When Vowels Speak: A study of Social Meaning and Phonetic Variation in Greek

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Abstract

Standard Modern Greek (SMG) is the official language spoken in Greece and one of the official languages in Cyprus. Despite its standardized form, substantial regional variation exists within mainland Greece, and scholars have proposed various classifications based on the regions (Trudgil, 2003). Standard Language Ideology (SLI), well documented in sociolinguistic research, views the standard variety as more correct and prestigious than non-standard varieties. Previous attitude studies employing the Matched Guise Test (MGT) (Lambert et al., 1960) have shown that SLI is prevalent in different sociolinguistic contexts, for various languages. In the case of Greek, MGT research has primarily emphasized Cypriot Greek (CG) speakers' attitudes toward SMG (Standard Modern Greek) and CG. However, the MGT has not been applied to explore the attitudes of native Greek speakers on regional phonetic variation occurring within mainland Greece.

Prior research on Greek dialects has demonstrated that characteristics associated with the Northern Greek varieties (Trudgil, 2003) are salient and socially marked. Among the most frequently discussed features are unstressed high-vowel deletion and unstressed mid vowel raising (Lengeris, 2016; Pappas, 2017; Topintzi & Baltazani, 2012). The present study employs the MGT to investigate how native Greek speakers evaluate phonetic variation within SMG. Specifically, this research examines, first, whether listeners' evaluations differ across guises that adopt the features of SMG, vowel deletion (/i/ deletion), or vowel raising (/e/ raising), assessing whether phonetic variation carries distinct social meanings and, second, the extent to which listeners' interpretations reflect awareness of SLI and stereotypes on regional variation.

Participants heard 2 passages for each of the three conditions: (i) No Change Condition from SMG (No Change), (ii) Unstressed High-vowel deletion- /i/ deletion (Deletion), (iii) Unstressed Mid-vowel raising- /e/ raising (Raising). They evaluated each voice recording on a series of polar traits, using a 7-point Likert scale. In addition, participants completed open-ended questions about the speaker's perceived origin and provided justifications for their responses.

Regarding the first research question, results revealed that the No Change guise received consistently more semantically positive ratings than both Deletion and Raising guises. Specifically, it was evaluated as more attractive, dependable, educated, and modern. When the conditions No change and Deletion were compared, the speaker was judged as more intelligent as well. With respect to the second research question, the results indicated that SLI is prevalent within the context of mainland Greece as well. This is evident by the participant's tendency to associate the No Change guise with traits revealing higher prestige and competence, while they give less favourable evaluations for the Deletion and the Raising guise. Quantitative analysis did not indicate any significant difference between the Deletion and Raising conditions. Qualitative analysis, however, revealed that Deletion was associated with provincial speech, whereas Raising was linked at a high percentage to Athens. Taken together, the results demonstrate that Deletion is more heavily stigmatized, while a complex pattern arises about Raising. Lastly, the results are discussed within the framework of third-wave sociolinguistics (Eckert, 2012), showing how phonetic variation carries social meaning, following Silverstein's (2003) theory of indexicality.

Keywords: Matched-Guise Technique (MGT), Standard Language Ideology (SLI), Standard Modern Greek (SMG), Northern dialects, Phonetic Variation.

Chapter 1
Introduction

A commonly cited proverb in Greek states ‘Δείξε μου το φίλο σου να σου πω ποιός είσαι’, which translates to ‘show me your friend and I’ll tell you who you are’. Proverbs and other forms of anecdotal knowledge without a clearly identifiable origin, such as this one, offer insight into the underlying beliefs that occur in a society. This proverb suggests that Greek speakers assume they can infer personal characteristics from an individual's social connections. At the same time, the proverb reflects the tendency to draw conclusions based on observed patterns and other external cues such as appearance and speech. While such conclusions occur often, they can lead to unfounded stereotypes. This raises the following question: Do speakers draw conclusions about others based only on the way they speak? And if so, is there evidence beyond anecdotal proverbs that this occurs in the Greek speaking context as well?

Language users often assign subconsciously a set of beliefs to linguistic forms and practices, reflecting not only perceptions about the language itself, but also assumptions about the social characteristics associated with the linguistic features (Silverstein, 1979). These beliefs and attitudes are commonly referred to as language ideology, and they reflect shared views within members of a community. Language ideology is shaped by power and economic relations within the society, expressing the societal hierarchy through linguistic practice. Within this framework, Standard Language Ideology (SLI) has become prevalent in societies, supporting the notion that standard languages are more ‘correct’, prestigious, or even appropriate. In comparison, the non-standard use of the language is associated with lower societal status and is being marginalized (Walsh, 2021).

Sociolinguistic studies have documented the association of Standard varieties with higher education, prestige, and traits such as intelligence and ambition (Lambert et al., 1960; Bourdieu & Boltanski, 1975; Kahane, 1986; Garrett et al., 2003). Similar patterns have been found in Greek sources. Prior studies have attested that SLI is prevalent both in CG (Cypriot Greek) (Papapavlou, 1998; Evripidou, 2012; Karatsareas, 2018) as well as SMG (Standard Modern Greek) (Moschonas, 2019; Pappas, 2017; Topintzi & Baltazani, 2012; Lengeris, 2016). Studies comparing CG and SMG have employed qualitative methods or the MGT (Matched-guise Technique) (Lambert et al. 1970) to gauge CG native speakers' attitudes on the two varieties. However, although regional variation has been documented and classified by scholars (Trudgil, 2003), a gap in the literature remains since, to the best of my knowledge, no study has used the MGT to study Greek native speakers' attitudes toward regional variation within mainland Greece.

Nevertheless, some studies have explored native speakers' attitudes on the phonetic variation occurring in the Northern dialects, using other methods. Papas (2017) investigated how the phonetic features of vowel deletion and raising are meaningful social markers in Northern Greece. The study highlights that the most stigmatized characteristic is the deletion of /i/, which is associated with 'provincial' speech and avoided by speakers with higher education, immigrants who have returned to the region, and mostly women. While the raising of /e/ and /o/ is still marked, it is found to be less stigmatized. The study indicates that gender, education, and migration are factors affecting speakers' attitudes towards the dialectical features in comparison to the standard.

Earlier work on vowel reduction in Modern Greek (Dauer, 1980) and on high-vowel loss in Northern dialects (Topintzi & Baltazani, 2012) provides the phonetic groundwork for these observations, while Themistocleous (2017) further demonstrates how vowel variation functions across a dialect continuum. The researchers, after analyzing conversational speech of eight Kozani speakers, confirmed that /i/ deletion and /e/ raising were more prominent in the data collected. Therefore, vowel raising and deletion are two salient phonetic features of the Northern dialects, rendering them distant from SMG (Dauer, 1980; Topintzi & Baltazani, 2012; Lengeris et al., 2016; Themistocleous, 2017).

The aims of the present study are twofold. The first goal is to analyze native Greek speakers' attitudes on speech that adopts two prevalent characteristics of the Northern dialects, while investigating if SLI shapes the participants' views. Secondly, this study utilizes the MGT, a method that has been widely used in research looking into attitudes, but has yet to be applied to examine attitudes on variation that occurs within mainland Greece. As a result, this research contributes to the field of sociophonetics theoretically, by shifting the lens to a language that, despite its rich history, has not been studied in depth with regard to sociolinguistic research, and methodologically by applying the MGT to demonstrate what phonetic variation carries social meaning.

The research questions posed in this study are:

1. Do listeners' evaluations of speech that adopt various characteristics differ, indicating that phonetic variation carries distinct social meaning?
2. To what extent do listeners' interpretations reflect awareness of Standard Language Ideology and stereotypes of regional speech?

This thesis is structured as follows. Chapter 2 reviews the relevant literature by connecting the theoretical foundations of sociolinguistics with the present sociophonetic study. The chapter follows Eckert's (2012) division of sociolinguistics in the three waves, while discussing various theoretical and methodological approaches to sociophonetics. Then, the lens is shifted to prior sociophonetic research on Greek, as well as perception studies comparing SMG to CG or regional varieties. Chapter 3 outlines the present study and the formulation of the research questions, and hypotheses are posed. Chapter 4 introduces the methodology used, including information about the phonetic conditions, participants, as well as the materials used and procedure followed in the study. Chapter 5 demonstrates the results divided into two parts: the MGT and the qualitative results. Chapter 6 provides explicit answers to the research questions posed and addresses the hypothesis separately. Then, the chapter discusses the broader theoretical implications of the findings and the connection with the third-wave of sociolinguistics and specifically Silverstein's (2003) theory of indexicality. The chapter concludes with a reflection on the methods used as well as the limitations of the study and potential directions for future research.

Chapter 2
Literature Review

This chapter presents theories that connect linguistic variation to language attitudes and social meaning, aiming to outline the evolution of sociolinguistics. The field has shifted from interpreting variation as a reflection of social hierarchy to understanding it as a resource for constructing identity and expressing ideology. The chapter follows the developments of sociolinguistic thought through the three main 'waves' introduced by Eckert (2012) and presents the framework needed to understand how listeners assign social meaning to phonetic variation. Section 1 introduces the theoretical foundations of language attitudes and social meaning, Section 2 is an introduction to sociophonetics, Section 3 addresses prior studies in Greek, and Section 4 presents the research question and hypothesis of this study.

1. Theoretical Foundations of Language Attitudes and Social Meaning

Ferguson (1959) analyzed the phenomenon of diglossia systematically, explaining how social values are reflected in the linguistic hierarchy. He used the term to describe communities that employ two varieties of the same language for different contexts. While the 'high' (H) variety was associated with formal and prestigious settings, such as in universities or in a newspaper, the 'low' (L) variety referred to the regional dialects used in informal settings, as personal conversations or folk literature. Based on Arabic, Swiss German, Haitian Creole, and Greek, the researcher explains that speakers of these languages view H as the superior variety compared to L. For instance, speakers of Arabic often view a person speaking in L as not knowing Arabic,

even though, paradoxically, the speakers themselves might give this evaluation while using L (Ferguson, 1959).

Although these evaluations may appear uniform, they are in fact complex. Often, attitudes associated with the H variety reflect its image as more beautiful and capable of expressing valuable thoughts. However, Ferguson notes that in the case of Greek and the production of literature, the majority of poetry was produced in L, while literary works in H were viewed as unnatural. This example demonstrates that, although prestige was commonly conveyed through H, language attitudes and evaluations are complex and dynamic. In terms of acquisition, H was taught only formally in a school setting, whereas L was used in everyday life among both adults and children. Ferguson (1959) notes that this distinction is crucial, as it results in H being connected with rigid rules that need to be followed, whereas L is portrayed as the norm.

Eckert (2012) provides a framework that categorizes the methodological and theoretical developments in sociolinguistic research from the 1960s onwards and proposes a distinction between three sociolinguistic 'waves', where linguistic variation is viewed through different lenses. The first 'wave' establishes that variation is not random, but rather occurs in patterns.

1.1 First-wave of sociolinguistics

Studies in the first wave of sociolinguistics were characterized by the use of large-scale quantitative methods that linked phonetic variables to social categories such as age, gender, and class. As a result, the relationship between language patterns and social hierarchies became central.

William Labov is considered the researcher who set the empirical foundation of this approach. Labov (1966 in Labov, 2006) demonstrated how the use of postvocalic /r/ is observed more frequently in speakers of higher socioeconomic status. Using recordings from a representative sample of New York's Lower East Side community, Labov gathered the first large-scale data to show that variation is not random but socially stratified.

Additionally, Labov (1972) emphasizes the methodological implications defining how linguistic behavior can be studied empirically, while taking into account social context. In this article, the term 'vernacular' is central, as the researcher argues that it reflects the speakers' most automatic linguistic production, which is not influenced by social pressure. As a result, language variation is dictated by class, as it reflects the individuals' exposure to the standard use of language. According to Labov (1972), variation is informative of the speakers' position within a social hierarchy. Although individuals can adapt their speaking style, the variants' social meaning remains stable.

Kroch (1978) argued that phonological change occurs stratified within society. The researcher proposed that speakers of social groups with lower status are more likely to adopt phonetic and phonological changes, as they occur naturally. On the contrary, members of the dominant social groups resist them in order to maintain social prestige. Therefore, linguistic change does not simply reflect the power dynamics in society, but it is a dynamic process that includes ideology about language and its use.

Expanding on Labov's research in the United States, the variationist approach became prominent in the United Kingdom as well, particularly through the work of Peter Trudgil (1972). In his article, he examined how phonological variables in Norwich English are mirrored across

social class, gender, age, and stylistic concept. For this purpose, phonetic and phonological variables were created, and then index scores were calculated for each characteristic, and their means were later compared. The findings indicated that the linguistic variation observed in British English is influenced by the social structure. People from higher socioeconomic backgrounds favor formal speech and standard pronunciation, and, on the contrary, people from lower social classes prefer non-standard forms.

One of Trudgill's most influential contributions was the concept of covert prestige and its relationship to gender. To be more specific, the term covert prestige was used to describe the phenomenon in which male speakers viewed non-standard speech patterns as a marker of solidarity and local identity. By challenging the notion that prestige is exclusively associated with standard forms, Trudgill demonstrates that non-standard linguistic features can convey positive social meaning within a community.

In summary, the first wave of sociolinguistics, as outlined by Eckert (2012), established a connection between linguistic meaning and social hierarchy. Linguistic variability is often presented as a marker of socioeconomic status. While the second wave still connects linguistic variability with social division, it emphasizes that individual speakers maintain 'social agency' (Eckert, 2012, p. 91) through their linguistic choices as they express and construct their identities. Studies in the second wave predominantly employed ethnographic research across diverse communities.

1.2 Second-wave of sociolinguistics

The second wave of sociolinguistics marks a shift from analyzing linguistic variation through broad social categories to examining the construction of social networks and identity through linguistic variation. Studies within the second wave employed an ethnographic approach, emphasizing how individuals use language within their communities.

Milroy (1980) investigated patterns of linguistic variation through social networks and interpersonal relationships. Specifically, her research examined individuals in three communities in Belfast (Ballymacarrett, the Hammer, and the Clonard) and their use of phonological variants. Milroy introduced the concepts of dense networks, referring to the degree to which people are connected through a number of social ties, and multiplex networks, where people are connected through various social roles. The findings suggest that linguistic variation is not a direct reflection of social class but functions as a complex mechanism through which communities maintain social integrity and identity through linguistic norms.

Another significant finding is that speakers in dense and multiplex networks are more likely to use non-standard variants, whereas speakers in more open networks prefer more standard forms. Milroy's work (1980) explores how prestige and solidarity are expressed within communities, demonstrating how language change is dependent on the network's structure, rather than only on the speakers' social class. Although non-standard phonetic variants are often associated with low prestige and status in broader society, they gain covert prestige within closed networks as they signal solidarity, shared identity, and belonging.

Gumperz & Cook-Gumperz (1986) explore how more complex linguistic phenomena, such as language shift or maintenance, are deeply rooted in social processes. In their 1986 book,

the researchers argue that social identity is constructed through interactions. Language is not just viewed as a means of exchanging information. On the contrary, the researchers explain that linguistic practices are seen as various ways to create social identity (Chapter 1). Therefore, the communicative choices of the interlocutors shape their social identity while reflecting the power structures in society.

Through the use of language, community members either distance themselves from the group or engage with it, maintaining their identity through interaction. These choices are meaningful only when interpreted based on the same values and power structures, referred to as 'communicative conventions' (Gumperz & Cook-Gumperz, 1986, p.3). As these mechanisms mirror institutional hierarchies, complex language processes, such as language maintenance and language shift, result from an interplay among structured social networks (Gumperz, 1982). Therefore, Gumperz (1982) and Gumperz & Cook-Gumperz (1986) demonstrated that language variation is not only employed to communicate group membership and authority but also to reflect the development of social identity.

Other studies classified in the second wave of sociolinguistics emphasize the connection between language variation and occupation. Rickford (1986) studied language variation in a community in Guyana, the Caribbean, specifically examining the differences between members who worked in sugar plantations and those employed in administrative roles, who held a higher socioeconomic status. Although the division is not strictly occupational, it reflects the societal differences between these two communities. The findings indicate that manual workers used more Creole forms when using pronouns, whereas people of a higher socioeconomic status used more Standard English - 'acrolectal variants' (Rickford, 1986, p.218). This pattern suggests that

the use of Creole serves as a symbol of local identity and authenticity, despite being stigmatized at the societal level. To the contrary, the use of Standard English signified prestige.

At the same time, other ethnographic studies examining the Spanish Pyrenees (Holmquist 1985) have looked into how linguistic variation occurs as the inhabitants of a village shift from an agricultural to a more industrialized community, as younger people seek work in a nearby factory. Specifically, as people would be integrated in the national economy, a sound change of the postvocalic [u] shifted to [o] in marking the ending of masculine nouns and adjectives. Women were found to predominantly lead this change, while men who were more absorbed by agricultural life resisted this change.

To summarize, according to Eckert's (2012) division, second-wave ethnographic studies emphasized that linguistic variation occurs within social networks where attitudes and identity are established. Individual stylistic practices are interpreted as strategies for negotiating identity and establishing membership. In contrast, studies within the third-wave view linguistic variation as a stylistic practice that individuals use to position themselves in the community by associating with or distancing themselves from social identities or ideologies.

1.1.3 Third-wave of sociolinguistics

Silverstein (1979; 2003) synthesized the analyses of Gumperz (1982) and Gumperz & Cook-Gumperz (1986), emphasizing that language ideology is constructed through a semiotic process. To be more specific, Silverstein (1979) defines language ideologies as a 'set of beliefs about language articulated by users as a rationalization or justification of perceived language structure and use' (Silverstein 1979, 193). These ideologies represent conscious and shared belief and value systems about spoken languages that influence how speakers perceive prestige and

authority through language and, ultimately, linguistic use. Even though language ideologies have been defined by other researchers, each definition has linked the term to a broader set of implications. Heath (1977) emphasizes that language ideologies are, contrary to Silverstein (1979), unconscious assumptions. Specifically, they are defined as 'the self-evident ideas and objectives a group holds concerning roles of language in the social experiences of members as they contribute to the expression of the group' (Heath, 1997, 53), and therefore reflect unconscious rules evident in language and communication within the society. Lastly, a more recent definition by Irvine (1989) treats language ideology as "the cultural system of ideas about social and linguistic relationships together with their loading of moral and political interests" (p.255 in Irvine, 2022), connecting with the power relations at the societal and cultural level and not only on an individual level.

In addition, Silverstein (2003) introduced the order of indexicality to explain how social meaning is attached to linguistic forms. This model encompasses the idea that meaning is not inherent in linguistic forms, but rather acquired through the interaction of social norms and language. Specifically, first-order indexicality refers to the unconscious connection of a linguistic form with a social concept. Second-order indexicality refers to the widespread social recognition of those indexes, and lastly, higher-order indexicality links the indexes with a broader ideological frame within society. As an example of indexicality, the researcher uses how personal pronouns 'you' for singular and plural T/V, respectively, are used in European languages (Silverstein, 2003). When the speakers choose which pronoun to use, they immediately index the speaker's relation with their interlocutor (first-order indexicality). For instance, the use of T signifies familiarity, while V, even though it refers to the same individual, shows an additional layer of

respect and 'deference-entitlement' (Silverstein, 2003, p.205) of the Speaker to the Addressee (second-order indexicality). The meaning of the T/V pronouns is not inherent but is acquired through this process, indicating how people position themselves in the social hierarchy.

While Silverstein (1979, 2003) demonstrated how social meaning is attributed to linguistic forms, Eckert (2008, 2012, 2019) shifted the focus to how speakers use those forms to construct their identities. Building on Silverstein (2003), Eckert (2008) introduces the concept of 'indexical field', which links linguistic variables with a variety of social meanings. The researcher argues against a precise and rigid meaning of linguistic variables. To the contrary, linguistic variables bear a 'field of potential meanings' (Eckert, 2008, p.454) that can be employed based on the context in which the variable is being used. In this framework, variation is perceived as a means by which speakers build their personal speech style, rather than as an encapsulation of social structures. By employing the model of indexical field, Eckert (2008) showcases how speakers construct different 'personae' (Eckert, 2008, p. 256), as the same linguistic variable has different meanings across communities.

The purpose of this chapter is to trace the development of the sociolinguistics field. According to Eckert (2012), studies in the first wave of sociolinguistics show that linguistic variation is not random and is correlated with socioeconomic hierarchy. These studies employed large-scale surveys and quantitative analysis. Studies falling under the second wave perceive speakers as members of social networks who access shared norms and identities. These ethnographic studies deepened the field's knowledge of how variation is ascribed meaning and how it functions within a community. Lastly, attention in the third-wave studies shifts to the construction of identity through stylistic practice. Speakers are given back agency through their

linguistic choices since variation is now seen as carrying meaning and also being indicative of language ideology. This theoretical framework provides the backbone for the next chapter, which focuses on sociophonetic approaches to language variation. Specifically, it examines how phonetic variation is produced, perceived, and interpreted.

2. Approaches to Sociophonetics

2.1 Theory and sociophonetics

Early references to the term are by phoneticians to address speech variation among speakers of different dialects or to describe the differences in speaking styles. For instance, Esling (1991) examined the articulation of Vancouver English vowels in relation to differences in socioeconomic status. Results indicated a systematic variation of vowel production between men and women, showing that indeed differences in speech correlate with social factors. In their influential book 'Empirical foundations of a Theory of Language' Weinreich et al. (1968) establish that language variation is not random but is systematically organized and that a complete language system accounts for variation (Ch.3). Building on that foundation, variability is viewed as informative not only about linguistic differences but also about the speakers themselves (Kendall et al, 2023).

The field of sociophonetics addresses other phenomena, including perception and social meaning. Clopper & Pisoni (2005) investigate how speech variation is perceived through research methods, such as the matched-guise test and other attitude judgments. They conceptualize dialect perception as a process linking phonetic variation with listeners' social expectations and social norms. Similarly, Thomas (2002), in a very influential journal article,

identifies a research gap between the study of variation production and perception, emphasizing that listeners' evaluations of variation are driven by social knowledge and pre-existing expectations. Together, these studies highlight that perception is socially conditioned and central to the interpretation of phonetic variation.

One theoretical issue in the study of variation concerns the relationship between variation on a community and on an individual level. Walker & Meyerhoff (2013) offer an informative analysis of these two theoretical perspectives. The research tradition focusing on variation within the community follows Labov (1972) and Trudgil (1974), treating variation as systematic and socially constrained by factors such as age, gender, and class. In contrast, the 'linguistic grouping' approach (Horvath & Sankoff, 1987, as cited in Walker & Meyerhoff, 2013, p. 180) identifies linguistic patterns first and then groups speakers according to their shared linguistic and social behavior. Walker & Meyerhoff (2013) argue that while both perspectives are fundamental, language variation is simultaneously a communal phenomenon and a way to construct social identity.

Another major theoretical issue addressed by sociophonetics is social indexicality, where the principles of semiotics (Silverstein, 2003) are applied to analyze the relation between phonetic forms and social structures (Kendal et al., 2023). Phonetic variation acquires social meaning through a complex process in which speakers express their identity or attitudes through language, while listeners interpret these cues and ascribe social meaning based on shared cultural norms.

For instance, Kendal et al. (2023) discuss, among other issues, the example of creaky voice and its acquired social meaning. In many languages, including British and North American

English, creaky voice frequently occurs in an utterance-final position, and as a result, it is perceived as a cue to indicate turn-taking. However, it may also signal hesitation or even fatigue, depending on the context in which it is being used. Therefore, when listeners begin to notice and re-evaluate a feature, in this case, the creek, it acquires social meaning. This process aligns with Silverstein's (2003) framework of orders of indexicality, which describes how linguistic features receive layered social meaning through interpretation and can further lead to enregisterment (Agha, 2003), where linguistic features develop stable associations with social identities or styles.

2.2 Methods in sociophonetics

From a methodological standpoint, sociophonetics encompasses a wide range of methods. For the purposes of this thesis, the most relevant is perception studies. This broad term is often used to encompass speech perception, as well as studies on speaker perception. Speech perception refers to paying attention to the linguistic information, while the latter addresses studies that focus on social information, respectively (Kendall et al., 2023).

Speech perception studies often focus on how listeners identify and interpret linguistic forms. Common methods include identification and categorization tasks. Strand & Johnson (1996) address how the speakers' phonetic categorization is influenced by social information across individuals. Specifically, by employing an identification task, they asked participants to categorize fricatives in an /s/–/ʃ/ continuum while showing them a male or a female face. The results indicated that speech normalization is influenced by social and visual cues.

Additionally, Kleber & Reubold (2008) aimed to explore how /u/ fronting in Standard southern British English is perceived and whether it is subject to coarticulation variation. They

employed an identification and categorization task in which participants had to hear synthetically manipulated vowels and then categorize them into one of two phonetic realizations, /u/ or /ʊ/. Results indicated that listeners adjusted their vowel judgments in response to the surrounding context.

Another commonly employed method in speech perception studies is discrimination tasks. Labov et al. (1991) examined cases of near-mergers, where speakers produce phonemes with distinct phonetic realizations but are unable to distinguish them perceptually. Participants from Philadelphia listened to minimal pairs (e.g., fail-fell) and they were asked to indicate whether they were the same or different. Results indicated that vowel production and perception are distinguished. While the study focuses on phonological factors, it provided the groundwork for later sociophonetic research.

In addition, Niedzielski (1999) tested how the perception of phonetic variation is influenced by social information about the speaker. Specifically, through an identification task, participants from Detroit were asked to categorize resynthesized vowel tokens. Half of them were told that the speaker was from Detroit and the other half that the speaker was from Canada. Even though the only experimental manipulation was the perceived speaker identity, listeners who perceived the speaker to be Canadian identified raised diphthongs, while those who perceived the speaker to be from Detroit did not. The latter, additionally, identified different vowel tokens from those present in the speaker's dialect. The results of this study are significant, as it is one of the first to demonstrate that phonetic variation is driven by social expectations and is influenced by social information and labels.

Drager (2011) builds on Niedzielski (1999) by investigating whether non-specific, social cues influence listeners' phonetic categorization. The researcher recorded vowel tokens from a single speaker of New Zealand English, focusing on vowels affected by the New Zealand Vowel Shift, where fronting and raising are different across age groups. Before completing the identification task, participants were shown a picture of a younger or an older person and then asked to classify the vowels they heard. The results showed that age priming influenced vowel categorization, demonstrating that social information automatically affects speech perception and establishing social priming as an essential methodological approach in sociophonetics.

While speech perception studies focus on how linguistic signals are interpreted, speaker perception studies explore how listeners construe social characteristics from speech. The framework introduced by Lambert, Hodgson, Gardner, and Fillenbaum (1960), derived from the standpoint of social psychology, aims to understand individual attitudes. Lambert et al. (1960) demonstrated how the speakers internalize and reproduce the same power and social structures through implicit judgment. Lambert et al. (1960) developed an innovative indirect approach to investigate whether attitudes elicited by other direct approaches would align with people's private thoughts (Garrett, Coupland, & Williams, 2003). Their study, conducted in Montreal, a bilingual community with French and English speakers, aimed to gauge participants' evaluations of speakers based solely on the language used. The researchers, introducing the matched-guise technique (MGT), created audio tape recordings in which bilingual speakers read the same passages in both languages. The participants heard each recording, referred to as 'guise' (Lambert et al., 1960, p. 45), and rated the speakers on various traits (e.g., ambition, kindness). The results

revealed systematic differences in participants' evaluations, with English guises being ranked higher than the French ones.

Lastly, sociophonetics is also at play when other fields of linguistics are in question, such as sociolinguistic theory or even first (L1) and second language acquisition (L2). For instance, Nagy & Reynolds (1997) investigate how word-final consonant deletion occurs in the Faetar dialect, spoken in Southern Italy, by analyzing the phenomenon with Optimality Theory (OT). According to OT, a hierarchy of constraints accounts for variation. The researchers introduce 'floating constraints' (Reynolds, 1994, as cited in Nagy & Reynolds, 1997, p. 37), explaining that constraints can occur within a range in the hierarchy and therefore facilitate variation. The results of their analysis indicate that deletion is more frequent in informal contexts and among younger speakers, indicating that the phenomenon is not random but rather influenced by social factors. Regarding L1 and L2 acquisition, Khattab (2002) explores how Arabic-English bilingual children living in the UK produce /l/ in both languages. Specifically, she examines how /l/ is produced in English and Arabic, and then inspects whether these distinctions are maintained in each language or whether there is a cross-language effect. Results demonstrate that the use of English /l/ by bilingual speakers is more frequent when they interact with other English speakers in formal settings. On the contrary, the /l/ production was similar to Arabic in an informal context, pointing out that linguistic variation is socially stratified.

3. Phonetic Variation and Perceptions in Greek

3.1 Standardization and phonetic variation of Modern Greek

During the 19th and 20th centuries, diglossia in Greece was a widespread phenomenon, giving rise to the 'Language Question' (Moschonas, 2019), which was resolved in 1976 following the establishment of parliamentary democracy as a regime. Diglossia in Greece involved the simultaneous use of a H variety, katharevousa, and what was considered an L variety, demotic. While katharevousa was primarily used in formal contexts such as education or on the radio, demotic was spoken among people and was used in informal contexts (Ferguson, 1959). The high variety was also used by the government, but its use during the dictatorial regime of 1967-1974 contributed to the downfall of Katharevousa (Moschinas, 2019).

With the 'language Question' still prevailing, the dictator, Ioannis Metaxas (1936-1941), wanting to establish an official language, ordered the scholar Triantaphyllidis to create a uniform grammar based on demotic. For the scholar, the use of katharevousa was associated with sentiments of xenophobia and hypocrisy, which were characteristic of the Greek state and political life. On the contrary, he viewed demotic as the real language used by the people of Greece (Moschonas, 2004). Triantafyllidis published the 'Modern Greek Grammar (of Demotic)' (1941), which was based on what was used at the time by the educated middle class, as he believed that a mix between katharevousa and demotic would be more easily accepted by the state. He introduced Greek Koine, by suggesting a mix between katharevousa (H) and demotic (L) (Frangoudaki, 1992).

Even though the 'Language Question' was resolved with a reform that took place after parliamentary democracy was constitutionally established in 1976, there was one additional change that led to a language form more representative of what is used today. Modern Greek (Νέα Ελληνική) was defined as the official language by Law 309/1976 as the language used by people in Greece as well as by the writers. Interestingly enough, the law was written in Katharevousa (Mackridge, 2009). An additional orthographic reform was implemented by Kriaras (1983, as cited in Moschonas, 2019), marking a shift from a polytonic writing system, which uses multiple diacritics, to a monotonic system. While the polytonic system was used to reflect the pitch-accent deriving from Ancient Greek, Triandaphyllidis' koine had already incorporated a stress-accent, leading to the monotonic orthographic system to more accurately represent the stress patterns of Modern Greek (Moschonas, 2019). Even though the 'Language Question' was officially resolved, debates about the standard use of language continued to take place in Greek society. Eventually, the ideology that Standard Modern Greek is one unified language that captures the complexity and the variety that exists within the borders of Greece was accepted, rendering Standard Modern Greek (SMG) the official language (Moschonas, 2004).

Through the evolution and standardization of SMG, the ideological hierarchy that previously positioned katharevousa as the H norm and demotic as the L did not disappear. On the contrary, it took a different path. The power dynamic is now embedded in Standard Language Ideology (SLI). SLI is defined as the belief that the standard form of language is more correct and superior to the other forms of language spoken, and should therefore be preserved as a norm that is rigid and usually not open to change (Walsh, 2021). As a result, although the 'Language

Question' was resolved, the ideology that views certain forms of language as superior to others is still maintained. As Moschonas (2004) observes, the belief remained that SMG should be protected from internal or external influences, reinforcing SLI.

There is still regional variation throughout Greece. The persistence of SLI indicates that non-standard forms are evaluated as lower in the linguistic hierarchy in comparison to SMG. Trudgill's (2003) classification of the Greek dialects offers an overview of phonetic variation, illustrating how the dialects diverge from SMG. Trudgil reviews other researchers' primary classifications (see Argiriadis, 1990; Hadzidakis, 1992; Kontossopoulos, 1994; Newton, 1972 in Trudgil, 2003) and discusses the phonetic features that are prominent in 15 regions (see Trudgil, 2003, p.58).

The region that is relevant to this thesis is the Northern area, which is identified by high vowel loss as documented by Newton (1972). Following Kontossopoulos' (1994) division there is: (1) the Extreme Northern dialects in which all unstressed /i, u/ are deleted and /e,o/ are raised, (2) the Northern dialects where only word-final /i,u/ are deleted and /e,o/ are raised, and (3) the Semi-Northern dialects where only word-final /i,u/ are deleted, but /e,o/ are not raised. The region includes the northern mainland, Lefkada, northern Evia, Thassos, Samothraki, Imbros, Lesbos, Limnos, Skiros, Skiathos, Skopelos, Alonissos, and Samos.

3.2 Attitudes and phonetic variation

Phonetic variation for Greece, as well, is not only a matter of geography; it indexes language attitudes about linguistic variants and the social meaning they are ascribed. This section examines previous studies that have explored phonetic variation and attitudes toward it. To the best of my knowledge, while there is a large body of research that delves into attitudes on

Cypriot Greek (CG) in comparison to SMG, fewer studies emphasize linguistic variation within SMG.

Early work on attitudes and dialectal differences has focused on CG. Papapavlou (1998) examined Greek Cypriots' perceptions about their own dialect and SMG. Twenty-two first year Greek Cypriot students participated in the experiment, and they were asked to give their evaluations on two guises, one CG and one SMG. Their attitudes were elicited by employing the Matched Guise Technique (MGT). Results showed that SMG was judged more positively than CG. Specifically, the standard guise was perceived as more attractive, dependable, interesting, intelligent, modern, ambitious, and pleasant. However, the dialect speaker was found to be more sincere, friendlier, kinder, and more humorous. This difference suggests that the standard is idealized as more correct, whereas the dialect is valued for traits that reveal solidarity, indicating that SLI can also be observed within the Greek-speaking context.

Pavlou & Papapavlou (2004) examined how attitudes on CG affect language use and educational practices in Cyprus. The study aimed to explore teachers' attitudes through a questionnaire, completed by 133 teachers from 14 different schools. Results revealed that the majority of teachers (60%) correct their students' expressions of themselves in CG by giving them the SMG form; however, the majority do not evaluate the use of CG negatively. Again, the majority of the teachers stated that they avoid using CG in the classroom, except in cases where they want to be seen as humorous or relaxed, or when they want to build a personal rapport with the students. The majority of the teachers (70%) stated that they often use CG outside of the classroom and with other colleagues. This study reinforces that despite the dominance of the Cypriot dialect, SMG maintains its function as a linguistic marker of power and prestige.

Evripidou (2012) further investigated how Cypriot Greek speakers' attitudes are influenced by age by employing the MGT and in-depth interviews. Participants were 20 Greek Cypriot speakers born around the 1960s. Results indicated that the guises in CG were judged more positively than those in SMG. Specifically, CG speakers were perceived as more sincere, friendly, kind, humorous, and hard-working, whereas SMG guises were rated as more educated and attractive. Follow-up interviews were conducted with 6 of the participants. Interviewees noted that public figures, such as politicians, sound more sincere and friendly when they use CG, and that their social status compensates for the use of the non-standard variety. Additionally, they emphasized that their attitudes stem from a strong sense of self-identity, which is not influenced by proficiency in SMG. Moreover, participants also linked their emotional attachment to CG with its historical significance and their dramatic experiences during the 1974 events.

Shifting the lens to studies that focus on differences within SMG, sociophonetic variation has focused on the properties of unstressed vowels, one of the most salient and distinctive characteristics of Northern varieties (Newton, 1972; Trudgill, 2003). Topintzi & Baltazani (2012) provide a systematic acoustic analysis of vowel deletion in Greek spoken in Kozani (north-western Greece), suggesting that the phenomenon is gradient and demonstrates variability. Vowel deletion is also correlated with increased aspiration and duration of the consonants surrounding the deleted vowel, leading to the creation of consonant clusters that are not allowed in SMG, rendering the phenomenon salient. Even though the findings of this study provide an empirical foundation to explore how phonetic differences become socially meaningful, it should be taken into account that the results are based on one male speaker reading a text and they are not the results of naturally occurring speech.

Another study that examines vocalic phenomena in Kozani Greek is Lengeris et al. (2016). The study explores the following three phenomena: unstressed high-vowel deletion (/i/, /u/), unstressed mid-vowel raising (/e/, /o/ to [i, u]), and stressed vowel diphthongization (/e/, /o/ to [jɛ, wɛ]). Findings indicate that the frequency of occurrence for high vowel deletion and mid-vowel raising is higher than stressed mid-vowel diphthongization. Contrary to Topintzi & Baltazani (2012), in this study, /i/ deletion was more common than /u/ deletion. While /i/ deletion was common in word-final position, /u/ deletion occurred equally in all positions in the words. Specifically, /i/ deletion occurred in 55% of the instances, and /u/ deletion 39%. Regarding mid-vowel raising, the study found that /e/ was raised in 35% of the occurrences and /o/ in 42%. While /e/ raising appeared more often in word-final positions, /o/ raising occurred at the same rate around all word positions. Moreover, /o/ raising was not affected by pre-tonic or meta-tonic syllables, whereas /e/ raising occurred more frequently in meta-tonic syllables.

Additionally, Lengeris (2016) compared the perceptual vowel spaces of SMG, Kozani Greek, and Cretan Greek. Participants were instructed to identify the most representative examples of each vowel, which were part of carrier sentences and produced by a speaker of their respective dialect. Results showed that vowel space positioning varies across dialects. Specifically, SMG speakers displayed the most symmetrical and evenly distributed perceptual vowel system, compared to the other two, which demonstrated less symmetrical vowel positioning. The study is significant because it showcases that phonetic variation among Greek dialects is acoustically and perceptually distinct, providing evidence that vowel differences are salient features that can be evaluated by listeners.

Papas (2017) explored how unstressed vowel raising and deletion are used and also evaluated by speakers from a community in Thasos, an island in Northern Greece. The study was based on semi-structured interviews with two groups of participants: those who had always lived in the community and those who had migrated and returned later. The findings revealed that /i/ deletion is influenced by gender and migration status, with women and people returning favoring the standard pronunciation more than men and locals. To the contrary, education influenced the raising of /e/ and /o/. Speakers who had received higher education used the standard forms more frequently, while those who had received secondary education used the local forms more often. Moreover, younger speakers avoided /u/ deletion, a feature of northern Greek speech. While, at first glance, this finding might seem to be in contrast to Topintzi & Baltazani (2012), observing stereotypical features in seniors' speech is more expected. Papas (2017) interprets the results as indicating that vowel deletion is more stigmatized than vowel raising. In conclusion, returning migrants tend to avoid /i/ deletion to align with standard language norms, while women are most likely to avoid stigmatized forms and to adopt standard speech characteristics.

Chapter 3
The present Study

Studies on Cypriot Greek (Papapavlou, 1998; Evripidou, 2012; Karatsareas, 2018) and SMG (Moschonas, 2019; Pappas, 2017; Topintzi & Baltazani, 2012; Lengeris, 2016) have shown that language attitudes are shaped by Standard Language Ideology (SLI), which associates the standard variety with education and prestige, while regional or non-standard features are often stigmatized as markers of low status (Labov, 1972; Trudgil, 1972), even if they index solidarity and sometimes are viewed as a way to build identity. The fact that identity is created through stigmatized features is in alignment with studies in second-wave sociolinguistics (Milroy, 1980). However, from a perspective of third-wave, these evaluations can be seen as the result of indexical processes (Silverstein, 2003) where social meaning develops in layers and phonetic features are interpreted within an indexical field (Eckert, 2008) which is shaped by SLI.

Additionally, studies have shown that regional variation in vowel realization is a salient linguistic cue. Specifically, while examining Northern Greek speech, Topintzi and Baltazani (2012) and Lengeris (2016) have shown that vowel raising and deletion patterns create distinct linguistic cues that listeners can easily perceive. These differences function as perceptual cues that listeners use to infer region, social background, and education level. However, studies that delve into attitudes on dialectal variation emphasize Cypriot Greek, with only a few of them employing the Matched-Guise Technique (Papapavlou, 1998; Evripidou, 2012), creating a gap in the literature on studies exploring attitudes on phonological differences found in mainland Greece.

The present study addresses this gap by employing the MGT to investigate how native Greek speakers evaluate phonetic variation within Standard Modern Greek, focusing on two salient features of Northern Greek speech: unstressed /i/ deletion and /e/ raising (Topintzi & Baltazani, 2012; Lengeris, 2016), which have been shown to be socially marked (Pappas, 2017).

The study addresses the following research questions:

1. Do listeners' evaluations of speech that adopt various characteristics differ, indicating that phonetic variation carries distinct social meaning?
2. To what extent do listeners' interpretations reflect awareness of Standard Language Ideology and stereotypes of regional speech?

Based on previous findings, it is hypothesized that:

1. No Change guise will receive more positive evaluations than Deletion and Raising.[1]
2. No Change will receive more positive evaluations on traits that are associated with competence, status, and education. Adjectives such as ambitious, intelligent, modern, educated, and attractive are expected to indicate competence status and education. On the other hand, traits such as sincere, humorous, kind, and pleasant are expected to reflect attitudes on solidarity and warmth.
3. Deletion guises will be judged the most negatively, as deletion has been heavily stigmatized and associated with lower prestige.
4. Raising guises will be stigmatized less than Deletion guises, but will not be evaluated as positively as guises in No Change.

[1] For a detailed explanation of the conditions see Chapter 4: Methodology

5. Qualitative responses will reveal that the listeners' judgments are influenced by ideological beliefs that are consistent with Standard Language Ideology.

Chapter 4
Methodology

This study aimed to examine the language attitudes of Greek native speakers when presented with recordings of Standard Modern Greek (SMG), manipulated to incorporate two salient characteristics of northern Greek varieties. Following the procedures of the Matched Guise Test (MGT) (Lambert et al., 1960), the participants were asked to evaluate a recorded speaker on polar traits after hearing 2 passages for 3 different conditions: (i) No Change Condition from SMG (No Change), (ii) Unstressed High-vowel deletion- /i/ deletion (Deletion), (iii) Unstressed Mid-vowel raising- /e/ raising (Raising) (described in Section 1). To complement this controlled measure, qualitative data were collected through open-ended questions, allowing the participants to elaborate on their attitudes and interpretations. This chapter is structured as follows. Section 1 describes the conditions used, Section 2 presents the sample, Section 3 demonstrates the materials used and the procedure followed, and lastly, in Section 4, the methods of data analysis are discussed.

1. Conditions

For the creation of the stimuli, three conditions were selected: (i) No Change guise- no change from SMG, as it is the official language spoken in Greece, (ii) Deletion guise- Vowel deletion (/i/ deletion), and (iii) Raising guise- Vowel raising (/e/ raising). The last two characteristics were selected as they are marked and diverge from the standard pronunciation.

Papas (2017) and Lengeris (2016) note that upon considering position effects, /i/ was deleted more frequently in a word-final position. The same patterns were observed for /e/ raising.

As a result, the target words were selected to fit this criterion. Additionally, the target words were placed at the end of prosodic phrases to avoid co-articulation effects. The different conditions are illustrated in Table 1.

Table 1

Conditions selected for the creation of stimuli

Condition	Phonological Feature
(1)No Change	No change- Standard Form
(2) Deletion	Vowel deletion- /i/ deletion
(3) Raising	Vowel Raising- /e/ raising

Note. Table1 presents the three conditions used to create the stimuli, along with their corresponding phonological features.

An example of target words embedded in a carrier sentence is depicted in Table 2.

Table 2

Phonetic realisation of the example sentence.

Condition	Sentence in IPA
(1)No Change	o ˈi.lios ˈmo.lis ˈi.ɕe anaˈti.li ˈpa.no aˈpo to xoˈra.fi
(2) Deletion	o ˈi.lios ˈmo.lis ˈi.ɕe anaˈti.li ˈpa.no aˈpo to xoˈra.f
(3) Raising	o ˈi.lios ˈmo.lis ˈi.ɕi anaˈti.li ˈpa.no aˈpo to xoˈra.fi

Note. Table 2 illustrates the phonetic realisation of a sentence with a target word in all three conditions. In condition No Change, the underlined words are the target words, which are then changed to form conditions Deletion and Raising. The created target words are underlined in conditions Deletion and Raising as well.

Greek: Ο ήλιος μόλις είχε ανατείλει πάνω από το χωράφι

English Translation: 'The sun had just risen above the field'

2. Participants

The sample consisted of 108 Greek native speakers currently residing in Greece or abroad, of whom 96 met the exclusion criterion. They were asked to provide demographic information about their age, gender, education level, place of current residence, and place of upbringing. The participants' mean age was M = 37.77 (SD = 16.24). Of these, 54 identified as female, 40 as male, 1 identified as agender, and 1 chose the 'prefer not to say' option. Regarding education level, 45 held a Bachelor's degree, 37 a Master's degree, 6 reported a high school diploma, 3 a PhD, 1 had graduated from primary school, and 4 reported having other unspecified qualifications.

Of the participants who reported having a bachelor's degree, 42 provided additional information about their field of study; however, 16 did not specify the subject. The reported fields were as follows: Biology (n = 3), Education (n = 1), Engineering (n = 3), Law (n = 7), Medicine (n = 2), Philology/Philosophy (n = 2), Sports Science (n = 3), and Unclassified (n = 2). Responses reported as unclassified include vague entries or responses that are not clearly tied to an academic discipline. Of the participants who reported having a Master's degree, 28 provided additional information on their field of study, and 20 were labeled as unclassified. The other reported fields were as follows: Education (n = 1), Engineering (n = 2), Law (n = 1), Philology/Philosophy (n = 1), and Psychology (n = 3). Lastly, of the participants who opted for the 'PhD' option, 1 did not provide further explanation of their field of expertise. The remaining responses were as follows: Fusion plasma (n = 1) and Second year (n = 1).

Regarding the place of current residence, the answers were grouped by country. The responses were as follows: France (n = 2), Greece (n = 78), Italy (n = 1), the Netherlands (n =

12), Sweden (n = 1), and the UK (n = 2). All the participants reported their place of upbringing to be in Greece. The most frequently reported place of upbringing was Athens (n = 65), followed by Thessaloniki (n = 6). The remaining participants reported growing up in various cities across Greece (n= 25).

3. Materials and procedure

The survey was created in Qualtrics and consisted of three parts: a warm-up task, a main task, and a demographic section. Before the beginning of the survey, there was an information and consent block (see Appendix A). Specifically, by proceeding, the participants consented that they are above eighteen years old, that they understand the purpose of the survey, and that they agree to participate voluntarily. The items in the main task were randomized to ensure that participants were exposed to six audio clips per person (one of each item and two of each condition), while ensuring that the item and condition order were randomized and counterbalanced across the sample.

3.1 Stimuli

Nineteen items were created in total, eighteen for the main task and one for the warm-up task. All the texts were recorded in the LULC Phonetics Lab, using the Sennheiser MKH 416-P48U3 microphone connected to a PC. The microphone was placed at a distance of 15-20 cm from the speaker in accordance with the Phonetic Lab's protocol (Dutton & Ruijgrok, 2024), and the recording was made through the program Audacity. For the recording of the stimuli, a native Greek female speaker was selected based on the following criteria. First, the speaker did not display any speech characteristics indicating a regional dialect and had spent her formative

years in Athens, Greece, rendering her a speaker of Standard Modern Greek. Second, the speaker's education in Linguistics and specifically phonetics allowed them to understand the experimental design and to attempt to maintain consistent voice qualities, such as speech rate, volume, and pitch.

3.2 Warm-up

For the warm-up (see Appendix B), one item was created in No Change that did not contain any of the other conditions included in the main task. The duration of the item was approximately 30 seconds, similar to the duration of the items used in the main task. The text used to create the item was adapted from a passage found in a sixth-grade schoolbook to reflect Greece's compulsory educational level (Chapter 16, Museums). The text was chosen because of its neutral and informational content. After listening to the item, the participants had to answer 3 questions. The first question functioned as an exclusion criterion and inquired about the number of people in the recording. It was found necessary to account for any possible technical issues with playing the audio. The other two questions were listening comprehension questions (about the location of the museum and the goal of the exhibition).

3.3 Main Task

For the main experimental task, participants had to listen to a total of six items, with two items for each condition. In total, eighteen items were designed to be 'culturally neutral' (Papapavlou, 1998, p. 20). The content of the items was situational and could not provide explicit information about the speaker's social class, background, or personal characteristics. The items designed under conditions Deletion and Raising included 5 instances of each condition, respectively, with distinct target words per item (see Appendix C).

Each item was followed by a series of questions. Specifically, the participants were asked to answer a question about the speaker's place of origin, followed by an open-ended question to justify their answer. Then they were presented with 11 polar adjectives for which they were asked to rate the speaker on a 7-point Likert scale. Lastly, participants in this study were asked to justify their reasoning for choosing the adjectives, since no explicit information about the character traits was given to them (see Appendix D).

The polar traits selected for the MGT were based on Greek sociolinguistic studies. Prior research on language attitudes has emphasized the comparison of the SMG and the Cypriot dialect. In Papapavlou (1998), twenty-two Greek-Cypriot university students evaluated tape-recorded voices on 12 polar characteristics. Evripidou (2012) examines the attitudes of senior-adult Greek-Cypriot speakers using 10 polar traits. The two studies use an overlapping set of traits with some differences. Papapavlou included 3 different traits not found in Evripidou (dependable-non dependable, interesting-boring, and pleasant-unpleasant), while Evripidou (2012) added the trait hard-working-lazy. Drawing from the two studies, I incorporated all the polar characteristics into my questionnaire, as neither study justified their choice of inclusion or exclusion.

3.4 Demographic questions and self-assessed speech

As the final part of the survey, participants were asked to complete some demographic questions and indicate whether they think they speak a dialect or SMG, based on the definitions provided by the Cambridge Dictionary (see Appendix E). Dialect was defined as 'a form of a language that is spoken in one geographical area by a certain group of people'(Cambridge University Press, n.d., *Dialect*, para. 1), whereas Standard Language was described as 'the

language used by governments, the media and for international communication' (Cambridge University Press, n.d., *Standard and non-standard language*, para. 1). Out of the 96 participants, 63 reported to speak SMG, while 33 considered that they speak a dialect.

3.5 Pilot

During the pilot, the survey was distributed to four native Greek speakers. All participants identified as female, had a mean age of 26.25 years (SD=2.63), held a Master's degree in Linguistics, and were residing in the Netherlands. After completing the survey, semi-structured interviews were conducted to gather feedback on the questionnaire and the polar traits used. All participants indicated that two of the traits were not relevant to the task (interesting-boring and hard-working-lazy). In the following semi-structured interviews, the participants explained that their ratings for the two trait pairs were random because the stimuli did not provide any information to infer these characteristics. Therefore, these adjectives were excluded from the final version of the survey, and the complete matched-guise rating scale used is presented in Table 3.

Table 3

Matched-guise rating scale

Traits	1	2	3	4	5	6	7	Traits
sincere	1	2	3	4	5	6	7	insincere
attractive	1	2	3	4	5	6	7	unattractive
ambitious	1	2	3	4	5	6	7	unambitious
intelligent	1	2	3	4	5	6	7	unintelligent
kind	1	2	3	4	5	6	7	unkind
educated	1	2	3	4	5	6	7	uneducated
humorous	1	2	3	4	5	6	7	lacking humor
modern	1	2	3	4	5	6	7	old-fashioned
friendly	1	2	3	4	5	6	7	unfriendly
pleasant	1	2	3	4	5	6	7	unpleasant

Note. Table 3 presents the 7-point Likert scale as it was presented to the participants. On the left side of the scale, the traits are laid out, and on the right side, their polar opposite is indicated.

4. Methods of data analysis

4.1 Statistical analysis

This study employed a within-subjects design to investigate how participants rated a Greek-native speaker under three experimental conditions. The conditions were displayed using a Linear Mixed-Effects Model (LMM) to account for repeated measures and individual variability. The model was analysed in R using the lmer package.

The dependent variable was the participant's Likert-scale rating (1-7) for each polar trait. This model included Condition, Adjective, and their interaction as fixed effects to test whether the influence of condition varied across traits. In addition, demographic variables (Age, Gender, Education, Residence, and Place of Upbringing) were included to examine whether individual background factors explained variance in ratings. Random intercepts were included for participants to account for repeated measures and individual differences in ratings. Random intercepts were also included for items to account for variation across the specific stimuli used. Lastly, random intercepts were introduced for the set to display differences between stimuli groupings.

4.2. Open-ended questions

In addition to Likert-scale ratings, participants were presented with open-ended questions. First, they were asked to indicate the speaker's place of origin and secondly to justify their answer as well as their Likert-scale ratings. The qualitative data were coded based on the recurring patterns observed.

Chapter 5
Results

This chapter presents the statistical model employed and the analysis of open-ended questions, which aim to answer the research questions. First, section 1 demonstrates the mean rating for each trait across the three conditions. Then, the Linear Mixed Model is introduced, followed by checks of the model's assumptions and the post-hoc analysis. Section 2 displays the results of the open-ended questions. The results are further discussed and interpreted in Chapter 6: Discussion.

1. Matched-Guise Test

1.1 Mean condition rating for traits across items

Mean ratings for all polar traits across items are presented per condition in tables 4 - 6. In the 7-point Likert scale, 1 indicated a strong association with the trait presented (e.g., attractive), while 7 signified association with its polar opposite (e.g., unattractive). Therefore, higher scores on the scale reveal a negative semantic association of the guise and the trait. However, a lower score on the scale reflects a positive semantic connection between the guise and the trait.

Overall, as demonstrated in Table 4, the mean of all the traits in No Change is 2.82 (SD = 1.53). This low score suggests that the guise was evaluated positively by the participants. The means for No Change range from M = 2.55 (Friendly) to M = 3.59 (Humorous), indicating that, although participants avoided the extremes of the scale, they associated the speaker with the given traits. Standard deviation (SD) clustered around SD=1.38 (Ambitious) to SD=1.68 (Kind),

suggesting moderate variability in the participants' answers. Humorous (M = 3.59, SD = 1.47) was the highest rated trait, followed by Ambitious (M = 3.25, SD = 1.38) and Modern (M = 3.13, SD = 1.51), suggesting that the speaker was judged to be connected the least with the previously mentioned traits. For the characteristics Intelligent (M = 2.88, SD = 1.41), Attractive (M = 2.79, SD = 1.40), and Educated (M = 2.72, SD = 1.55), some connection was revealed. The lowest-rated traits were Friendly (M = 2.55, SD = 1.60), Kind (M = 2.60, SD = 1.68), Sincere (M = 2.62, SD = 1.60), Dependable (M = 2.62, SD = 1.56), and Pleasant (M = 2.63, SD = 1.70), indicating that the participants associated the speaker strongly with these traits.

Table 4

Mean Ratings by Trait across Items- No Change

Trait	Mean	SD	N
Ambitious	3.25	1.38	204
Attractive	2.79	1.4	204
Dependable	2.26	1.56	204
Educated	2.72	1.55	204
Friendly	2.55	1.6	204
Humorous	3.59	1.47	204
Intelligent	2.88	1.41	204
Kind	2.6	1.68	204
Modern	3.13	1.51	204
Pleasant	2.63	1.7	204
Sincere	2.62	1.6	204
Average	2.82	1.53	204

Note. This Table presents the mean ratings (M), standard deviations (SD), sample size (N), and their average across items for No Change Condition.

As presented in Table 5, the mean across traits is 3.11 (SD = 1.5), demonstrating that despite low evaluations on the scale and what seems to be a positive semantic evaluation, the semantic associations in Deletion are semantically less positive than No Change. The mean ratings for Raising are ordered from M = 2.66 (Kind) to M = 3.70 (Modern), demonstrating a slightly higher overall mean range than No Change. Standard deviation ranges from SD = 1.35 (Intelligent) to SD = 1.64 (Modern), indicating a small variation in the participants' answers. For Raising, Modern (M = 3.70, SD = 1.64) received the highest rating accompanied by Attractive (M = 3.47, SD = 1.37), Humorous (M = 3.42, SD = 1.39), Educated (M = 3.34, SD = 1.47) and Ambitious (M = 3.30, SD = 1.39), revealing an association of the speaker with the opposite traits. The characteristics Intelligent (M = 3.14, SD = 1.35), Dependable (M = 2.98, SD = 1.57), Pleasant (M = 2.78, SD = 1.56), and Friendly (M = 2.73, SD = 1.56) have relatively low means, showcasing that the speaker was perceived to be closely associated with these adjectives. Lastly, Kind (M = 2.66, SD = 1.58) and Sincere (M = 2.73, SD = 1.60) demonstrated the lowest mean, indicating a strong association between the speaker and the adjectives, and therefore the most semantically positive evaluations.

Table 5

Mean Ratings by Trait across Items- Deletion

Trait	Mean	SD	N
Ambitious	3.3	1.39	192
Attractive	3.47	1.37	192
Dependable	2.98	1.57	192
Educated	3.34	1.47	192
Friendly	2.73	1.56	192
Humorous	3.42	1.39	192
Intelligent	3.14	1.35	192
Kind	2.66	1.58	192
Modern	3.7	1.64	192
Pleasant	2.78	1.56	192
Sincere	2.73	1.6	192
Average	3.11	1.5	192

Note. This Table presents the mean ratings (M), standard deviations (SD), sample size (N), and their average across items for Deletion Condition.

As summarized in Table 6, the overall mean across adjectives for Raising is 3.08 (SD = 1.53), indicating relatively low scores on the scale similarly to Deletion, pointing to a small difference in means between the two conditions. The means for Raising varied from M=2.67 (Friendly) to M=3.56 (Modern), and the standard deviation ranged from SD=1.3 (Ambitious) to SD=1.68 (Pleasant). Participants in Raising rated the speaker in the features Modern (M = 3.56, SD = 1.56), Humorous (M = 3.54, SD = 1.44), Attractive (M = 3.33, SD = 1.44), and Ambitious (M = 3.31, SD = 1.30). Although the characteristics Educated (M = 3.26, SD = 1.61), Intelligent (M = 3.08, SD = 1.37) and Dependable (M = 2.92, SD = 1.55) received low ratings, the most semantically positive association occurred with the adjectives Friendly (M = 2.67, SD = 1.59), Kind (M = 2.73, SD = 1.64), Pleasant (M = 2.76, SD = 1.68), and Sincere (M = 2.76, SD = 1.60) as they received the lowest scores.

Table 6

Mean Ratings by Trait across Items- Raising

Trait	Mean	SD	N
Ambitious	3.31	1.3	180
Attractive	3.33	1.44	180
Dependable	2.92	1.55	180
Educated	3.26	1.61	180
Friendly	2.67	1.59	180
Humorous	3.54	1.44	180
Intelligent	3.08	1.37	180
Kind	2.73	1.64	180
Modern	3.56	1.56	180
Pleasant	2.76	1.68	180
Sincere	2.76	1.6	180
Average	3.08	1.53	

Note. This Table presents the mean ratings (M), standard deviations (SD), sample size (N), and their average for each item across Raising Condition..

1.2 Linear Mixed Model (LMM)

A linear mixed-effects model was fitted using lme4 (Bates et al., 2015) and lmerTest (Kuznetsova et al., 2017) packages in R (version 4) with Condition and Adjective as fixed effects, along with their interaction. Participant Age, Gender, Education, Current residence, Place of Upbringing, and Dialect (the participants' self-assessment of their speech as standard or dialect) were added as covariates. Random intercepts were included for Items, Sets, and a random intercept and random slope for Condition were specified by Participant to account for individual differences in responses across conditions. The model was fitted using a maximum likelihood estimation (REML = FALSE). Type III F-test, Satterthwaite's method for degrees of freedom was used to check the significance of fixed effects.

Condition was contrast coded with No Change as the baseline, so that all comparisons reflect the difference across adjectives for each condition, rather than a single adjective. Results revealed a significant main effect of Condition $F(2, 96) = 13.72$, $p < .001$, illustrating that the mean trait ratings differed across the three conditions. Pairwise contrasts based on the model estimates demonstrated that No Change produced significantly lower ratings than Raising ($\beta = -0.18$, $p < .001$), indicating that participants perceived the speaker in No Change as being strongly associated with more positive traits. No Change also resulted in significantly lower ratings than Deletion ($\beta = –0.27$, $p < .001$), showing that the speaker in Deletion was judged to be related to more negative traits. Although Deletion yielded higher ratings than Raising ($\beta = 0.09$, $p = .006$), indicating that the speaker in Deletion was perceived as maintaining more negative characteristics than the speaker in Raising, the comparison was not statistically significant.

Additionally, a significant main effect was found for Adjective $F(10, 6038) = 50.46$, $p < .001$, and a significant interaction of Condition and Adjective $F(20, 6038) = 3.31$, $p < .001$, revealing that the effect of Condition varied across Adjectives. Lastly, among the covariates, only Age was significant, $F(1, 103) = 9.02$, $p = .003$, indicating that older participants gave lower ratings on the scale and therefore perceived the speakers as being linked with more positive characteristics.

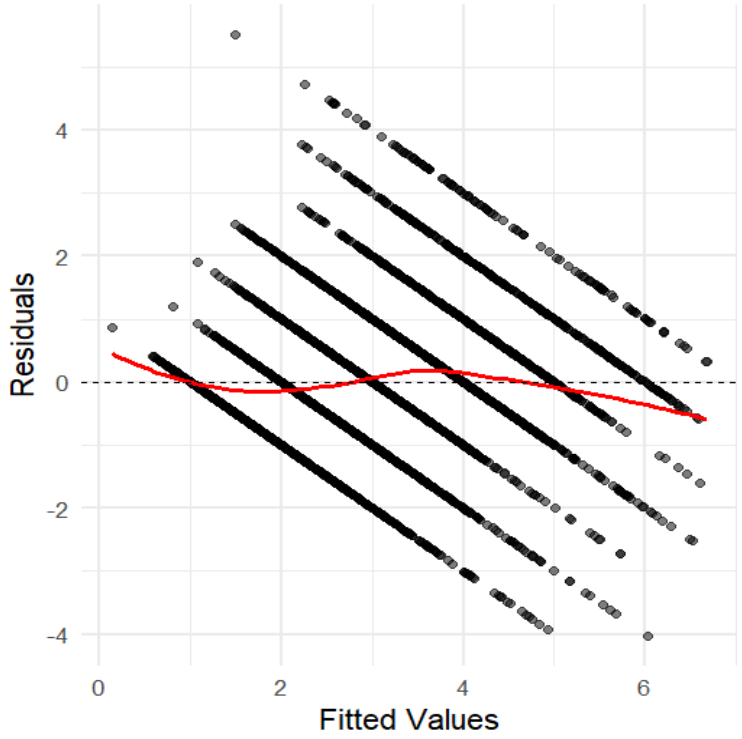
1.3 Assumption of LMM

1.3.1 Linearity

The assumption of linearity was checked for the linear mixed-effects model with a residuals versus fitted values plot. As presented in Figure 1, the residuals were distributed around the zero line, and the trend line was approximately flat, indicating that there is no consistent pattern that suggests the model is missing a nonlinear effect. The shaping of the trend line is expected, given that the Response variable was in the form of a 7-point ordinal Likert scale. The pattern, therefore, does not indicate a violation of linearity but instead describes the number of response categories.

Figure 1

Residual versus Fitted values

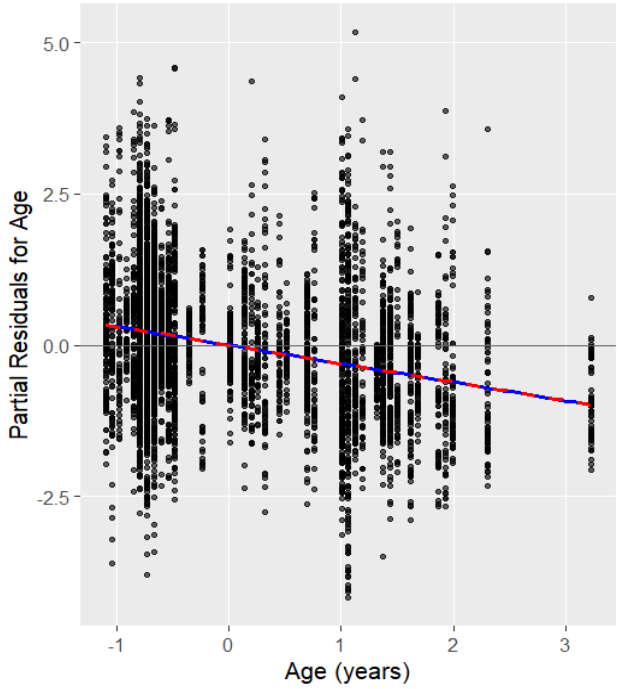


Note. Figure 1 presents the residuals versus fitted values of the linear mixed-effects model. On the X axis, the fitted values represent the model's Likert scale predicted values based on the predictors. On the y-axis, the residuals represent the difference between the observed and predicted values. Each point represents one observation from the dataset. The horizontal line that falls on 0 depicts the point where the model's prediction matches the observed score. The trend line shows the average pattern of the residuals across the fitted values.

Linearity for the continuous predictor Age was evaluated by comparing a linear mixed-effects model with a linear effect of Age to an alternative model with a quadratic term of Age. A likelihood ratio test indicated that the quadratic model did not provide a significantly better fit, $\Delta\chi^2(1) = 0.003$, $p = .96$, suggesting that the assumption of linearity is satisfied. As shown in Figure 2, the red and blue lines overlap, indicating that the relationship between Age and the response is linear. Both lines show a slight negative slope, suggesting that as Age increases, predicted ratings somewhat decrease.

Figure 2

Partial residual plot for Age



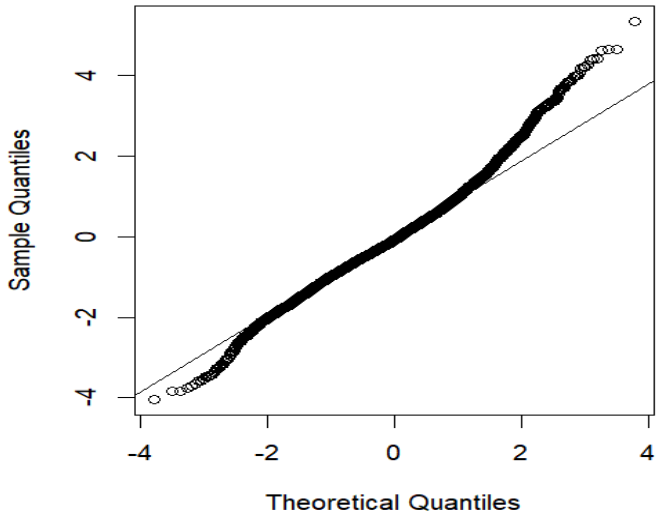
Note. Figure 2 illustrates the partial residuals for Age. The X axis represents age, and the Y axis the residuals from the full model, but adjusted for the effect of age. The adjustment represents the isolated relationship between Age and the response after accounting for all the other predictors. The observed data is plotted with black dots on the figure explaining how responses differ at various ages. While the blue line summarizes the assumption of linearity between age and the response as a fitted linear regression line, the red-dashed line shows the actual trend in the data without assuming linearity.

1.3.2 Normality of residuals

The assumption of normality of residuals was checked for the LMM using a quantile-quantile (QQ) plot. Figure 3 presents the QQ plot and shows that the residuals closely follow the theoretical normal distribution.

Figure 3

Normal QQ plot

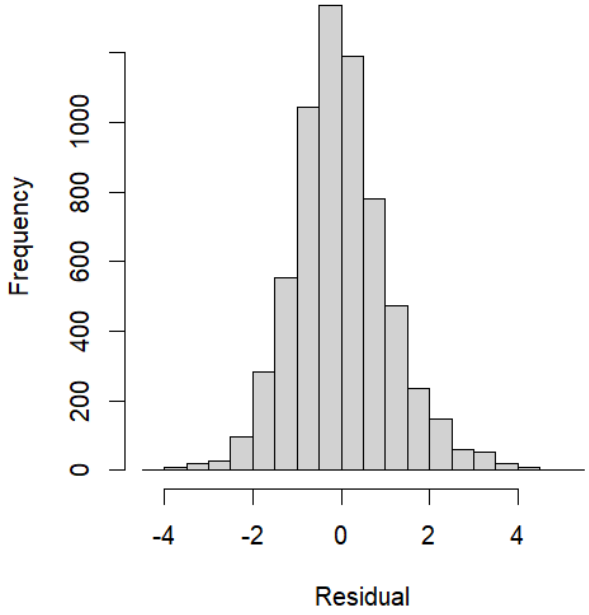


Note. Figure 3 shows the normal quantile-quantile (QQ) plot for the LMM used. The x-axis presents the quantiles of a theoretical normal distribution, and the y-axis plots the quantiles of the observed residuals of the model. Even though small deviations in the tails can be observed, in the middle range, residuals closely follow the line, suggesting normality.

Normality residuals were additionally checked using a histogram. Figure 4 presents the histogram, revealing a symmetric, bell-shaped distribution centered around 0. Most residuals were gathered around -3 to +3. No skewness or outliers were observed.

Figure 4

Histogram of Residuals



Note. Figure 4 presents a histogram of residuals. The x-axis represents the values of the observed and predicted ratings of the model. The y-axis shows how many residuals fall within each bar along the X axis. Taller bars have more observations of that specific residual value. Each bar represents a range of residual values.

1.3.3 Homoscedasticity

Assumption of homoscedasticity was assessed using the residual versus fitted value plot (Figure 2, same as the linearity plot). There was no evidence of a funnel shape or a systematic trend, even though a horizontal grouping is visible due to the ordinal responses obtained on the Likert scale.

1.4 Post hoc analysis

1.4.1 Pairwise Comparisons across Conditions

To assess differences in evaluations across the three conditions, a post-hoc test using Tukey-adjusted pairwise comparisons was conducted. As shown in Table 7 the results indicated that No Change produced significantly lower ratings than both Deletion ($\beta = –0.28$, $SE = 0.06$, $z = –4.67$, $p < .001$) and Raising ($\beta = –0.27$, $SE = 0.06$, $z = –4.49$, $p < .001$). However there was no significant difference between Deletion and Raising ($\beta = 0.01$, $SE = 0.06$, $z = 0.13$, $p = .99$). These results suggest that the speaker in No Change was perceived more favorably than the speaker in Deletion and Raising and that even though there is a difference in evaluations between Deletion and Raising the differences are not caused by the experimental manipulation.

Table 7

Tukey-adjusted pairwise comparison across conditions

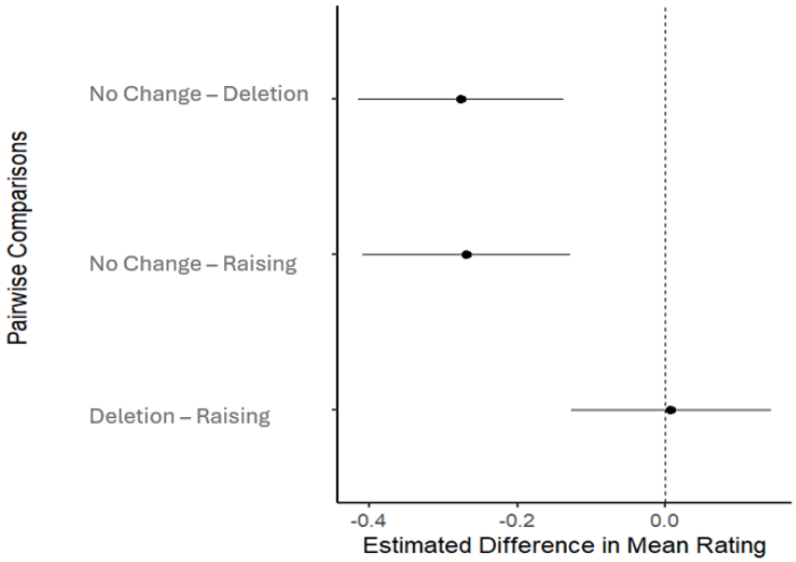
Contrast	Estimate	SE	z	P
No Change - Deletion	–0.28	0.06	–4.67	< .001
No Change - Raising	–0.27	0.06	–4.49	< .001
Deletion - Raising	0.01	0.06	0.13	.99

Note. This Table presents the estimated difference in mean rating across conditions. Each row under contrast compares two conditions; the estimate reflects the estimated difference in mean rating between the two conditions, with negative values indicating that the first condition has lower ratings than the second. SE reports the standard error of the estimate, the test statistic, and p the adjusted p-value (Tukey correction for multiple comparisons).

Figure 5 shows the pairwise comparisons for different condition pairs. The contrast between No Change and Deletion is significant, as the dot is located at -0.03, and the CI does not cross the point 0.0. For the No Change-Raising comparison, the estimated difference in means falls around -0.03, and the CI does not include 0.0, indicating that the difference is statistically significant as well. Lastly, the CI for the No Change-Deletion contrast includes 0.0; therefore, the difference is not statistically significant.

Figure 5

Pairwise Differences in Ratings Across Conditions



Note. This figure illustrates the pairwise differences in ratings across conditions. The x-axis reflects the difference in average rating between the two conditions, and the y-axis demonstrates the pairwise comparison of the conditions. Negative values showcase that the first condition has received a more positive (lower) rating, while positive values indicate that the second condition exhibited lower and therefore more positive evaluations. The dot indicates the estimate of the condition difference, while the error bar surrounding it represents the 95% confidence interval (CI). The dashed vertical line falling at 0.0 determines the point of reference for no difference among the conditions.

1.4.2 Pairwise comparisons for Condition Effects across Traits

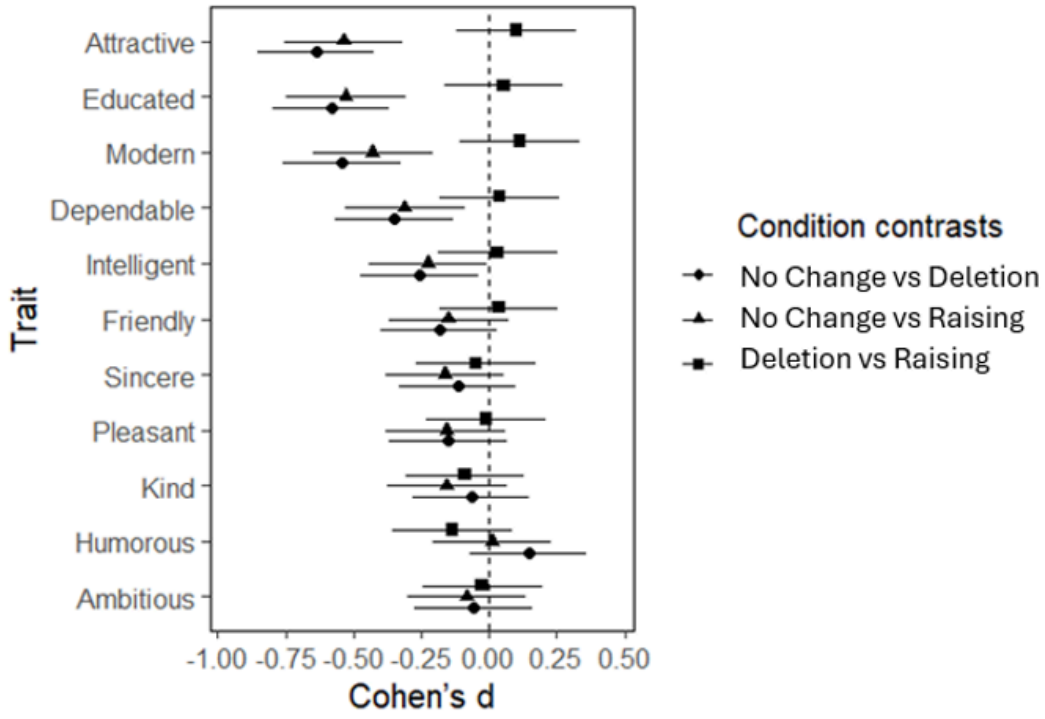
Having demonstrated a significant difference in ratings between the condition pairs No Change - Deletion and No Change - Raising, but no significant differences in the conditions Deletion - Raising, it is now crucial to examine the condition effects across specific traits. Similarly, low ratings signify positive semantic evaluations, whereas higher ratings express less positive association with the trait and therefore more negative semantic judgments.

Pairwise comparisons of condition effects were calculated across traits (see Appendix F and Appendix G). Significant differences were found in ratings for some adjectives. Ratings for 'Attractive' were significantly lower in No Change than in Deletion (β = –0.69, SE = 0.12, z = –5.79, p < .001) and Raising (β = –0.58, SE = 0.12, z = –4.78, p < .001). For the trait 'Dependable' ratings in No Change were lower than in Deletion (β = –0.38, SE = 0.12, z = –3.18, p = .004) and Raising (β = –0.34, SE = 0.12, z = –2.77, p = .016), respectively. For 'Educated', the ratings were lower in No Change than in both Deletion (β = –0.63, SE = 0.12, z = –5.28, p < .001) and Raising (β = –0.57, SE = 0.12, z = –4.71, p < .001). A similar trend was observed for the trait 'Modern', with No Change being ranked lower than Deletion (β = –0.59, SE = 0.12, z = –4.92, p < .001) and Raising (β = –0.47, SE = 0.12, z = –3.83, p < .001). All other comparisons yielded non-significant results (p > .05). Lastly, the trait 'Intelligent' was evaluated with a significantly lower rating only in the comparison No Change- Deletion (β = –0.27, SE = 0.11, p = .039).

As it is presented in Figure 6, effect sizes for most traits were close to 0.00, indicating small differences between condition contrasts. Overall, the pattern that emerged shows that the participants perceived the traits Attractive, Educated, Modern, Dependable, and Intelligent more positively for the No Change guise than for both the Deletion and the Raising guises. The previously mentioned adjectives exhibit the largest negative effect sizes, meaning that participants rated the speaker in No Change lower on these traits than in Deletion and Raising. The corresponding CIs did not include 0.00, indicating statistically significant differences. On the contrary, effect sizes for the comparison of Deletion and Raising demonstrated CIs overlapping 0.00 for the rest of the traits, showcasing that the difference in ratings between these conditions is not significant.

Figure 6

Cohen's d for Condition comparisons across Traits



Note. This figure presents the standardized mean differences (Cohen's d) for pairwise Condition comparisons across traits. On the x-axis, the differences between conditions, measured in standard deviation units (standardized effect sizes), are portrayed. Each row on the y-axis represents one adjective. Each point represents the estimated effect size for a given contrast, with horizontal lines representing the 95% confidence interval (CI). Values near 0.0 indicate a negligible difference. Values falling on the positive side of the x-axis signify the first condition being rated higher, therefore being associated more with the polar opposite trait. On the contrary, negative values display that the second condition in the contrast is evaluated as closer to the opposite feature of the adjective displayed.

2. Open-Box Questions

For the analysis of the open-box questions, the participants' responses were coded and analyzed to interpret and contextualize the MGT results. Specifically, the open-ended questions analyzed are informative of the speaker's origin and the participants' justification for their answers.

2.1 Speaker Origin

For the open-box question inquiring the origin of the speaker, the responses were coded based on the patterns observed. To be more specific, the two biggest urban centers in Greece (Athens and Thessaloniki) remained as separate categories. In an attempt to create broader categories, other cities mentioned were coded for the geographical region they are located in, whereas answers including general direction were coded for cardinal directions. More descriptive answers were coded based on whether the participant indicated a province, a city, or an island (either by name or just the noun). Therefore, the categories created were: 'Athens', 'Province', 'Islands', 'Thessaly', 'Central Greece', 'No accent/Anywhere', 'Do not know', 'Epirus', 'North Greece', 'City', 'Peloponnese', 'Attica', 'Macedonia/Thrace', 'South Greece', 'Airport', 'Thessaloniki', 'Western Greece'.

Figure 7 presents the distribution of perceived speaker origin across the three conditions. In No Change, almost half of the answers (42%) stated that the speaker originated from 'Athens', followed by smaller percentages associated with the 'Islands'(11%), a 'Province' (7%), and a 'City' (7%). 'Central Greece' was among other responses that were not used very often (6%), alongside 'No accent/Anywhere' (5%), 'Thessaly' (4%), and 'I do not know' (4%). Among the

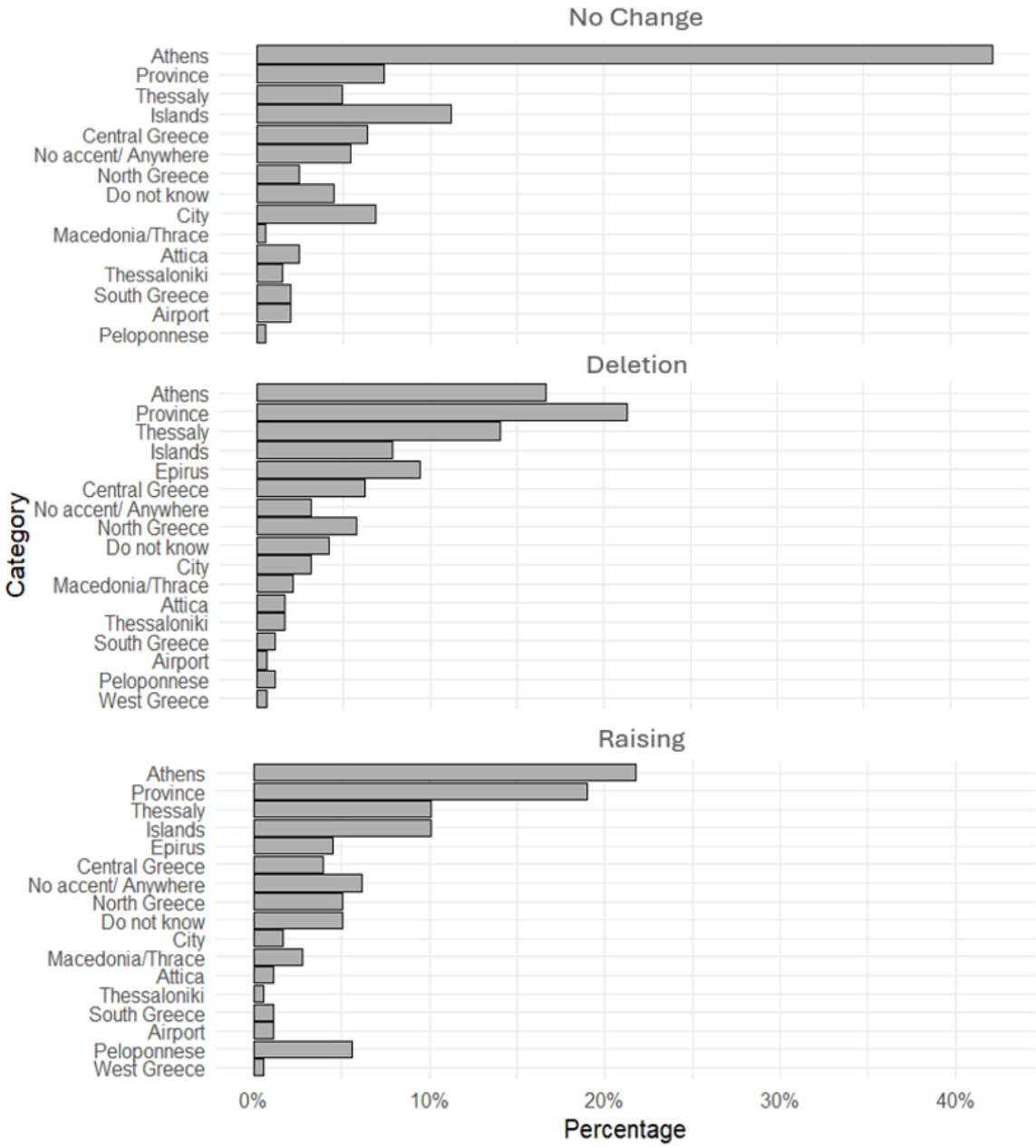
least frequently used answers were 'Attica' (2%), 'Northern Greece' (2%), 'Thessaloniki' (2%), 'Macedonia/Thrace' (1%), and the 'Peloponnese' (1%). An additional 2% did not understand the question and answered that the speaker is located in an 'Airport'.

For Deletion, the category that was mentioned the most was 'Province' (21%), followed by 'Athens' (16%), 'Thessaly' (14%), Epirus (8%), and the 'Islands' (8%). Categories that were used less were 'Central Greece' (5%), 'Northern Greece' (5%), 'No accent/Anywhere' (3%), and 'City' (3%). Other mentions included 'I do not know' (3%), 'Attica' (2%), 'Thessaloniki' (2%), 'Macedonia/Thrace' (2%), 'South Greece' (1%), 'Western Greece' (1%), and 'Airport' (1%).

In Raising, the classifications that were mentioned the most frequently were 'Athens' (21%), 'Province' (19%), and 'Islands' (10%). Categories that were used less often were 'Thessaly' (10%), 'No accent/Anywhere' (6%), 'Northern Greece' (5%), 'I do not know' (5%), 'Peloponnese' (5%), and 'Central Greece' (5%). These categorizations were followed by 'Epirus' (4%) and 'Macedonia/Thrace' (3%). Answers stated the least were 'City' (1%), 'Attica' (1%), 'Airport' (1%), 'South Greece' (1%), 'Thessaloniki' (1%), and 'Western Greece' (1%).

Figure 7

Distribution of Perceived Speaker Origin



Note. The figure presents the percentage distribution of the coded categories for perceived speaker orientation. The x-axis shows the percentage, and the y-axis depicts the coded categories. The three facets correspond to each condition.

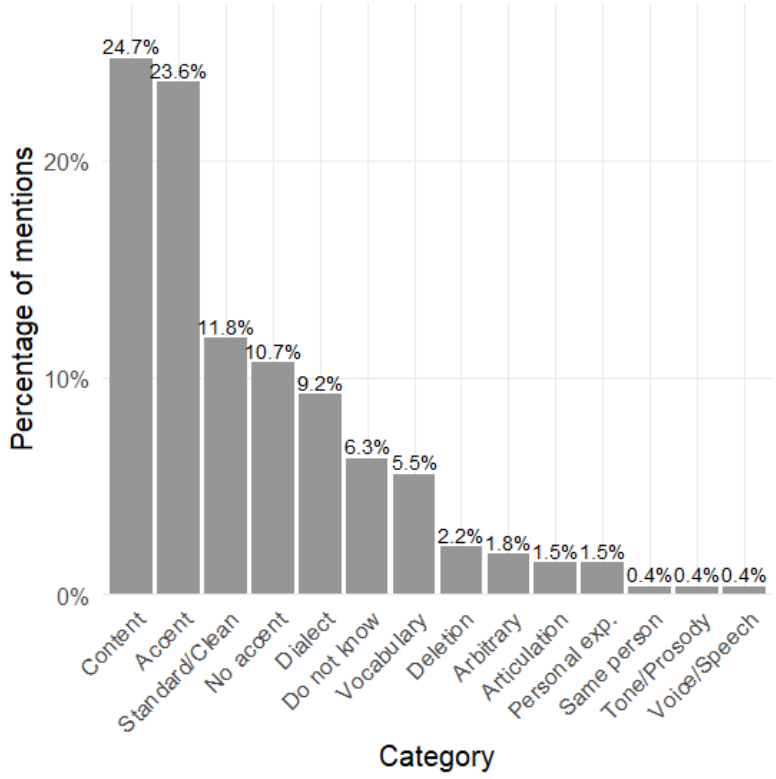
2.2 Speaker Origin Justification

The open-ended responses explaining the participants' justifications of speaker origin were coded for the presence of linguistic features mentioned by participants. The features included 'Accent', 'Dialect', 'Deletion of letters or vowels', 'Vocabulary', 'Tone/prosody', 'Articulation', and 'Content'. Additional categories were created to capture references to other comments, such as 'Standard or clean speech', 'Personal experience', or ' Do not know' or 'Dame person'. Multiple features within a single response were counted individually. For each condition, the total number of mentions was divided by the total number of mentions across all categories in that condition. The percentages, therefore, represent how salient each linguistic cue within one condition is.

Figure 8 presents the percentage of total mentions of each category for No Change. For SMG 'Content' (24.7%) and 'Accent' (23.6%) were the most frequently used, followed by 'Standard or clean speech' (11.8%) and 'No accent' (10.7%). Mentions of 'Dialect' (9.2%), 'Do not know' (6.3), and 'Vocabulary' (5.5%) were less common. Lastly, the most rare categories were 'Deletion' (2.2%), 'Articulation' (1.8%), 'Personal experience' (1.5%), 'Same person' (1.5%), 'Tone/prosody' (0.4%), and 'Voice/speech' (0.4%).

Figure 8

Percentage of each category in No Change Condition



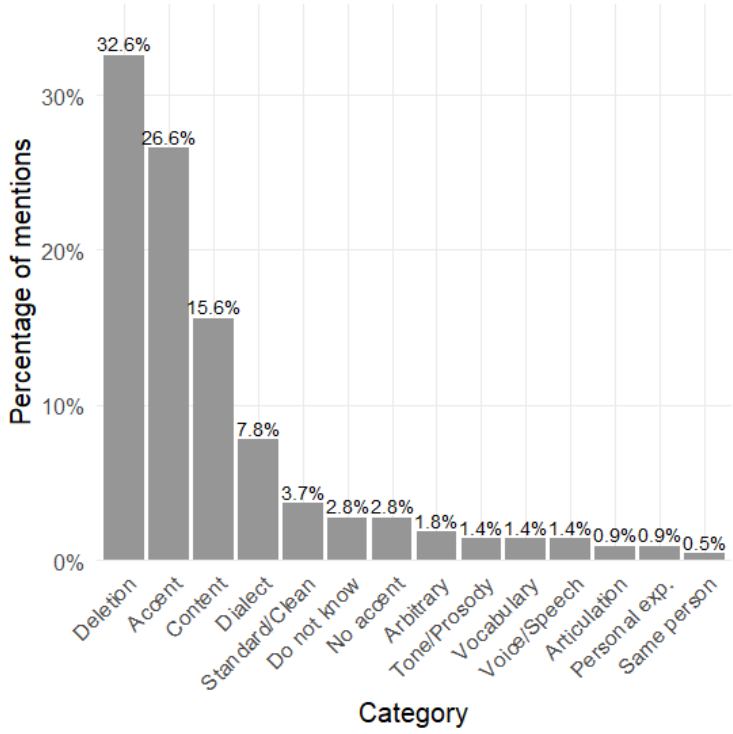
Note. The figure presents the salience of each linguistic cue mentioned by participants in No Change. The x-axis represents each category, and the y-axis represents the percentage of total mentions in this condition.

Figure 9 illustrates the percentage of total mentions of each category for Deletion. For /i/ deletion, the most frequent answer was 'Deletion' (32.6%), followed by 'Accent' (26.6%) and 'Content' (15.6%). Categories mentioned less frequently were 'Dialect' (7.8%), 'Standard/clean

speech' (3.7%), 'Do not know' (2.8%), and 'No accent' (2.8%). Lastly, rarely cited justifications were 'Arbitrary' (1.8%), 'Tone/prosody' (1.4%), 'Vocabulary' (1.4%), 'Voice/speech' (1.4%), 'Articulation' (0.9%), 'Personal experience' (0.9%), and 'Same person' (0.5%).

Figure 9

Percentage of each category in Deletion Condition



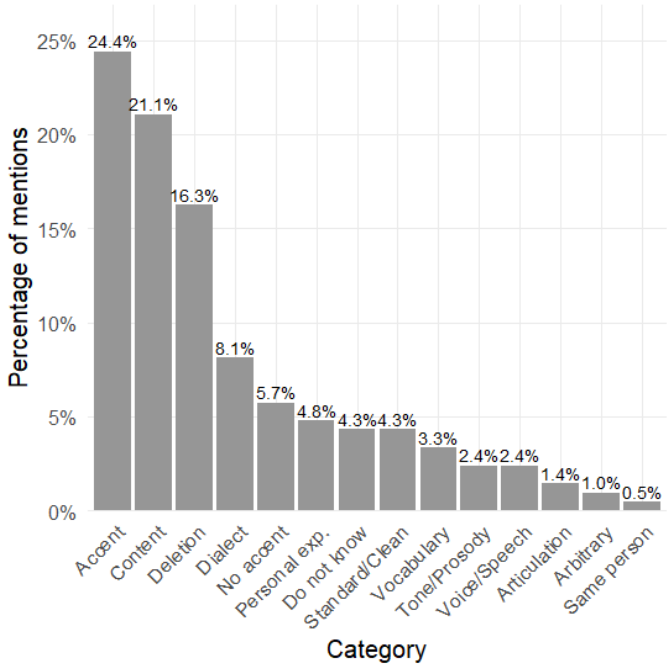
Note. The figure presents the salience of each linguistic cue mentioned by participants in Deletion. The x-axis represents each category, and the y-axis represents the percentage of total mentions in this condition.

Figure 10 summarizes the percentage of total mentions of each category for Raising. For /e/ raising 'Accent' (24.4%), 'Content' (21.1%), and 'Deletion' (16.3%) were the most frequent categories used. Mentions of 'Dialect' (8.1%), 'No accent' (5.7%), and 'Personal experience'

(4.8%) were also substantial, followed by 'Do not know' (4.3%), 'Standard/clean speech' (4.3%), and 'Vocabulary' (3.3%). Least frequent justifications included 'Tone/prosody' (2.4%), 'Voice/speech' (2.4%), 'Articulation' (1.4%), 'Arbitrary' (1.0%), and 'Same person' (0.5%).

Figure 10

Percentage of each category in Raising Condition



Note. The figure presents the salience of each linguistic cue mentioned by participants in Raising. The x-axis represents each category, and the y-axis represents the percentage of total mentions in this condition.

Overall, the data collected from the open-box questions revealed clear patterns across conditions. For No Change, the speaker is associated with Athens, the capital, supporting the association of SMG with urban centers. On the contrary, both Deletion and Raising are associated with province and therefore, non-urban regions. This finding suggests that /e/ raising and /i/ deletion are phonetic features that are perceptually associated with regional variation in contrast to SMG spoken in Athens. This pattern is in alignment with previous sociophonetic studies in Greek, which underline the perceived connection of standard forms with urban centers and regional features with provincial regions (Papapavlou, 1998; Pappas, 2017; Trudgil, 2003).

Chapter 6
Discussion

This chapter aims to answer the research questions and to link the present studies with prior sociolinguistic research. Section 1 provides an overview of the findings, followed by sections 2 and 3 that break down the quantitative and qualitative results, respectively. Section 4 addressed the theoretical implications, and finally, Section 5 focuses on the methodological limitations of the present study as well as future research directions.

1. Overview

The purpose of this study was to address the research gap regarding speakers' attitudes toward phonetic variation in SMG. The research questions posed were whether listeners' evaluations of guises that adopt different characteristics vary, indicating that phonetic variation carries social meaning, and, secondly, whether SLI is reflected in listeners' interpretations of the different guises. Participants' attitudes were assessed using the Matched Guise Test (MGT). Specifically, participants listened to recordings of the same speaker in three different conditions. Those were No change Condition (No Change), speech that utilized /i/ deletion (Deletion), and speech that featured /e/ raising (Raising).

Overall, the MGT revealed that the speakers evaluated the No Change guise to be associated with more semantically positive traits (M = 2.82) than Deletion (M = 3.11) and Raising (M = 3.08). Significant effects were found for condition and certain adjectives. To be more specific, the comparisons that produced statistically significant results were No

Change-Deletion and No Change-Raising. As for the adjectives concerned, the No Change guise was systematically judged as more attractive, dependable, educated, and modern in comparison to Deletion and Raising. The No Change guise was evaluated as more intelligent in the No Change-Deletion comparison.

Additionally, the patterns observed in the open-ended questions provide insight into how participants perceived the speaker's origin in each condition, as well as into the motivation behind their answers. In No Change, almost half of the participants identified the speaker to be from Athens. This connection reflects an association of the standard variety with the capital. (Terkourafi, 2005; Theodoropoulou, 2013). The participants' justifications show that what influenced their choices was the content, the accent, or what they perceived as standard and 'clean' speech. This justification suggests that the speech was understood as neutral and not marked.

In Deletion, the majority stated that the speaker originates from a province, indicating that the speech manipulation was salient and that the speech is not perceived as the standard variety spoken in an urban center. Despite this fact, many participants identified the speaker's origin as being from a province or Thessaly, a region located in northern Greece. Participants' justifications revealed that their answers were motivated by 'letter deletion' or 'accent', indicating that high-vowel deletion was associated with regional and provincial speech, particularly those from northern regions.

In Raising, the participants' answers did not reveal a clear categorization. It can be hypothesized that this is caused by the perceptual difference between Deletion and Raising. On the one hand, deletion can be easier to describe, as it involves the presence or absence of a letter.

On the other hand, raising is a more complex change that non-linguists might find harder to describe, resulting in an unclear categorization in the participants' responses. In addition, the majority of the participants perceived the speaker to be from Athens, although many of them identified the speaker as originating from a province. The most common reasons to influence their answers were accent, content, and deletion.

The patterns observed in both the quantitative and qualitative results support some of the hypotheses and reflect a gradience in the hierarchy of social meaning, with No Change receiving the most semantically positive evaluations, Deletion being the most stigmatized guise, and Raising not indicating a categorical pattern but rather a less salient phonetic variable. An interesting observation is that the quantitative results suggest that there is no significant difference between Deletion and Raising, while the qualitative results suggest that the participants perceive the two variables differently.

1. Quantitative Results

Hypothesis 1

To answer Research Question 1, listeners evaluate differently guises that adopt different speech characteristics. Results of the LMM revealed that ratings differed systematically across conditions. No Change received lower ratings on the 7-point Likert scale and, therefore, was associated with more semantically positive evaluations. To the contrary, Deletion received the highest ratings and hence, was linked with semantically negative associations. Lastly, Raising received lower ratings than Deletion but higher ratings than No Change, indicating that even though /e/ raising was a salient feature, /i/ deletion is more heavily stigmatized. However, the

Deletion -Raising comparison was not significant. These differences suggest that vowel deletion and raising are salient phonetic cues that influence the listeners' attitudes.

These findings support Hypothesis 1, which predicted that No Change would be perceived more favourably than Deletion and Raising. This result aligns with Papapavlou (1998), who employs the MGT to elicit the attitudes of Greek Cypriots towards SMG and CG. The study reports that SMG was judged more positively in comparison to the Cypriot dialect. Additionally, Pavlou & Papapavlou (2004) examine teachers' attitudes toward SMG and CG, pointing out that SMG is a linguistic marker of power and prestige. Even though the teachers do not evaluate CG negatively, they correct the students' in-class expressions in CG and refrain from using the dialect unless they want to seem relaxed or friendly to the students. Therefore, in supporting Hypothesis 1, both in this study and in Pavlou & Papapavlou (2004), SMG is associated with education and prestige.

However, Evripiou (2012) compares SMG to CG and reports that the Cypriot guise was evaluated more positively than the SMG guise. This difference can be attributed to the variation in participant pools between the two studies. On the one hand, Papapavlou (1998) elicits the attitudes of university students, while Evripidou (2012) reports that participants in the study were born in the 1960s. In Papapavlou (1998), the results can be interpreted as indicating that young students idealize the use of SMG. In contrast, Evripidou (2012) views the use of CG as marking solidarity and identity, as well as emotional attachment to historical events that occurred in Cyprus during the 1970s.

Hypothesis 2

Moreover, the findings support Hypothesis 2, which anticipated that No Change would be evaluated more positively on traits that reflect competence, status, and education. It was hypothesized that the adjectives expected to yield significant differences in status, competence, and education are ambitious, intelligent, modern, educated, and attractive. However, the No Change guise was consistently given a lower rating and therefore had a stronger association with the traits 'attractive', 'dependable', 'educated', and 'modern' in the No Change-Deletion and No Change-Raising comparisons. The trait 'intelligent' showed significant differences only in the No Change-Deletion comparison.

In Papapavlou (1998), participants associated the standard guise with traits that signal prestige and correctness. Those traits were attractive, dependable, interesting, intelligent, modern, ambitious, and pleasant. Given the close similarity in traits associated with No Change, the two findings are interpreted as being in alignment, and in this study, No Change is interpreted as signaling prestige and correctness.

Papas (2017) examined vowel raising and deletion in a community in Northern Greece and found that /i/ deletion is affected by gender and migration status of the locals. Specifically, residents who migrated back to the community after living in an urban center, as well as women, avoided /i/ deletion and preferred the standard pronunciation. Additionally, /e/ raising was also avoided by people who had received higher education compared to those who had received secondary education. Therefore, /i/ deletion is interpreted to carry more stigma because returning migrants avoid it to adjust to the standard language norm. At the same time, women are more likely to avoid heavily stigmatized forms (Papas, 2017).

Building on the findings of Papas (2017), the results of this study indicated that guises in Deletion systematically received higher scores in the Likert scale and, therefore, were associated with more semantically negative evaluations. Significant differences in Deletion were observed for traits related to competence and status. The Deletion guise was perceived as less attractive, less dependable, less educated, less modern, and less intelligent than the No Change guise. The guise in Deletion is more traditional and potentially less appealing than the guise in No Change. This negative shift in competence and status-related adjectives suggests that /i/ deletion is perceived to indicate a non-standard variety and lower prestige. However, the traits friendly, kind, pleasant, and sincere all received very positive evaluations across all conditions. For Deletion, this suggests that participants rated the speaker as likable and genuine, even if they judged them as less educated.

An interesting parallel can be drawn with Campbell-Kibler (2009). The study examined how listeners perceive social meaning in the variable -ing (talking-talkin'). Participants originated from the West Coast and the South of the U.S. Specifically, at a first glance, the use of -ing indexes a status dimension deriving from its association with intelligence and education. However, this interpretation is not similar for all participants in the study. Participants' interpretations were based on contextual information such as regional accent, gender, or perceived social class, indicating that social meaning is stratified. Similarly, in this study, /i/ deletion indexes a non-standard variety and lower education, resulting in more semantically negative evaluations for traits associated with competence and status. While Campbell-Kibler's study finds that social meaning is layered and different linguistic cues can influence participants' perceptions, this study suggests that context may have affected participants' inferences of

nonstandardness. The open-ended questions about speaker origin justification reveal that, across conditions, participants stated that the content of the stimuli influenced their views on the speaker's origin justification. As a result, even though /i/ deletion is associated with lower status prestige and nonstandardness, its interpretation was influenced by other contextual inferences about the speaker.

Hypothesis 3

Hypothesis 3, suggesting that Deletion will be stigmatized the most among the three conditions and will be associated with lower prestige, is not supported by the findings. The results revealed that the differences in the participants' evaluations are significant only when No Change is compared to Deletion and when No Change is compared to Raising. The comparison between Deletion and Raising did not yield significant results. Therefore, even though Deletion received the most semantically negative evaluations in comparison to No Change, no overall conclusions can be made when all three conditions are compared simultaneously.

Hypothesis 4

Hypothesis 4 is also not supported. Although Raising was stigmatized less than Deletion guises and evaluated more negatively than No Change, there was no statistical significance in the comparison of Deletion to Raising.

In Trudgil's (2003) classification of Greek dialects, it is stated that northern dialects delete unstressed /i, u/ and raise unstressed /e, o/. However, based on other classifications of the northern dialects, different patterns have been observed, with high vowel loss being more prominent in all northern dialects compared to /e, o/ raising. Additionally, Topintzi & Baltazani

(2012) emphasize that in their data /i/ deletion occurs more often (55% of the instances) than /e/ raising (35% of the instances). Therefore, even though vowel raising has been observed and documented across Northern Greek dialects, it does not function as a clear marker. One possible explanation is that it is not as acoustically salient as vowel deletion. On the one hand, vowel deletion involves the loss of a segment within the syllable structure. On the other hand, vowel raising preserves the unstressed syllable structure and is therefore less salient.

Although /e/ raising has been argued to carry less stigma than /i/ deletion (Papas, 2017), the results of the present study suggest that listeners did not differentiate between the two conditions with non-standard characteristics (Deletion, Raising). Even though the ratings between Deletion and Raising are slightly different, there is no statistical difference between them. It is possible to interpret this pattern as a result of the distinction between SMG and non-standard speech, where listeners evaluated similarly the conditions that did not have standard phonetic cues. The experimental design could have reinforced this distinction as participants were presented with all conditions and could distinguish the non-standard conditions from the standard. Alternatively, the difference between Deletion and Raising is too subtle to be detected in the present experiment.

2. Qualitative Results

Hypothesis 5

Hypothesis 5 suggests that the qualitative responses will reveal that the listener's judgments are influenced by ideological beliefs consistent with Standard Language Ideology (SLI). The answers to the open-ended questions support this hypothesis. When participants were

asked to indicate the speaker's origin, the majority (42%) associated SMG (No Change) with the capital, Athens. In addition, 7% of the respondents connected No Change with a city, and 5% stated that there is no distinct accent indicating a place of origin. These parallels suggest that standardness is linked with either the political center of Greece or an urban center, in general, or with the lack of any marked speech characteristics. Therefore, standard speech is perceived as neutral or correct and associated with urban centers. As a result, the findings align with the ideology that views linguistic prestige as connected with social status and centralization in urban centers.

Although the quantitative results indicated that there is no difference between Deletion and Raising, the qualitative results suggest that the two conditions differ in terms of the geographical origin of the speaker. The most frequent answer for Deletion is Province (21%) and for Raising, Athens (21%). This might suggest that deletion is linked to provincial speech and functions as a socially marked variant, which is in alignment with previous studies (Lengeris, 2016; Pappas, 2017). On the contrary, even though the majority of the participants perceived Raising to be originating from Athens, 19% of the responses connected Raising with Province. It can therefore be hypothesized that raising is less stigmatized than deletion. This distinction, however, derives from the qualitative data, as the quantitative results do not suggest any difference between Deletion and Raising.

Hypothesis 5 can be further supported by the participants' answers to the speaker's origin justification question. Answers for No Change indicate that the participants' evaluations stemmed from the speaker's accent (23.6%). Taking into account the answers to the speaker's origin question, this accent is interpreted as the standard. This view is further supported by the

percentages that indicated that the speaker had standard, or namely ‘clean speech’ (11.8%) or other mentions of ‘no accent’ (10.8%). The findings support the notion that SMG is perceived as the correct and neutral form of Greek, a perception that aligns with SLI, which views standard languages as the accurate and prestigious form.

Moreover, the justifications in Deletion reveal that the participants are aware of the phonetic variation that they often mark as incorrect. Namely, 32% of the responses explain that their answers are influenced by the speaker deleting letters (32%) or by the speaker’s accent (26.6%) or dialect (7.8%). The results indicate that /i/ deletion functions as a marked linguistic feature associated with non-standard speech. The decreased percentage of standard/clean speech (3.7%) and its increased association with provincial regions and non-urban centers suggest that /i/ deletion is not associated with prestige and is stigmatized.

Justifications in Raising demonstrate that /e/ raising is marked but not heavily stigmatized. The majority of the responses were influenced by the speaker’s accent (24.4%), dialect (8.1%), and what was categorized as deletion (16.3%). At the same time, the percentages in the other categories have increased compared to Deletion, with the most notable being ‘no accent’ (5.7%) and ‘standard/clean’ (4.7%). The results are interpreted as implying that /e/ raising is not strongly stigmatized, although it is connected with regional non-standard speech.

To conclude, the participants’ judgments reflect beliefs that are consistent with SLI. The results revealed that the listeners treated No Change as the guise with the neutral, unmarked accent, and they associated Deletion and Raising with non-standard speech and no urban centers. Additionally, the participants perceived No Change to be strongly connected with the traits: ‘attractive’, ‘dependable’, ‘educated’, ‘modern’, and ‘intelligent’. On the contrary, the Deletion

guise was judged to be significantly less associated with the previously mentioned traits. Lastly, the Raising guise was evaluated more positively than the Deletion, but less positively than the No Change, with the difference in evaluations between Deletion and Raising not being statistically significant. The patterns indicate that the participants' evaluations are influenced by SLI, which privileges standard variety and stigmatizes the non-standard variants.

3. Theoretical Implications

The patterns observed in this study can be interpreted within the third wave of sociolinguistics. Characteristics such as unstressed high vowel deletion or unstressed mid-vowel raising have been documented by several sources (Dauer 1980; Hawks & Fourakis, 1995; Botinis et al., 1997; Fourakis et al., 1999; Topintzi & Baltazani, 2012; Lengeris, 2016; Themisticleous, 2017; Pappas, 2017). The findings of the present study demonstrate that vowel deletion and vowel raising function as distinct and salient sociophonetic phonetic cues, and that Greek native speakers draw on these to make inferences about speakers, even when the variants do not occur in natural speech, but are instead produced in experimental settings. This is in alignment with previous studies showcasing that perceptual information is carried by vowels and their realization (Botinis et al., 1997; Lengeris, 2016; Themistocleous, 2017).

Eckert (2008, 2012) argues that variation in the third wave becomes socially meaningful and functions as a means of constructing and interpreting identity within society. In this study, the No Change guise consistently received more semantically positive evaluations, while both vowel raising and vowel deletion are socially marked. Deletion and Raising guises were systematically associated with semantically negative evaluations and elicited judgments of lower

competence, prestige, education, and intelligence (only for Deletion) in comparison to No Change. These patterns indicate that the manipulated variables were carrying social meaning independently of the controlled context in which they appeared. Drawing on Silverstein (2003), both conditions exhibit second-order indexicality. To be more specific, the phonetic variation is not only interpreted as a linguistic characteristic, but rather as one that carries social meaning and is connected with non-standardness, lower prestige, education, and competence.

Lastly, the evaluations in this study support observations about SLI in the Greek context. The systematic, semantically positive evaluations of the No Change guise reflect an ideology that posits the standard as socially acceptable, prestigious, and connected with education (see Moschonas, 2004, 2019). On the contrary, the semantically negative assessment associated with Deletion (/i/ deletion) and with Raising (/e/ raising) reflects ideological evaluations that perceive non-standard varieties as less prestigious, informal, and socially marginalized. These patterns reflect how SLI shapes the listeners' evaluations and maintains associations of lower status and competence with the non-standard variety, even in the Greek context.

4. Limitations and Future Research

This study contributes to the examination of language attitudes toward phonetic variation within Greece, an area that has received limited attention in sociolinguistic research. Previous studies have focused on extensive classifications based on linguistic features (e.g., Kontosopoulos, 1994; Newton, 1972; Trudgil, 2003) or on examining attitudes toward the comparison of CG and SMG while employing the MGT (Lambert et al., 1960; Loureiro-Rodriguez, Boggess, & Goldsmith, 2013; Lai, 2007) or other methodologies (Garrett,

et. al., 2003; Kircher & Zipp, 2022; Papapavlou, 1998; Pavlou & Papapavlou, 2004; Evripidou, 2012; Karatsareas, 2018; Sophocleous, 2009). However, fewer studies have investigated attitudes on other phonetic variation combinations within Greece, excluding Cyprus, especially by using the MGT. Hence, the methodological contribution of the present study is that it attempts to fill a gap within the existing literature by employing the MGT to assess how Greek native speakers evaluate two documented characteristics that are prominent in the Northern varieties, /i/ deletion and /e/ raising.

To achieve this, the study opted for a controlled experimental design that aimed to minimize speaker variability. The same speaker was used to create the stimuli for all three conditions, ensuring that the participants' inferences about the speaker's voice quality, articulation, speech rate, and ultimately personality characteristics would be based on one speaker. Therefore, the differences in the participants' evaluations could be attributed to the experimental design rather than to the differences between multiple speakers. Additionally, the stimuli consisted of text, not single words, aiming to resemble naturalistic speech, aligning with the stimuli used in studies employing the MGT.

Although the MGT is a widely used method to gauge the implicit language attitudes of speakers, it has received some criticism. The main concern regarding this experimental method is its validity. Speakers' attitudes may be influenced by the manipulated variables, but only the use of MGT is not informative of whether the participants' evaluations are based on the guises they heard or any other features (Edwards, 1982). As an attempt to tackle this criticism, this study adopted a mixed methods design, combining quantitative evaluations with qualitative explanations. The Likert scale enabled a quantitative comparison of the results, whereas the open-ended questions functioned as a space for the participants to elaborate on their answers and

give further explanations about their assumptions and reasoning. Specifically, the qualitative data provided valuable information to help further interpret the scores of the MGT and report on the metalinguistic associations the participants make, as well as their stereotyping patterns across phonetic features (Garrett et al. 2003).

However, the MGT as a research method encompasses another limitation. Even though the recordings used can capture the targeted linguistic variables, they are not a product of natural speech occurring in a communicative context. The participants, therefore, may pay more attention to the linguistic properties than they would in a normal conversation, or the participants' responses might be influenced if they become aware that the guise is a result of reading and not spontaneous speech (Kircher & Zipp, 2022). Moreover, they respond to a decontextualized voice that, even though it is connected to the passage, does not contribute to the ecological validity of the study.

Additionally, although the results of the study are promising and seem to indicate a clear pattern of linguistic hierarchy and prestige of the standard variety, influenced by SLI, two factors render the results promising but point out the need for further research. First, the demographic composition is not representative of the entire Greek population. Specifically, the majority of the participants were younger, educated, and currently residing in urban centers, with greater exposure to SMG. Secondly, given that this study is based on the MGT methodology, the analysis of the qualitative data was not in-depth. As a result, the qualitative data provided should be viewed as supplementary to the quantitative method used.

The methodological limitations discussed above render clear several paths for future research. Firstly, the qualitative responses collected through the survey could be examined in further detail and provide a more well-rounded analysis of the themes and patterns exhibited. In

the present study, the responses were collected and coded to support and contextualize the quantitative findings. As a result, a more detailed qualitative approach that does not treat the responses as supplementary material could shed more light on how listeners construct social meaning on phonetic variation.

Secondly, even though this study provides an important starting point for applying the MGT to examine attitudes toward phonetic variation within Greece, obtaining a more representative picture requires a larger and more diverse pool of participants. The present sample is largely composed of younger, educated participants who reside in urban centers in Greece or even abroad. Future research should include participants across a wide range of age groups, educational backgrounds, and, most importantly, geographical regions, to account for more generalizable results deriving from a heterogeneous participant pool.

Lastly, it is crucial to acknowledge that the phonetic characteristics examined in the present study represent only a small part of the features that constitute regional variation in Greece. Within northern Greek varieties, unstressed vowel deletion is not limited to /i/, and unstressed vowel raising does not only occur in /e/. Therefore, future research could look into the broader range of regional variation and aim to examine attitudes toward stimuli that incorporate patterns that characterise the regional variation as a whole, in contrast to some of its features. Additionally, examining attitudes toward variation that occurs in other regions than the north of Greece could provide valuable insights into how SLI shapes listeners' judgments and could lead to border ideological patterns that have yet to be examined.

Circling back to the proverb discussed in the introduction, this study does not directly address whether Greek listeners make inferences based on appearance-related stereotypes;

however, it does give a glimpse into the ideology and linguistic stereotypes that shape how varieties of the language spoken in mainland Greece are perceived.

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Appendix A
Information and Consent Block

This appendix presents the information and consent block as it appeared in the survey that was distributed to the participants. First, the original version is displayed in Greek, followed by a faithful translation in English.

Αγαπητοί/ές συμμετέχοντες,

Καλείστε να λάβετε μέρος σε μία έρευνα που επικεντρώνεται στα κοινωνιοφωνητικά μοτίβα που παρατηρούνται στα ελληνικά. Η παρούσα μελέτη διεξάγεται στο πλαίσιο της πτυχιακής εργασίας της Γεωργίας Λυχναρά, υπό την επίβλεψη του Dr. B.P.P Storme, στο Τμήμα Ανθρωπιστικών Επιστημών του Πανεπιστημίου Leiden.

Σκοπός της Έρευνας

Η έρευνα έχει ως στόχο να διερευνήσει τις υποθέσεις που σχηματίζουν οι άνθρωποι για τους ομιλητές της ελληνικής γλώσσας.

Διαδικασία Συμμετοχής

Θα σας ζητηθεί να ακούσετε μια σειρά σύντομων ηχογραφήσεων και να απαντήσετε σε μερικές σχετικές ερωτήσεις. Στη συνέχεια, θα ολοκληρώσετε ένα δημογραφικό ερωτηματολόγιο.Οι απαντήσεις και τα δημογραφικά σας στοιχεία θα καταγραφούν.

Η έρευνα θα διαρκέσει περίπου 15 λεπτά.

Ανωνυμοποίηση Δεδομένων

Όλες οι απαντήσεις σας θα είναι πλήρως ανώνυμες, δεν θα συλλεχθούν ευαίσθητες πληροφορίες ή προσωπικά δεδομένα. Τέλος, δεν υπάρχουν αναμενόμενοι σωματικοί ή ψυχολογικοί κίνδυνοι που σχετίζονται με τη συμμετοχή σας σε αυτή την έρευνα.

Ενημερωμένη συγκατάθεση

Κάνοντας κλικ στο βελάκι κάτω δεξιά δηλώνετε ότι:

- Είστε τουλάχιστον 18 ετών
- Κατανοείτε τον σκοπό αυτής της μελέτης
- Συμφωνείτε να συμμετάσχετε εθελοντικά

Είστε ελεύθεροι να αποσυρθείτε από τη μελέτη ανά πάσα στιγμή και να κλείσετε την έρευνα νωρίτερα αν το επιθυμείτε.

Επικοινωνία Για ερωτήσεις ή διευκρινίσεις, μπορείτε να επικοινωνήσετε με: Γεωργία Λυχναρά, g.lychnara@leidenuniv.nl

Translation

Dear participants,

You are invited to take part in a study focusing on the sociophonetic patterns observed in Greek. This research is conducted as part of the Master thesis of Georgia Lychnara, under the supervision of Dr. B.P.P. Storme, at the Faculty of Humanities, Leiden University.

Purpose of the Study

The aim of this research is to investigate the assumptions people make about speakers of the Greek language.

Participation Procedure

You will be asked to listen to a series of short recordings and answer a few related questions. Afterwards, you will complete a demographic questionnaire. Your answers and demographic details will be recorded.

The study will take approximately 15 minutes.

Data Anonymization

All your responses will be completely anonymous. No sensitive information or personal data will be collected. Finally, there are no expected physical or psychological risks associated with your participation in this study.

Informed Consent

By clicking the arrow at the bottom right, you confirm that:

- You are at least 18 years old
- You understand the purpose of this study
- You agree to participate voluntarily

You are free to withdraw from the study at any time and close the survey earlier if you wish.

Contact

For any questions or clarifications, you may contact:

Georgia Lychnara, g.lychnara@leidenuniv.nl

Appendix B
Warm-up task

The following text introduces the script that was read by the native Greek speaker to create the warm-up task. First, the original Greek version is displayed, followed by an English translation.

Το Μουσείο στεγάζεται στο αναπαλαιωμένο κτίριο της Τράπεζας Πειραιώς στη Θεσσαλονίκη που περικλείεται από τις οδούς Μητροπόλεως - Τσιμισκή. Το Μουσείο ιδρύθηκε το 1997 και στα εκθέματά του συμπεριλαμβάνονται μουσικά όργανα από την κατηγορία των εγχόρδων, όπως λύρα, των κρουστών, όπως κρόταλο, και άλλα. Εκτός από τα μουσικά όργανα που εκτίθενται στους χώρους του Μουσείου δημιουργήθηκε μια κινητή έκθεση. Σκοπός της είναι η μεταφορά της σε διάφορους νομούς της Ελλάδας και το εξωτερικό για να ενημερωθούν οι νέοι της χώρας μας.

Translation

The Museum is situated in the restored building of the Piraeus Bank in Thessaloniki, located between Mitropoleos and Tsimiski streets. The Museum was founded in 1997, and its exhibits include musical instruments from the string family, such as the lyre, and from the percussion family, such as the rattle, among others. In addition to the musical instruments displayed in the Museum's premises, a temporary exhibition was created. Its purpose is to be transferred to various regions of Greece and abroad in order to inform and educate the youth of our country.

Appendix C
Main task and target words across items and conditions

This appendix shows the scripts that were given to the native Greek speaker to read and create the items for the main task of the survey. Each item is manipulated to create three conditions: condition 1- SMG, condition 2- /i/ deletion and condition 3- /e/ raising. The text does not change across conditions, only across items. The target words differ and they are listed under each condition. For the text in every 'condition 2', the /i/ is crossed out in the target words. Similarly, for the text in every 'condition 3' /e/ is canceled and replaced by /i/ in the target words. After each item there is an English translation of the text.

Item 1

No change Condition

Ο ήλιος μόλις είχε ανατείλει πάνω από το χωράφι. Εύκολα μπορεί κανείς να δει πως εκεί φυτρώνει σιτάρι και κριθάρι. Ακουμπισμένο στο χώμα βρίσκεται στο πάτωμα ένα ποτιστήρι. Ένας αγρότης έπιασε στα χέρια του κάποια στάχυα. Οι σπόροι ήταν πλέον έτοιμοι. Ο αγρότης λοιπόν, φώναξε τους βοηθούς του που βρίσκονταν στο αλώνι. Ήρθε η στιγμή να ξεκινήσει ο θερισμός.

Vowel Deletion Condition (/i/ deletion)

Ο ήλιος μόλις είχε ανατείλει πάνω από το χωράφ~~ι~~. Εύκολα μπορεί κανείς να δει πως εκεί φυτρώνει σιτάρ~~ι~~ και κριθάρ~~ι~~. Ακουμπισμένο στο χώμα βρίσκεται στο πάτωμα ένα ποτιστήρ~~ι~~. Ένας αγρότης έπιασε στα χέρια του κάποια στάχυα. Οι σπόροι ήταν πλέον έτοιμοι. Ο αγρότης

λοιπόν, φώναξε τους βοηθούς του που βρίσκονταν στο αλώνι. Ήρθε η στιγμή να ξεκινήσει ο θερισμός.

Target words: χωράφι, σιτάρι, κριθάρι, ποτιστήρι, αλώνι

Vowel Raising Condition (/e/ raising)

Ο ήλιος μόλις είχε ανατείλει πάνω από το χωράφι. Εύκολα μπορεί κανείς να δει πως εκεί φυτρώνει σιτάρι και κριθάρι. Ακουμπισμένο στο χώμα βρίσκεται στο πάτωμα ένα ποτιστήρι. Ένας αγρότης έπιασε στα χέρια του κάποια στάχυα. Οι σπόροι ήταν πλέον έτοιμοι. Ο αγρότης λοιπόν, φώναξε τους βοηθούς του που βρίσκονταν στο αλώνι. Ήρθε η στιγμή να ξεκινήσει ο θερισμός.

Target words: είχε, βρίσκεται, έπιασε, είδε φώναξε

Translation

The sun had just risen over the field. It was easy to see that wheat and barley were growing there. Resting on the ground lay a watering can. A farmer held some ears of grain in his hands. The seeds were now ready. So, the farmer called out to his helpers who were at the threshing floor. The time had come to begin the harvest.

Item 2

No change Condition

Το προηγούμενο Σάββατο, ξεκινήσαμε από το σπίτι και πήγαμε για επίσκεψη στο σπίτι παππού. Μπήκαμε στο τρένο και μόλις βρήκαμε το βαγόνι με τις θέσεις μας και περιμέναμε να ξεκινήσει

το ταξίδι. Στο τέλος του ταξιδιού ήμασταν πεινασμένοι καθώς ήταν πια μεσημέρι. Ευτυχώς εκείνος είχε βγάλει από το φούρνο το πιλάφι.

Vowel Deletion Condition (/i/ deletion)

Το προηγούμενο Σάββατο, ξεκινήσαμε από το σπίτ~~ι~~ και πήγαμε για επίσκεψη στο σπίτι του παππού. Μπήκαμε στο τρένο και μόλις βρήκαμε το βαγόν~~ι~~ με τις θέσεις μας και περιμέναμε να ξεκινήσει το ταξίδ~~ι~~. Στο τέλος του ταξιδιού ήμασταν πεινασμένοι καθώς ήταν πια μεσημέρ~~ι~~. Ευτυχώς εκείνος είχε βγάλει από το φούρνο το πιλάφ~~ι~~.

Target words: σπίτι, βαγόνι, ταξίδι, μεσημέρι, πιλάφι

Vowel Raising Condition (/e/ raising)

Το προηγούμενο Σάββατο, ξεκινήσαμ~~ε~~ι από το σπίτι και πήγαμ~~ε~~ι για επίσκεψη στο σπίτι του παππού. Μπήκαμ~~ε~~ι στο τρένο και μόλις βρήκαμ~~ε~~ι το βαγόνι με τις θέσεις μας και περιμέναμ~~ε~~ι να ξεκινήσει το ταξίδι. Στο τέλος του ταξιδιού ήμασταν πεινασμένοι καθώς ήταν πια μεσημέρι. Ευτυχώς εκείνος είχε βγάλει από το φούρνο το πιλάφι.

Target words: ξεκινήσαμε, πήγαμε, μπήκαμε, βρήκαμε, περιμέναμε

Translation

Last Saturday, we left the house and went to visit grandpa's home. We got on the train, and as soon as we found the carriage with our seats, we waited for the journey to begin. By the end of the trip, we were hungry since it was already noon. Fortunately, he had taken the pilaf out of the oven.

Item 3

No change Condition

Κάθε πρωί η θάλασσα είναι πολύ ήρεμη και τα κύματα σπάνε απαλά στο μόλο. Κάποιες φορές μπορούμε να διακρίνουμε ένα κοπάδι γλάρων να γυρίζουν πάνω απ το νερό αναζητώντας φαγητό, συνήθως κάποιο ψάρι. Στις 9 το πρωί φτάνει το καράβι με κόσμο που μόλις ξεκινάει το δικό του ταξίδι. Το λιμάνι τώρα είναι γεμάτο με ανθρώπους που ακολουθούν το μονοπάτι προς το κέντρο του νησιού.

Vowel Deletion Condition (/i/ deletion)

Κάθε πρωί η θάλασσα είναι πολύ ήρεμη και τα κύματα σπάνε απαλά στο μόλο. Κάποιες φορές μπορούμε να διακρίνουμε ένα κοπάδ̶ι γλάρων να γυρίζουν πάνω απ το νερό αναζητώντας φαγητό, συνήθως κάποιο ψάρ̶ι. Στις 9 το πρωί φτάνει το καράβ̶ι με κόσμο που μόλις ξεκινάει το δικό του ταξίδ̶ι. Το λιμάνι τώρα είναι γεμάτο με ανθρώπους που ακολουθούν το μονοπάτ̶ι προς το κέντρο του νησιού.

Target words: κοπάδι, ψάρι, καράβι, ταξίδι, μονοπάτι

Vowel Raising Condition (/e/ raising)

Κάθε πρωί η θάλασσα είναι πολύ ήρεμη και τα κύματα σπάν̶ε̶ι απαλά στο μόλο. Κάποιες φορές μπορούμ̶ε̶ι να διακρίνουμ̶ε̶ι ένα κοπάδι γλάρων να γυρίζουν πάνω απ το νερό αναζητώντας φαγητό, συνήθως κάποιο ψάρι. Στις 9 το πρωί φτάνει το καράβι με κόσμο που μόλις ξεκινάει το δικό του ταξίδι. Το λιμάνι τώρα είναι γ̶ε̶ιμάτο με ανθρώπους που πάν̶ε̶ι στο μονοπάτι για κέντρο του νησιού.

Target words: σπάνε, μπορούμε, διακρίνουμε, γεμάτο, πάνε

Translation

Every morning the sea is very calm, and the waves break gently on the pier. Sometimes we can spot a flock of seagulls circling over the water in search of food, usually a fish. At 9 in the morning, the ship arrives with people who are just beginning their own journey. The port is now full of people following the path toward the center of the island.

Item 4

No change Condition

Όλοι οι ταξιδιώτες περιμένουν υπομονετικά μπροστά από τη ζώνη με τις βαλίτσες. Για κάποιους από αυτούς το ταξίδι έχει μόλις τελειώσει ενώ για κάποιους άλλους τώρα μόλις ξεκινά. Ακούγεται το κουδούνι και την εμφάνιση του πάνω στον ιμάντα κάνει το πρώτο βαλιτσάκι. Η κοπέλα κρατάει στο χέρι της ένα ζευγάρι κλειδιά και αφού είδε την αποσκευή της, την πήρε και κατευθύνεται προς το αμάξι.

Vowel Deletion Condition (/i/ deletion)

Όλοι οι ταξιδιώτες περιμένουν υπομονετικά μπροστά από τη ζώνη με τις βαλίτσες. Για κάποιους από αυτούς το ταξίδ̶ι έχει μόλις τελειώσει ενώ για κάποιους άλλους τώρα μόλις ξεκινά. Ακούγεται το κουδούν̶ι και την εμφάνιση του πάνω στον ιμάντα κάνει το πρώτο βαλιτσάκ̶ι. Η κοπέλα κρατάει στο χέρι της ένα ζευγάρ̶ι κλειδιά και αφού είδε την αποσκευή της, την πήρε και κατευθύνεται προς το αμάξ̶ι.

Target words: ταξίδι, κουδούνι, βαλιτσάκι, ζευγάρι

Vowel Raising Condition (/e/ raising)

Όλοι οι ταξιδιώτεις περιμένουν υπομονετικά μπροστά από τη ζώνη με τις βαλίτσες. Για κάποιους από αυτούς το ταξίδι είχει μόλις τελειώσει ενώ για κάποιους άλλους τώρα μόλις ξεκινά. Ακούγειται το κουδούνι και την εμφάνιση του πάνω στον ιμάντα κάνει το πρώτο βαλιτσάκι. Η κοπέλα κρατάει στο χέρι της ένα ζευγάρι κλειδιά και αφού είδει την αποσκευή της, την πήρε και κατευθύνειται προς το αμάξι.

Target words: ταξιδιώτες, είχε, ακούγεται, είδε, κατευθύνεται

Translation

All the travelers wait patiently in front of the baggage carousel. For some of them, the journey has just ended, while for others it is only just beginning. The bell rings, and the first little suitcase makes its appearance on the conveyor belt. The young woman holds a pair of keys in her hand, and after spotting her luggage, she picked it up and headed toward the car.

Item 5

No change Condition

Όλοι κάθονταν στο πάτωμα και κοιτούσαν τα ξεχωριστά κομμάτια του καινούριου επίπλου που βρίσκονταν ανάμεσά τους. Στο σαλόνι, βρίσκονταν σκορπισμένα διάφορα εργαλεία. Ένα πριόνι, ένα σφυρί και ένα κατσαβίδι. Κοιτούσαν το κάθε κομμάτι γεμάτοι απορία. Τότε, η φωνή του

Γιάννη ακούστηκε από το δίπλα δωμάτιο: «Παιδιά, το βρήκα!» είπε και εμφανίστηκε κρατώντας τις οδηγίες στο χέρι.

Vowel Deletion Condition (/i/ deletion)

Όλοι κάθονταν στο πάτωμα και κοιτούσαν τα ξεχωριστά κομμάτια του καινούριου επίπλου που βρίσκονταν ανάμεσά τους. Στο σαλόν, βρίσκονταν σκορπισμένα διάφορα εργαλεία. Ένα πριόν, ένα σφυρί και ένα κατσαβίδ. Κοιτούσαν το κάθε κομμάτ γεμάτοι απορία. Τότε, η φωνή του Γιάννη ακούστηκε από το δίπλα δωμάτιο: «Παιδιά, το βρήκα!» είπε και εμφανίστηκε κρατώντας τις οδηγίες στο χέρ.

Target words: σαλόνι, πριόνι, κατσαβίδι, κομμάτι, χέρι

Vowel Raising Condition (/e/ raising)

Όλοι κάθονταν στο πάτωμα και κοιτούσαν τα ξεχωριστά κομμάτια του καινούριου επίπλου που βρίσκονταν ανάμεισά τους. Στο σαλόνι, βρίσκονταν σκορπισμένα διάφορα εργαλεία. Ένα πριόνι, ένα σφυρί και ένα κατσαβίδι. Κοιτούσαν το κάθει κομμάτι γεμάτοι απορία. Τότει, η φωνή του Γιάννη ακούστηκει από το δίπλα δωμάτιο: «Παιδιά, το βρήκα!» είπει και εμφανίστηκε κρατώντας τις οδηγίες στο χέρι.

Target words: ανάμεσα, κάθε, τότε, ακούστηκε, είπε

Translation

Everyone was sitting on the floor, looking at the separate pieces of the new piece of furniture that lay among them. In the living room, various tools were scattered about — a saw, a hammer, and a screwdriver. They looked at each piece full of puzzlement. Then, Yannis's voice was heard from the next room: “Guys, I found it!” he said, appearing with the instructions in his hand.

Item 6

No change Condition

Η βαριά βροχή μούσκεψε το παντελόνι της κοπέλας. Το λεωφορείο έφτασε και ενώ εκείνη ήθελε να μπει γρήγορα για να προλάβει μια θέση, αποφάσισε να δώσει τη σειρά της σε έναν ηλικιωμένο κύριο που κρατούσε ένα μπαστούνι. Το μόνο που σκεφτόταν τώρα είναι πως ήθελε ένα ποτήρι νερό και να ξαπλώσει στο δικό της κρεβάτι. Παρόλα αυτά, άνοιξε το πορτοφόλι και έβγαλε τη λίστα με τα ψώνια που είχαν απομείνει.

Vowel Deletion Condition (/i/ deletion)

Η βαριά βροχή μούσκεψε το παντελόν̶ι̶ της κοπέλας. Το λεωφορείο έφτασε και ενώ εκείνη ήθελε να μπει γρήγορα για να προλάβει μια θέση, αποφάσισε να δώσει τη σειρά της σε έναν ηλικιωμένο κύριο που κρατούσε ένα μπαστούν̶ι̶. Το μόνο που σκεφτόταν τώρα είναι πως ήθελε ένα ποτήρ̶ι̶ νερό και να ξαπλώσει στο δικό της κρεβάτ̶ι̶. Παρόλα αυτά, άνοιξε το πορτοφόλ̶ι̶ και έβγαλε τη λίστα με τα ψώνια που είχαν απομείνει.

Target words: παντελόνι, μπαστούνι, ποτήρι, κρεβάτι, πορτοφόλι

Vowel Raising Condition (/e/ raising)

Η βαριά βροχή μούσκεψε το παντελόνι της κοπέλας. Το λεωφορείο έφτασει και ενώ εκείνη ήθελει να μπει γρήγορα για να προλάβει μια θέση, αποφάσισε να δώσει τη σειρά της σε έναν ηλικιωμένο κύριο που κρατούσε ένα μπαστούνι. Το μόνο που σκειφτόταν τώρα είναι πως ήθελε ένα ποτήρι νερό και να ξαπλώσει στο δικό της κρεβάτι. Παρόλα αυτά, άνοιξει το πορτοφόλι και έβγαλει τη λίστα με τα ψώνια που είχαν απομείνει.

Target words: έφτασε, ήθελε, σκεφτόταν, άνοιξε, έβγαλε

Translation

The heavy rain soaked the young woman's trousers. The bus arrived, and although she wanted to get on quickly to secure a seat, she decided to give her place to an elderly man who was holding a cane. The only thing she was thinking about now was that she wanted a glass of water and to lie down in her own bed. Nevertheless, she opened her wallet and took out the shopping list which remained unfinished.

Appendix D

Open-ended questions and the Matched Guise Test

The following appendix illustrates the questions given to the participants immediately after they heard a recording of the main task. First, they were asked 3 questions about the speaker, and second, they were asked to rate the speaker on 11 polar traits. This question setup was repeated after every recording. In total, each participant answered these questions 6 times. An English translation follows the original Greek version.

1. Από ποιό μέρος της Ελλάδας θεωρείτε ότι είναι ο ομιλητής που μόλις ακούσατε;
2. Καθώς αυτή η πληροφορία δεν σας έχει δοθεί, πώς καταλήξατε σε αυτό το συμπέρασμα;
3. Παρακαλώ αξιολογήστε τον ομιλητή που μόλις ακούσατε ως προς τα ακόλουθα χαρακτηριστικά:

Κάθε γραμμή περιλαμβάνει δύο αντίθετα επίθετα. Χρησιμοποιήστε την παρακάτω επταβάθμια κλίμακα για να δηλώσετε ποιο από τα δύο επίθετα περιγράφει καλύτερα τον ομιλητή:

- 1 σημαίνει ότι ο ομιλητής ταιριάζει απόλυτα με το αριστερό επίθετο.
- 7 σημαίνει ότι ταιριάζει απόλυτα με το δεξί επίθετο.
- Οι ενδιάμεσοι αριθμοί (2 έως 6) δείχνουν διάφορους βαθμούς ανάμεσα στα δύο.

Χαρακτηριστικά	1	2	3	4	5	6	7	Χαρακτηριστικά
ειλικρινής	1	2	3	4	5	6	7	ανειλικρινής
ελκυστικός	1	2	3	4	5	6	7	αποκρουστικός

φιλόδοξος	1	2	3	4	5	6	7	ματαιόφρων
έξυπνος/ευφυής	1	2	3	4	5	6	7	ανόητος/ μη ευφυής
καλοσυνάτος/ευγενικός	1	2	3	4	5	6	7	άκαρδος/αγενής
μορφωμένος	1	2	3	4	5	6	7	αμόρφοτος
Με χιούμορ	1	2	3	4	5	6	7	Χωρίς χιούμορ
μοντέρνος	1	2	3	4	5	6	7	παλιομοδίτικος
φιλικός	1	2	3	4	5	6	7	εχθρικός
ευχάριστος	1	2	3	4	5	6	7	δυσάρεστος

Translation

1. From which part of Greece do you think the speaker you just heard comes?
2. Since this information has not been given to you, how did you arrive at this conclusion?
3. Please evaluate the speaker you just heard with regard to the following characteristics.

Each line includes two opposite adjectives. Use the seven-point scale below to indicate which of the two adjectives best describes the speaker:

- 1 means that the speaker completely matches the adjective on the left.
- **7** means that the speaker completely matches the adjective on the right.
- The intermediate numbers (2 to 6) indicate varying degrees between the two.

Traits	1	2	3	4	5	6	7	Traits
sincere	1	2	3	4	5	6	7	insincere
attractive	1	2	3	4	5	6	7	unattractive
ambitious	1	2	3	4	5	6	7	unambitious
intelligent	1	2	3	4	5	6	7	unintelligent
kind	1	2	3	4	5	6	7	unkind
educated	1	2	3	4	5	6	7	uneducated
humorous	1	2	3	4	5	6	7	lacking humor
modern	1	2	3	4	5	6	7	old-fashioned
friendly	1	2	3	4	5	6	7	unfriendly
pleasant	1	2	3	4	5	6	7	unpleasant

Appendix E

Demographic questions and self-assessed speech

The following questions show the last block of the questionnaire, where participants were asked to answer a series of demographic questions and indicate whether they speak Standard Greek or a dialect, based on the definitions provided by the Cambridge Dictionary. An English translation follows the Greek original text.

Α. Πόσο χρονών είστε; (παρακαλώ απαντήστε με αριθμούς)

Β. Ποιό είναι το φύλο σας;

1. Άνδρας
2. Γυναίκα
3. Μη δυαδικό
4. Άλλο (παρακαλώ διευκρινίστε)
5. Προτιμώ να μην απαντήσω

Γ. Ποιό είναι το επίπεδο εκπαίδευσής σας;

1. Δημοτικό
2. Γυμνάσιο
3. Λύκειο/Τεχνικό Λύκειο
4. Πτυχίο ΑΕΙ/ΤΕΙ (παρακαλώ διευκρινίστε)
5. Μεταπτυχιακό (MA, MSC, κ.α) (παρακαλώ διευκρινίστε)
6. Διδακτορικό (PhD) (παρακαλώ διευκρινίστε)
7. Άλλο (παρακαλώ διευκρινίστε)

Δ. Πού κατοικείται αυτή τη χρονική περίοδο

Ε. Πού έχετε μεγαλώσει

Στ. Το λεξικό του Cambridge ορίζει μία διάλεκτο ως 'μια μορφή της γλώσσας που ομιλείται σε ένα συγκεκριμένο τμήμα της χώρας ή από μια συγκεκριμένη ομάδα ανθρώπων", ενώ τη standard γλώσσα ως "μία ποικιλία γλωσσών που χρησιμοποιείται από τις κυβερνήσεις, στα μέσα ενημέρωσης, στα σχολεία και για διεθνή επικοινωνία'.

Εσείς θεωρείτε ότι μιλάτε διάλεκτο των ελληνικών;

1. Ναι
2. Όχι

Ζ. Παρακαλώ αιτιολογήστε την απάντησή σας.

Translation

A. How old are you? (please answer with numbers)

B. What is your gender?

1. Male
2. Female
3. Non-binary
4. Other (please specify)
5. Prefer not to answer

C. What is your level of education?

1. Primary schoolMiddle school
2. High school/Technical high school
3. Bachelor's degree (please specify)
4. Master's degree (MA, MSc, etc.) (please specify)
5. Doctorate (PhD) (please specify)
6. Other (please specify)

D. Where are you currently living?

E. Where did you grow up?

F. The Cambridge Dictionary defines a dialect as "a form of a language spoken in a particular part of a country or by a particular group of people," while the standard language is defined as "a variety of a language used by governments, in the media, in schools, and for international communication."

Do you consider that you speak a dialect of Greek?

1. Yes
2. No

G. Please explain your answer.

Appendix F

Pairwise contrasts between conditions across traits (Tukey-adjusted)

This appendix presents the full Table for pairwise contrasts between conditions across traits using a Tukey correction. First, the adjective is introduced, followed by the condition contrast and the estimate, the difference in estimated means between the two conditions. SE refers to the standard error of estimate, z-value to the test statistic, and *p*-value to the probability value for the test.

Adjective	Contrast	Estimate (β)	SE	z- value	*p-value*
Ambitious	NoChange – Deletion	–0.06	0.11	–0.52	.86
	No Change – Raising	–0.08	0.11	–0.69	.77
	Deletion – Raising	–0.02	0.12	–0.18	.98
Attractive	No Change – Deletion	–0.69	0.11	–6.13	< .001 ***
	No Change – Raising	–0.57	0.11	–4.98	< .001 ***
	Deletion – Raising	0.12	0.12	1.01	.57
Dependable	No Change – Deletion	–0.38	0.11	–3.35	.002 **
	No Change – Raising	–0.33	0.11	–2.85	.012 *
	Deletion – Raising	0.05	0.12	0.43	.90
Educated	No Change – Deletion	–0.63	0.11	–5.58	< .001 ***
	No Change – Raising	–0.56	0.11	–4.90	< .001 ***
	Deletion – Raising	0.07	0.12	0.56	.84
Friendly	No Change – Deletion	–0.20	0.11	–1.75	.19

	No Change – Raising	–0.15	0.11	–1.32	.38
	Deletion – Raising	0.04	0.12	0.39	.92
Humorous	No Change – Deletion	0.16	0.11	1.41	.33
	No Change – Raising	0.02	0.11	0.17	.98
	Deletion – Raising	–0.14	0.12	–1.20	.45
Intelligent	No Change – Deletion	–0.27	0.11	–2.44	.039 *
	No Change – Raising	–0.23	0.11	–2.04	.10
	Deletion – Raising	0.04	0.12	0.34	.94
Kind	No Change – Deletion	–0.07	0.11	–0.62	.81
	No Change – Raising	–0.16	0.11	–1.39	.35
	Deletion – Raising	–0.09	0.12	–0.77	.72
Modern	No Change – Deletion	–0.59	0.11	–5.21	< .001 ***
	No Change – Raising	–0.46	0.11	–3.98	< .001 ***
	Deletion – Raising	0.13	0.12	1.12	.50
Pleasant	No Change – Deletion	–0.16	0.11	–1.42	.33
	No Change – Raising	–0.16	0.11	–1.37	.36
	Deletion – Raising	0.00	0.12	0.03	1.00
Sincere	No Change – Deletion	–0.12	0.11	–1.10	.52
	No Change – Raising	–0.17	0.11	–1.46	.31
	Deletion – Raising	–0.04	0.12	–0.38	.92

Note. Negative estimates indicate that the first condition received lower (more semantically positive) mean ratings than the second.

Significance codes: ***p < .001,** p < .01,* p < .05. Values without asterisks are non-significant (p ≥ .05).

Appendix G

APA reporting of Pairwise comparisons per trait

The results revealed that the effect of the condition varied across traits. Significant differences were observed for the traits: 'Attractive', 'Dependable', 'Educated', 'Modern', and 'Intelligent'. To be more specific, for No Change, 'Attractive' was rated significantly lower than Deletion (β = –0.69, *SE* = 0.11, z = –6.13, $p < .001$) and Raising (β = –0.57, *SE* = 0.11, z = –4.98, $p < .001$), revealing a semantically positive association of between the trait and the guise. The same pattern was observed for the assessment of the previously mentioned traits. 'Dependable' was given lower ratings and yielded positive semantic evaluation in No Change compared to Deletion (β = –0.38, *SE* = 0.11, p = .002) and to Raising (β = –0.33, *SE* = 0.11, p = .012). Additionally, 'Educated' was rated lower for No Change in contrast to Deletion (β = –0.63, *SE* = 0.11, $p < .001$) and Raising (β = –0.56, *SE* = 0.11, $p < .001$), reflecting more semantically positive associations with No Change. Similarly, 'Modern' yielded lower scores and semantically positive ratings for No Change compared to Deletion (β = –0.59, *SE* = 0.11, $p < .001$) and Raising (β = –0.46, *SE* = 0.11, $p < .001$). Lastly, for 'Intelligent', the contrast between No Change and Deletion was significant (β = –0.27, *SE* = 0.11, p = .039).