

Consonantal Variation of Spanish in Northern Morocco

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1. Introduction

As is often indicated in broad-spectrum Hispanic linguistics works (Granda 1991, Lipski 2002, Silva-Corvalán 1995, Stewart 1999, Quilis 1992 and 2002), the presence of the Spanish language in western North Africa is not recent. In fact, it dates back several centuries when Spain first occupied Melilla at the end of the 15th century before later annexing Ceuta in 1668. Beyond the two autonomous cities, Spanish was initially introduced in Northern Morocco with the arrival of thousands of Moriscos and Sefardic Jews and later its presence was strengthened under the Spanish Protectorate. On the other hand, heavy immigration towards French-occupied Algeria during the 19th century also fomented the use of this language in northwestern Algeria (Bonmatí Antón 1992). As for the Western Sahara, its occupation by Spain until 1975 has positioned Spanish as the second language of the Saharawis instead of French as is the case in the rest of the region (Moreno Fernández 1995, Tarkki 1995).

In Northern Morocco in particular, several factors have sustained the presence of Spanish and fomented its contact with colloquial Arabic. The geographical proximity of the area to mainland Spain, its adjacency to Ceuta and Melilla, and the establishment of the Spanish Protectorate during the first half of the 20th century (1912- 1956) have all played a particularly significant role. Today mass media and close socioeconomic links between Spain and Morocco continue to contribute to the maintenance of Spanish as a valid communicative code in the region. It is spoken not only by the remaining descendents of the Spanish immigrants, but also by a considerable sector of the Northern Moroccan population (Sayahi 2004).

The focus of the present paper will be on consonantal variation in Spanish as it is currently used in Northern Morocco by educated speakers. Firstly, we will identify the segmental features that vary consistently from standard Peninsular Spanish, including both Castilian and Andalusian pronunciations, and which may be considered as the more distinctive features of non-native Northern Moroccan Spanish. Secondly, we will analyze the variation among these speakers themselves given that the naturalistic acquisition process leaves a margin for different phonetic realizations of some Spanish sounds. In addition, we will also indicate another level of variation, which happens within the speech of the same speaker and provides additional information on the nature of North African Spanish.

2. Method

For this paper, seven sociolinguistic interviews with an average length of 45 minutes were analyzed. All subjects interviewed are male Northern Moroccans between the ages of 18 and 28 and reside in Tangier, the major city in the region. They claim to have learned Spanish by watching Spanish television stations and occasionally interacting with autochthonous native Spanish speakers or tourists from the Peninsula as illustrated in the case of the speaker quoted in excerpt (1).

- (1) “Tenía amigos españoles y ya sabes que vemos la tele de España. Tenemos que aprender para entender las películas, para entender los programas, las noticias y todo eso.” (Male, Tangier)

‘I had Spanish friends and you know that we watch Spain’s television. We have to learn [Spanish] to understand the movies, to understand the programs, the news and all that.’

While the qualitative part of the analysis is based on these interviews, recorded during the summers of 2002 and 2003, for a more detailed segmental analysis, we have selected three subjects whose interviews were transcribed phonetically and quantified. The three selected subjects have a high educational level and

are representative of the most proficient group of speakers among those who acquire Spanish naturalistically in Northern Morocco. Additional information gathered during direct observation of the use of Spanish in the region will also be employed where appropriate. For part of the discussion, spectrograms were produced using PRAAT software for speech analysis.

3. Common segmental features

As already mentioned, Moroccan speakers of Spanish have access to standard media Spanish on the one hand and Andalusian varieties on the other. While the first reaches Tangier through national Spanish television and radio stations, historically, Andalusian Spanish has been more commonly in use owing to the settlement of thousands of Andalusian immigrants in Tangier and further consolidated by the regional Andalusian television station *Canal Sur*. When developing competence in Spanish, non-native Tangerine speakers also draw from the three additional phonological systems available to them: Moroccan Arabic, Modern Standard Arabic, and French. As we will argue below, this fact deeply influences their ability to produce some of the Spanish sounds.

Most commonly, Arabic speakers who learn Spanish have been thought to show a tendency to voice the unvoiced bilabial stop inexistant in their native language. But this assumption does not hold true in Northern Morocco since all the speakers in this study managed to produce the /p/ sound consistently. While an argument can be made that this phoneme now forms part of the Moroccan Arabic phonological inventory thanks to the high number of loanwords from both Spanish in the North and French in the rest of the country (Heath 1989), an equally reasonable explanation for the successful articulation of this sound lies in the speakers' early fluency in French. A second significant segmental feature shared by the subjects of the study is the retention of the affricate /tʃ/, which is rarely reduced to /ʃ/ as it is often the case in some Andalusian varieties (Mondéjar 1991). This may be caused by the possibility of this phonic combination in Moroccan Arabic and the overall frequency of complex clusters in this language (Dell and Elmedlaoui 2003, Kaye 1989). As for the voiceless velar fricative /x/, it does not present any difficulty for these speakers and there were no instances of its aspiration. On the contrary in some cases it is produced as a voiceless post-velar /χ/ similar to the one present in Arabic and in some varieties of Central/Northern Spanish (Hammond 2001). In this aspect, Northern Moroccan Spanish is again clearly distinct from Andalusian varieties. A fourth common segmental feature shared by Moroccans lies in the pronunciation of the voiced stops /b/, /d/, and /g/. The speakers of this study tended to produce these sounds as stops, even in cases where the fricative allophone is the norm in Spanish. One contributing factor may be that while in Moroccan Arabic /d/ and /g/, /ð/, and /ɣ/, are all separate phonemes, in Spanish the latter two are allophones of the former. We did however, find a few cases of weakening of the voiced dental stop /d/ when it occurs in the past participle suffix *-ado* or in word-final position. However, this did not occur consistently and seems to be more lexically and morphologically driven rather than a result of a reorganization of phonological constraints in the speaker.

In Arabic, the alveolar liquid can be articulated as a flap or as a trill, in cases of gemination, thus theoretically giving the speakers the ability to produce it in an almost native-like manner in Spanish. However, several instances of neutralization of the distinction between the multiple vibrant and the simple one have been observed in our data. Cases of [r] to [r̄] seem to be less common and happen mostly in emphatic speech. Many examples occur after occlusive sounds ('creyendo' to 'c[r̄]eyendo') or in breath-group-final position ('ver' to 've[r̄]'). Cases of [r̄] to [r] are much more common and happen both in word-initial position ('reconquista' to '[r]econquista') or in syllable-initial position after a vowel ('carrera' to 'ca[r]era').

Another common segmental feature observed in this study is the difficulty the Tangerine speakers have in producing the palatal nasal /ɲ/. While the rest of the segments discussed above have a counterpart in one of the three phonological systems accessible to the speakers, this sound does not. The result, therefore, is not the selection of a different phoneme but a continuum of approximations that never quite reach native-like production as it will become obvious by comparing both native and non-native Tangerine Spanish speakers' articulation of the palatal nasal. In most cases, Moroccan speakers articulate this phoneme as an alveolar nasal sound followed by a palatal glide. Below is an example of two words, '*dueña*' and '*español*' as pronounced by a Tangerine with Spanish as his first language. It should be noted that this speaker has very limited knowledge of Arabic and uses Spanish to perform all of his daily activities. Before the [ɲ], we

see distinct separation of the first and second formants as the second and third formants rise slightly and come together in preparation for this palatal sound. We can also see that, although the syllable before the palatal /*ñ*/ in the case of '*dueña*' is a rising diphthong, which also tends to produce a rising of the second formant, this same pattern was found in '*español*' where no diphthong is present. Also present is a long sustained drop in energy as the one long nasal consonant is produced, something that is not observed in the examples of non-native speech.

Figure 1

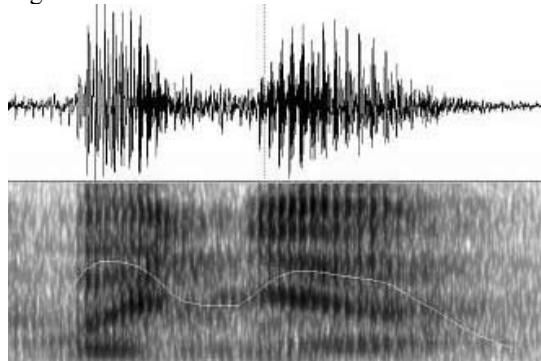
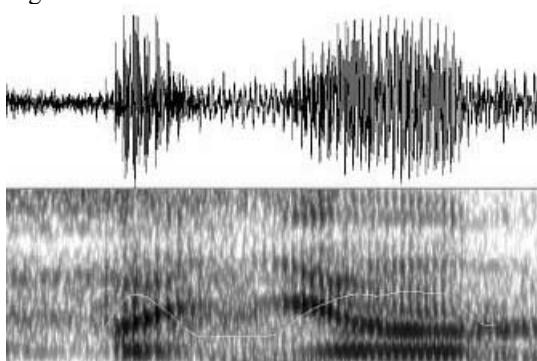


Figure 2



The last two figures represent the words '*enseña*' and '*español*' respectively as pronounced by two Tangerine speakers with Spanish as non-native language. In both figures, we can see that the first three formants remain the same distance apart and constant before the alveolar nasal [n] instead of rising to assimilate, as was the case with the palatal [ñ] in Figures 1 and 2. In fact, in Figure 3 both nasal consonants are produced almost identically, the second followed by what seems to be a long [i] and in Figure 4 the [n] is followed by a similar higher fronted vowel. Again, where in Figures 1 and 2 there is a prolonged drop in intensity caused by the palatal [ñ], in Figures 3 and 4 the drop in intensity caused by the [n] has a much shorter duration followed by a sharp rise of the subsequent front vowel. The phonetic representation of these words would be [en.se.ni.a] and [es.pa.niol].

Figure 3

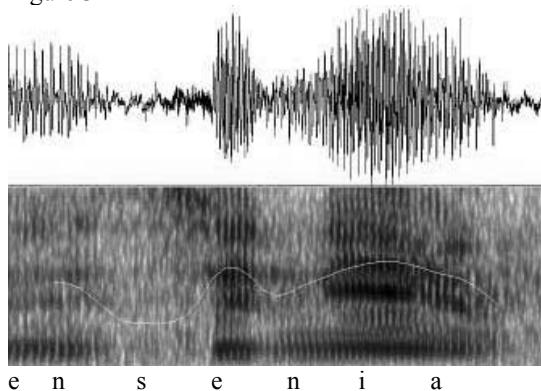
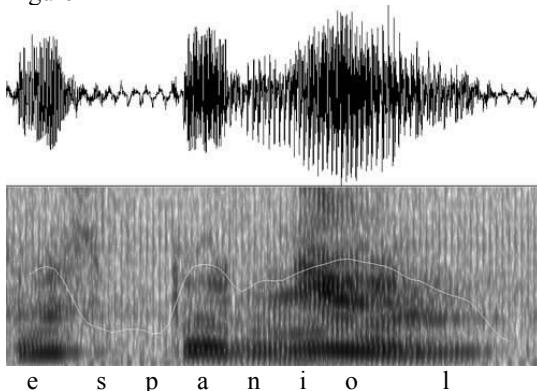


Figure 4



4. Inter-speaker variation

In this section, we will discuss two of the most salient differences between Central/Northern Spanish and Andalusian Spanish and how they materialize in our subjects. First, we will look at the presence of the voiceless interdental phoneme /θ/, typical of the central and northern areas of Spain, or its absence more common in the south. Second, we will examine the retention of the postnuclear /s/, most prevalent in the Central/Northern varieties, and its deletion in coda positions, usually observed in Andalusian Spanish.

Although the general situation in this area of Morocco is that the use of *seseo* is much more common than the realization of /θ/, educated speakers and those with higher sociolinguistic consciousness tend to realize the interdental phoneme, although not necessarily in a systematic manner. This can be explained by their familiarity with different Spanish dialects and also their capacity to produce this particular sound given that it is not totally unfamiliar to them. Unsurprisingly, in the three interviews analyzed quantitatively results showed that *seseo* is in fact less common among educated speakers as shown in Table 1. In a total of 327 tokens there were more occurrences of the interdental than the alveolar. However, as we will see in the following section two of the speakers consistently produced tokens of both pronunciations, the articulation of /θ/ and the *seseo*, while the third seemed to adhere more strictly to distinguishing the sounds from each other.

Table 1. Realization of *z*, *ce*, and *ci* by educated Moroccan speakers

	[θ]		[s]		Total	
	N	Percent	N	Percent	N	Percent
Subject 1	128	82.58%	27	17.42%	155	100.0%
Subject 2	55	94.83%	3	5.17%	58	100.0%
Subject 3	8	7.02%	106	92.98%	114	100.0%
Total	191	58.41%	136	41.59%	327	100.0%

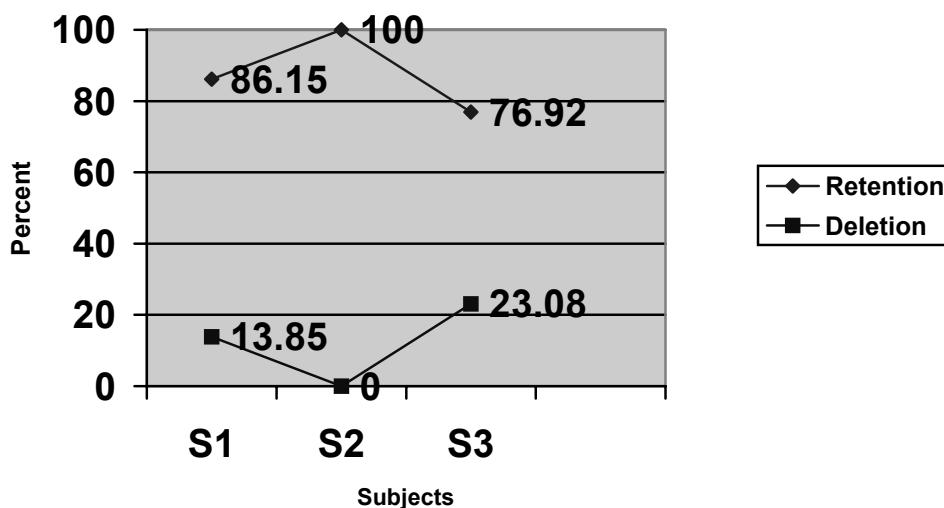
The second level of inter-speaker variation concerns the retention or weakening of /s/ both in syllable -final and word-final positions. In Northern Morocco, final /s/ deletion is more frequent among aging speakers with a low educational level who acquired Spanish through direct contact with the Spaniards during the Protectorate period. However, it can still be observed in younger speakers depending on their educational background and the degree of their awareness of the prestige associated with Central/Northern Spanish dialects.

Table 2. /s/ retention and deletion by non-native speakers

	Breath-group-final		Syllable-final before a vowel		Syllable-final before a liquid or a nasal		Syllable-final before an obstruent	
	[s]	[Ø]	[s]	[Ø]	[s]	[Ø]	[s]	[Ø]
Subject 1	98	4	79	5	57	15	189	44
Subject 2	48	0	47	0	24	0	140	0
Subject 3	50	15	85	17	21	9	184	61
Total	196	19	211	22	102	24	513	105
%	91.16	8.84	90.56	9.44	80.95	19.05	83.00	17.00

Figure 5 shows that /s/ retention is by far much more common than its deletion in all linguistic environments. In fact, the percentage of /s/ retention is at least three times higher than that of its deletion (Table 2). Important to notice is that in our data, the aspiration of final /s/, often observed in western Andalusian Spanish, is totally absent. This may be explained by a stronger influence of other varieties of Spanish and more importantly the presence of /h/ as a separate phoneme in Arabic. As a result Moroccan speakers opt either for its retention or less frequently deletion, a fact also reported by Moreno Fernández (1992, 1994) in his Algerian speakers of Spanish.

Figure 5. Percent of /s/ retention and deletion



It also becomes evident from comparing the tendencies of each speaker regarding the two phenomena discussed above that subject 1 and subject 2 tended to distinguish between /θ/ and /s/ and retain the /s/ in coda position while subject 3 tended to use *seseo* and elide the final /s/ more often. This comparison hints at a strong correlation between these two tendencies and reinforces the idea that in cases of naturalistic second language acquisition more inter-speaker variation is observed.

As well as some of the common segmental features that remain constant, speakers also share a tendency to vary within their own speech. Some speakers make use of both the interdental /θ/ and the alveolar /s/, although each to a greater or lesser extent. As shown in Figure 5, even though there is a pattern of /s/ retention, there are also cases of free variation between retention and deletion of this sibilant and, as mentioned in section 3, there also seems to be high degree of variation between the trill [r̄] and the tap [r] in contexts where the [r̄] should be produced and vice versa. This type of variation can occur, not only within the same conversation but also within the same utterance, as can be seen in the example below.

- (2) “Hi[θ]e una ca[r]era de [θ]ien[θ]ias económica[θ] y so[s]iales. Ahora e[θ]toy e[s]tudiando en la E[θ]cuela Na[θ]ional de Comer[θ]io y Ge[s]tión.”

‘I received a degree in social and economic sciences. Now I am studying at the National School of Commerce and Administration.’

5. Conclusions

In summary, we have shown that highly-educated speakers in Northern Morocco are able to draw upon various phonological systems in order to pronounce many Spanish sounds such as the unvoiced bilabial /p/, the velar /x/ and the affricate /tʃ/. However, although the speakers of this study are highly proficient in Spanish, there are still some segmental features that set them apart from a native Spanish speaker such as the failure to produce the fricative allophones of /b/, /d/, and /g/ and to distinguish between the trill and the tap, as well as difficulties in producing the palatal nasal /ɲ/. They tend to use aspects of Central/Northern Spanish Peninsular pronunciation, and less often Andalusian features, depending on the degree of their sociolinguistic consciousness.

On the whole, three factors seem to determine the different levels of phonetic variation present in the case of educated Northern Moroccans who acquire Spanish without formal instruction: their knowledge of Modern Standard Arabic and French, their intense exposure to Spanish television, and their awareness of the sociolinguistic markers active in the Peninsula and exhibited through mass media. In fact, their overall tendency to make more use of the Central/Northern pronunciation is complemented by a lack of interest in immigrating to southern Spain and preference for more northern and economically strong regions such as Madrid or Catalonia. In conclusion, this study points towards the fact that mass media in Northern Morocco has become the most effective vehicle for Spanish language maintenance in the area while at the same time transmitting elements of language ideology and sociolinguistic consciousness.

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