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Vowel raising and vowel deletion as sociolinguistic variables in Northern Greek

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The research reported here is part of a longitudinal case study into the linguistic effects of de-urbanization, which is occurring in Greece due to severe economic recession. The overall aim of the analysis is to explore the way in which de-urbanization is affecting the evaluation and production of dialects in rural communities. In this paper, I present evidence that the features of unstressed vowel deletion and vowel raising are socially embedded in Northern Greek. Even though the usage of standard variants is very close to categorical, a quantitative comparison of the linguistic patterns of urban in-migrants who have returned to the rural community against the usage of speakers who have never left reveals that the use of standard variants indexes more advanced education and an orientation towards the urban lifestyle.

Keywords: high vowel deletion, mid vowel raising, rural dialects, dialect contact, de-urbanization, Modern Greek

1. Introduction

One of the major causes of language change has been the large movement of populations. For example, Labov (2001: 342) credits the vast mobilization that was the result of WWI as the cause for changes in the vowel system of Philadelphia. Other than the two world wars, the demographic process that has undoubtedly shaped the linguistic map of the developed world the most in the 20th century is urbanization. Bailey and Maynor (1989) argue that the rise of the automobile industry in Detroit was a catalyst in the divergence of African-American English from its Anglo-American origins, as the creation of thousands of jobs in the northern cities in the early 1900s attracted many members of these communities, both Anglo and African. In the new urban environments of Detroit, Chicago, and Cleveland, however, these workers lived in segregated communities, and the ensuing deepening of the geographical and cultural separation led to the divergence of the two

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varieties of English. Similar effects of population movement have been noted in other regions such as Tennessee (Fridland 2003), Ohio (Dodsworth 2008), and in the U.K. (Britain and Trudgill 2005).

Labov (1963) showed that the process of urbanization can result in the weakening of rural dialects, since younger dialect speakers who aspire to find success in the urban environment perceive the urban variety as prestigious and begin to adopt it, while at the same time aspects of the rural dialect are stigmatized. Hence, local varieties begin to give way to more urban forms of speech, through the process of dialect contact (Chambers and Trudgill 1998, Britain and Trudgill 1999, Kerswill and Williams 2000). This type of language change has been confirmed by several studies, (Trudgill 1972, Nichols 1983, Trudgill 1986, Kerswill 1993, Wolfram and Schilling-Estes 1995, Britain 1997, Hazen 2002), and has been labeled by Labov (2006: 203) as "change from above." Hazen (2002) classified residents in a rural county of North Carolina into two categories: those who identified with their local community only, and those who identified both with the local community and with the urban communities surrounding it. He shows that the latter tend to use stigmatized features of their dialect less frequently, and argues that this is correlated with their attitudinal orientation. On the other hand, some studies (Bailey et al. 1993, Fridland 2003) have demonstrated that when speakers of a standard variety move *en masse* into a community where a non-standard variety is spoken, local speakers may resist this change by preserving a few dialectal features as markers of an authentic local identity. Wolfram and Schilling-Estes (1996) have shown that this can also be the case even for smaller communities as they transition into a post-insular phase.

According to Bourdieu (1977), such phenomena of dialect shift or maintenance are viewed as the linguistic expression of power struggles within a community, because language is imbued with symbolic capital. Typically, urban life is associated with a higher standard of living, better education and more symbolic capital than life in rural areas. As a result, urban varieties have overt prestige when compared to rural ones.

An important question that has not been investigated, however, is whether this process of dialect attrition through urbanization can be reversed if a change in the socioeconomic conditions renders life in urban centers less desirable than life in rural communities. The reason for the lack of such investigations is that there have not been many such cases of de-urbanization in the developed world, until the last decade.

In this project, I intend to conduct a study that examines the effects of such a reversal in urbanization in Greece. After WWII, Greece, like many European countries, underwent a long period of urbanization that did not abate until a few years ago. By the beginning of the 21st century, the two major urban centers of

Greece (Athens and Thessaloniki) comprised 50% of the population of Greece (roughly 5 million inhabitants, HRMI 2006). This period of urbanization led to the decrease of dialect speakers and the emergence of an urban Greek vernacular (based mostly on the Athenian koiné), which quickly became the prestige variety in the first decade after the restoration of democratic rule in the country (1974–1984, cf. Frangoudaki 1992). Pappas (2008) explores the different attitudes of speakers in a rural community in Greece towards their local variety and especially towards the palatal pronunciation of the sounds /l/ and /n/, which is stigmatized in popular culture. The study reveals that this stigmatization was affecting younger speakers the most, particularly those who planned to pursue education and career opportunities in Athens or Thessaloniki. These speakers used the standard pronunciation almost exclusively and expressed negative attitudes both towards their local community and their dialect.

However, since the beginning of the economic crisis in 2008, unemployment in Greece has reached 25.6% for the general population, and over 53.2% for workers under the age of 24 (ELSTAT 2015). As expected, the urban workforce has been much more affected by this turn of events. In rural communities, especially in areas where the tourism industry is very robust, the effect is mitigated. News articles (Shorto 2012), have documented the exodus of young city dwellers to their ancestral villages in search of better job opportunities. A study published by the Greek government (Kapa Research 2012), shows that 19% of the participants were exploring ways to move out of the two major cities, while 68% thought that such a move would be beneficial to their standard of living. The press release for the study comments that this is "a period of reversal of the process of urbanization" (HRMDF 2012), whose biggest effect is that young people in rural Greece no longer desire to move to a city to seek employment.

The larger project to which this study belongs is a longitudinal study which aims to assess whether in-migrants who are returning to rural communities converge back to rural dialect norms over time, or if they continue to use the standard at the same rate as when they first arrived. The research questions guiding this project are as follows:

i. Will the pronunciation of speakers who have returned from the cities converge over time with that of speakers who have not left the village?
ii. Will their attitudes towards the local variety change over time?

In order to answer these questions I plan to: (i) Analyze speakers' usage and evaluation of certain diagnostic variables in order to establish what differences, if any, exist between the two groups, and whether gender and education play a role; (ii) Repeat interviews after a period of five years with as many speakers as possible and determine what changes, if any, have occurred.

The first set of interviews took place in 2012 in a rural community in Northern Greece (the village of Limenaria on the island of Thasos), where I recorded semi-structured interviews with two groups of speakers: eleven speakers between the ages of 25 and 35 who had never left their community, and thirteen speakers of the same age group who had lived in an urban center but returned. The former group includes five women and six men, while the latter has seven women and six men. In terms of education, all those who have not left the island completed high school only, while of the in-migrants nine have some form of post-secondary education.

The island of Thasos was chosen because: (i) There are published descriptions of the traditional dialect (Tompaidis 1967), confirming the presence of defining characteristics of Northern Greek; (ii) While tourism is vigorous and the local economy is robust, the island also maintains a stable population during the off-season months, so it would be easy to find participants; (iii) It is located near the mainland, so while there is a certain degree of isolation, travel and contact with urban centres is quite frequent.

The first necessary step in the project is to verify that the in-migrant speakers have indeed adopted a more standard pronunciation. I will present evidence that there is a significant difference between speakers who have remained on the island for the most part and those who are returning after a substantial period of living in a major urban centre and that, furthermore, education and gender play a role.

Thasos Greek (Contossopoulos 2001: 61–71, Trudgill 2003: 53) belongs to the Extreme Northern variety in which unstressed high vowels are deleted and unstressed mid vowels are raised in all word positions. Typically, one hears [piˈði] for /peˈði/ (‘child’), [ˈtosu] for /ˈtoso/ (‘this much’), [ˈpaʎ] for /ˈpali/ (‘again’), or [ˈkti] for /kuˈti/ (‘box’).

Phonologically, the rules are arranged in a counter-feeding order (Newton 1972: 186): [piˈði] (‘child’) does not also undergo deletion to become [pði]. In terms of acoustic studies, there is only Topintzi and Baltazani (2012), which examines the deletion pattern of one elderly speaker from Kozani in northwestern Greece. They find that /i/ is much more resistant to deletion than /u/ and that in both cases the deletion is gradient and variable. However, their findings are based on only one speaker, who is performing dialect (Schilling-Estes 1998). He is reading a story that he himself has written based on local experiences and in which he attempts to represent the vowel deletion orthographically. As performance speech tends to exaggerate the occurrence of dialectal features, a direct comparison of the results of Topintzi and Baltazani (2012) with the results of this report would not be particularly informative.

2. Methodology and results

All speakers were recorded during semi-structured interviews, in which the main topics were family and relatives, life on the island vs. life in the city, the impact of the economic crisis, and unique features of Thasos, including its dialect. Each interview was at least 25 minutes long. For each vowel, 20 tokens were extracted from the portion of the interview ranging after the fifth minute and before any discussion of dialectal features, in order to avoid, as much as possible, self-conscious speech. If a word contained more than one possible instance of deletion or raising, only the first vowel was examined in order to mitigate any effects of priming (cf. Tilsen 2009). For the vowels /i/, /e/ and /o/, which are very frequent, I restricted the selection by imposing a maximum of one token for each type (word) per speaker in order to ensure the lexical variability of the dataset. This was not possible for /u/, because, as Topintzi and Baltazani (2012: 393) note, Protopapas et al. (2010) have shown that /u/ is the least frequent among vowels in Greek (4% only). As a result, the bulk of unstressed /u/ tokens come from six types, most notably the pronoun /mu/ (indirect object or possessive, 1st sg.) at 27% (127/480), and the noun /ðuˈlia/ (‘work’) at 16% (67/480). For the raising of unstressed mid vowels, several words with /e/ and /o/ in word final position were excluded from the dataset because the vowels in question were not raised but deleted. A word was excluded if at least two speakers demonstrated this pattern of deletion, which is mostly seen in the ending of the 1st person plural active of a verb. For example, /ˈpame/ (‘let’s go’) is frequently realized [ˈpam] instead of the expected [ˈpami]. For this reason, I excluded all instances of a 1st person active verb form; the form /ˈine/ (3rd singular or plural of ‘be’), which often is pronounced [ˈin] as well as [ˈini]; and the adverbs /ˈkato/ (‘down’) pronounced [ˈkat] as well as [ˈkatu], and /ˈpano/, [ˈpan] as well as [ˈpanu]. All tokens were coded impressionistically as to whether the pronunciation of the vowel was dialectal or standard. Spectrograms of a sample of the tokens (10%) were examined in Praat 5.4.2 (Boersma and Weenink 2015) in order to verify the accuracy of the coding.

Overall, 1920 tokens were extracted and coded, 480 (24 speakers X 20 tokens) for each variable. Table 1 shows the results for use of the two variants for each of the vowels. The frequency of standard usage for /i/ is 86.5%, 89.6% for /e/, 81% for /o/, while for unstressed /u/ it is the highest, at 99%. For this reason, /u/ is not included in the regression analysis.

Although these results show that standard usage is at near categorical levels for all variables, I will show that there is still significant social embedding at play (consider Meyerhoff, this volume, for a discussion of how to deal conceptually with low frequency forms). A preliminary Goldvarb (Sankoff et al. 2015) analysis demonstrates that ‘type of vowel’ is indeed a significant factor group in terms of

Table 1. Distributional results for vowel deletion and raising in Thasos Greek

Vowel	Pronunciation			
	Standard		Northern Greek	
/u/	99%	*N* = 475	1%	*N* = 05
/i/	86.5%	*N* = 415	13.5%	*N* = 65
/e/	89.6%	*N* = 430	10.4%	*N* = 50
/o/	81%	*N* = 389	19%	*N* = 91
	Total *N*	1709		211

probability of standard pronunciation (see Table 2). Furthermore, a ΔG (difference of deviance) comparison of the model with the three vowels as separate factors (log likelihood = −535.4) against the model in which vowels /e/ and /o/ are grouped together (log likelihood = −542.4), is significantly better, with a x^2 value of 14, which is significant at $p < 0.005$. Based on this result, separate Goldvarb runs were implemented for each vowel but with the same non-linguistic factor groups. Migration status, while not significant in the model that combines all vowels, is significant for the pattern of variation of specific vowels when they are considered separately.

Table 2. Goldvarb model of standard pronunciation

Total *N* = 1440, Log = −535.4, Input = 0.89				
		Weight	**%**	**Total**
Vowel	/e/	0.59	90	480
	/i/	0.51	86	480
	/o/	0.4	81	480
	Range	*19*		
Education	post-secondary	0.73	96	540
	high school	0.35	79	900
	Range	*38*		
Gender	Women	0.55	90	720
	Men	0.45	82	720
	Range	*10*		
In-migration	Migrants	[0.53]	92	780
	Locals	[0.47]	79	660

The Goldvarb analysis for /i/ in Table 3 shows that gender and in-migration are significant factor groups: Women favour the standard, while men do not. The standard is also favoured by returning in-migrants but not by locals. Education is not significant for this variable (0.56 and 0.46 probability weights for post secondary and high school education respectively).

Table 3. Goldvarb model of standard pronunciation of /i/.

Total *N* = 480, Log = −174.793, Input = 0.89				
		Weight	**%**	**Total**
Gender	Women	0.61	92	240
	Men	0.39	81	240
	Range	22		
In-migration	Migrants	0.60	93	260
	Locals	0.38	79	220
	Range	22		

For /e/ the results are different, as the only significant factor group is education, with speakers who received post-secondary schooling favouring the standard, while those who only completed high school disfavour it (Table 4). Gender and in-migration are not significant as main effects. Women as a factor have a weight probability of 0.55 and men 0.44. For migrants the weight is 0.47, while for locals it is 0.52. Importantly, however, there is an interaction between migration and gender: in-migrant women use the standard variant significantly more than in-migrant men (97% vs. 89%). The Pearson post-hoc test performed in a contingency analysis (JMP v. 12.01) returned a significance value of $p = 0.0095$. For locals, the difference between women (88%) and men (83%) is not significant ($p = 0.25$).

Table 4. Goldvarb model of standard pronunciation of /e/.

Total *N* = 480, Log = −141.713, Input = 0.94				
		Weight	**%**	**Total**
Education	post-secondary	0.85	99	180
	H/S	0.25	84	300
	Range	60		

Finally, for /o/, we see the same pattern as for /e/ (Table 5), as the only main effect is that of education, where those with advanced education favour the standard whereas those with basic education do not. The probability weights for women and men are 0.5 and 0.49 respectively, hence n.s.; for migrants and locals also 0.5 vs. 0.49. Crucially, the interaction pattern is the same as for /e/, as in-migrant women again lead in-migrant men (93% vs. 82%, Pearson test $p = 0.005$, performed in JMP v. 12.01), while the difference between local women and men (69% vs. 75%) is not significant ($p = 0.32$).

The finding that the deletion of /u/ is in effect proscribed, is surprising because Topintzi and Baltazani (2012) find that /u/ deletes more frequently than /i/ in Kozani Greek. This apparent contradiction can be resolved if we consider that

Table 5. Goldvarb model of standard pronunciation of /o/.

Total *N* = 480, Log = −211.632, Input = 0.84				
		Weight	**%**	**Total**
Education	post-secondary	0.77	95	180
	H/S	0.33	73	300
	Range	44		

in the case of Kozani Greek, we have a 60-year old man who is performing dialect and is thus favoring non-standard features. In the present study we have 20-year olds in the more free-flowing but still formal register of the sociolinguistic interview, a setting in which stigmatized stereotypes are expected to be avoided. Thus the contradicting patterns may be two sides of the same coin, namely the high prominence of /u/ deletion as a stereotype of Northern Greek.

In the deletion of /i/, on the other hand, and the raising of /e/ and /o/, we see a more complex pattern, one that I will attempt to explain by hypothesizing that deletion is more heavily stigmatized than raising. The first key observation is that education is not significant for deletion, but it has a very strong effect on raising, where the range between post-secondary and high school speakers is 60 for /e/ and 44 for /o/. I surmise that this is the case, because the stigma against raising is less pronounced and thus only relevant to those who wish to pursue a white-collar profession.

The second key observation is the behavior of in-migrants, which provides further support for this explanation. Notice that even though both in-migrants and locals have high input values for standard usage, in-migration is a significant factor for all three vowels. But while migration status has a straightforward main effect on /i/ deletion, in the raising of /e/ and /o/ it is masked by the interaction between in-migration and gender.

Both patterns can be explained by hypothesizing that deletion carries more stigma than raising. It is reasonable to expect speakers who have moved to an urban center to be more positively oriented towards the standard, and, consequently, to be the ones who lead in the avoidance of the most stigmatized feature of the dialect, namely deletion. If we assume that the stigma against raising is not as strong, then it is also expected that raising will be avoided the most by those speakers who, typically, lead in the adoption of the standard. Women who are less attached to their local community have been shown to be such leaders of change (cf. Labov 1972, 2001).

Finally, for the raising of vowels, it is interesting to note that they do belong to the same pattern as the phonological rule predicts. Thus, even though the input values of usage for /e/ and /o/ are different, the raising of /e/ and /o/ is unified in

that they have the same ranking of social constraints and, as a result, they do the same kind of indexical work (in the sense of Johnstone et al 2006).

3. Conclusion

In this report, I have presented the theoretical background and overall objectives of a longitudinal study into the linguistic effects of de-urbanization, which is occurring in Greece as a result of the severe and prolonged economic recession. More specifically, my project aims to explore the effect this process may be having on the Northern Greek dialect of Thasos, as former in-migrants are returning to the rural community. As a first step in documenting any future changes that may occur, I have examined the variation patterns of two groups of young adults: those who had left the island in search of economic gain but were forced to return due to the crisis, and those who had not left the island.

The variables examined are the deletion of unstressed high vowels and the raising of mid vowels. Even though there is a high rate of adoption of the standard variants in both cases, it was shown that there is still a significant difference between the two. While the deletion of /i/ is influenced by gender and in-migration status in a straightforward and unsurprising manner, the sociolinguistic pattern for raising is more complex, evincing a strong effect for education, and interaction between gender and in-migration status. The more pronounced stigmatization of deletion was offered as a possible explanation for this difference.

The repeat interviews of this longitudinal study, scheduled for 2017, will reveal whether the usage pattern of returning in-migrants, especially men, is reverting back to the local norms, or if the variables maintain the same pattern of indexation.

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