Sound change in dialect contact situation: Argentinean immigrants in Mexico City[1]

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Speakers from some parts of Argentina may be recognized as Argentineans because of the way they pronounce the phoneme /ʝ/. In Buenos Aires, for example, the characteristic pronunciation of /ʝ/ is [ʒ]; in contrast, in Mexico, the pronunciation of /ʝ/ is [ʝ]. What happens with [ʒ] if an Argentinean speaker relocates to Mexico? Argentinean immigration to Mexico has increased for political and economic reasons since 1974[2]. Argentinean immigrants are adopting features of Mexican dialect. The purposes of this paper are to account for the replacement of [ʒ] by [ʝ] within dialect contact situation and explain how the replacement or maintenance of [ʒ] is associated with different social and linguistic variables.

The following examples show the difference between these variants of /ʝ/:

Argentinean pronunciation	Mexican pronunciation
/ʝ/ → [ʒ] fricative	/ʝ/ → [ʝ] fricative
postalveolar	palatal
voiced	voiced

		Arg.	Mex.
calle	'street'	[káʒe]	[káʝe]
yo	'I'	[ʒo]	[ʝo]
llegar	'to arrive'	[ʒeɣár]	[ʝeɣár]

FIGURE 1

Many studies have pointed out that linguistic change is related to dialect contact situations. Trudgill (1986), following the accommodation theory (Giles 1973), explains why people modify the way they speak when they relocate to another place. Trudgill suggests that linguistic accommodation is more evident when an individual moves to another country whose language is the same as the one he/she uses. In accordance with Trudgill, accommodation degree may vary depending on the characteristics of the speakers; some of them keep up almost all the features of the primary dialect; some of them are more adaptable to the new linguistic environment and they easily adopt many features of the second dialect. The adoption of features is more likely in face to face interactions with second dialect speakers. Those features may then be used even with speakers of the primary dialect. In this way, linguistic change is spread from one individual to another.

Chambers (1992) postulates eight principles that account for the sequence of linguistic replacements within dialect acquisition among children. Kerswill (1996) suggests that linguistic changes are originated by spoken varieties in contact; he proposes a nine levels hierarchy of features that are more and more difficult in a second dialect acquisition. According to linguistic accommodation theory (Giles, 1973; Trudgill, 1986), Ralph Penny (2000: 38-41) attributes fundamental importance to dialect contact in order to explain linguistic change and its spread. Penny explains that important stages of the history of Spanish started

with the mixture of reciprocally understood dialects that promoted permanent linguistic adjustments. Dialect contact, mixing, and the beginning of many speech varieties were frequent during historical events like the Conquest and Colonization of America.

My interest in the study of linguistic change within dialect contact situations stems from the lack of sufficient studies of this type with data from Spanish dialects. [3]

METHODOLOGY

The data for this study came from six forty-five minutes sociolinguistic interviews with three men and three women, all from Buenos Aires and relocated to Mexico City. The social variables considered are <gender>, <years lived in Mexico>, <age>, <age of arrival>, <plans for returning to Argentina> and <Mexican family>. One of the limitations of the sample is that age and years lived in Mexico are different for the men and women. The data have been organized in a post-stratified sample in the following way:

Place of birth	BUENOS AIRES					
Gender	Male			Female		
Years lived in Mexico	3	6	29	3	12	14
Age	32	38	70	29	32	44
Age of arrival	29	32	41	26	20	30
Plans for returning to Argentina	Yes	Yes	No	Yes	No	No
Mexican Family (husband/wife, children)	No	No	Yes	No	Yes	Yes

FIGURE 2

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[3] Some studies related to Spanish dialects in contact are: FONTANELLA DE WEINBERG, 1978, 1979, 1993; SILVA CORVALÁN, 1994; MARTÍN BUTRAGUEÑO, 1993, 1995, 2000, 2002, 2004; RODRÍGUEZ CADENA, 2001; SERRANO, 2002; HERNÁNDEZ, 2002.

In order to figure out how linguistic accommodation is involved in sound change, the sociolinguistic interviews include an attitudes and beliefs test. The results of this test were analyzed as an extra-linguistic variable. The test consists of four questions that were answered on a 1 to 5 point-scale. Five reveals the most "friendly" attitude toward the second dialect. The questions are:

1. How similar is the way you speak to the way Mexican people speak?

2. How do you think the way you speak has changed since you have been living here?

3. How much do you think the Mexican dialect is "catchy"?

4. How much do you think you have "caught" the Mexican dialect?

The answers of each speaker were averaged. The results obtained were 2 and 3; thus, I assumed 3 as "friendly attitude" and 2 as "indifferent attitude".

All tokens of /ʝ/ were extracted from the data and each one of them was coded as one of two variants, [ʝ] and [ʒ]. The total of tokens analyzed was 524. The independent linguistic variables taken into account were:

i. Type of word (grammatical role that each token has): noun, pronoun, adjective, adverb, toponym and discourse marker.

ii. Whether or not the word was learned in Mexico: names of some places, Mexican food or colloquial words used in Mexico, i. e. *tortilla, Coyoacán* (it is a very famous place in Mexico City)*, grilla* 'politics' (colloquial use).

RESULTS

Despite the fact the pronoun *yo* 'I' and the adverb *ya*[4] 'already' are very frequent, I did not exclude them because these words have extreme variation. Furthermore, I will show how the frequency is related to sound replacement in this case. The variables <Mexican family> and <plans for returning to Argentina> overlapped, i. e. all those who have Mexican family did not plan to return to Argentina, while all those without Mexican family did plan to return; consequently I decided to collapse them. The same happened with <age> and <age of arriving>, due to the sample size, people who arrive to Mexico when they were very young is the younger people of the sample.

The sound /ʝ/ is used in a limited number of words, but some of them are high-frequency words. The list below[5] shows the rate of use of the most frequent tokens of /ʝ/ in the data. Tokens used only once are not shown:

Number of use	Tokens	Translation
2	sencillo	'single'
3	allí	'there'
3	aquella	'that'
4	calle	'street'
4	mayor	'biggest' 'larger'
5	villa	'villa'
5	tortilla	'tortilla'
5	mayoría	'majority'
6	proyecto	'proyect'
8	oye	'hey!'
10	ayudar	'to help'
12	qué sé yo	'I don't know'
17	llamar	'to call'

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[4] The Unversity of Chicago Spanish-English, English-Spanish Dictionary (2002:272) translates *ya* as follows: **ya** adv. already; now; soon; **¡---!** enough!; **--- era hora** it was about time; **¡--- lo creo!** I should say so; **--- no** no longer; **--- que** since; **--- sea que** whether; **--- te arreglo** I'll fix you; **--- verás** mark my words; **---voy** I'll coming.

[5] The idea was representing the lexical base with one word; therefore, in the case of the verbs, I did not list the different conjugation used by the speakers.

28	ellos, ellas	'they'
34	llegar	'to arrive'
51	allá	'over there'
101	ya	'already' 'now' 'soon'
190	yo	'I'
488	total of frequent tokens of /ʝ/	

<div align="center">FIGURE 3</div>

The likelihood of the variables to favor or disfavor the sound replacement of [ʒ] by

[ʝ] was analyzed with Goldvarb. The first binomial run showed that <type of

word>, <word learned in Mexico>, <attitude toward the second dialect> and <age>

are the factors that are favoring the sound replacement. Significant variables and

their probabilistic weights are shown in Figure 4:

Input probability 0.370

TYPE OF WORD	PROBABILISTIC WEIGHT
Adjectives	0.886
Adverbs	0.751
Verbs	0.426
Toponyms	0.026
Pronouns	0.545
Discourse markers	0.196
Nouns	0.152
WORD LEARNED OR NOT IN MEXICO	PROBABILISTIC WEIGHT
Word not learned in Mexico	0.451
Word learned in Mexico	0.977

ATTITUDE TOWARD THE SECOND DIALECT	PROBABILISTIC WEIGHT
Friendly	0.714
Indifferent	0.028
AGE	PROBABILISTIC WEIGHT
Less than 33 years old	0.105
In between 34 to 44 years old	0.814
More than 45 years old	0.612

FIGURE 4

Total Chi-square = 58.2216

Chi-square/cell = 1.1882

The first binomial up and down level analysis showed that the rest of the factors groups are insignificant, i. e. do not make a significant contribution to the variability of (ɟ). About the significance of adjectives, I have to say that only eight tokens of the sample were adjectives. The most adaptable speaker, the one who has lived in Mexico for 29 years, said five of them. Therefore, I decided to run the binomial up and down level analysis without the adjectives. The final results are shown in Figure 8, but it is important to say that the probabilistic weight of variants of <type of word> changed as follows:

TYPE OF WORD	PROBABILISTIC WEIGHT
Adverbs	0.605
Verbs	0.488
Toponym	0.138
Pronouns	0.515
Discurse markers	0.157

FIGURE 5[6]

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[6] This table is a part of the finals results shown in Figure 8.

Discourse markers seem the less favorable context for sound replacement. Just in one case, within the phrase *qué sé yo* 'I don't know' *yo* was pronounced as [ɟo]. The reason of this maintenance of the first dialect sound may be that this phrase is very common in the Argentinean dialects. I have heard it in Mexico, but most of the time Mexican people say *no sé* 'I don't know' instead *qué sé yo*. On other hand, if the word was not learned in Mexico, as it is the case, it is less likely to favor the sound replacement.

Results in Figure 5 do not necessarily demonstrate that sound replacement of [ʒ] by [ɟ] has to do with the grammatical function of the word. It seems that the frequency of use of some words is favoring the replacement. Figure 3 above shows that *yo* and *ya* are high-frequency words.

Since almost all the questions were related to the experiences about living in Mexico, in these interviews it was expected that the speakers would use *yo* several times. Therefore, the use of that pronoun was very frequent, but the likelihood of replacement of [ʒ] by [ɟ] is not as significant (0.515) as the adverb *ya* is (0.605).

The very high frequency of *ya* and *yo* may be promoting the sound replacement. According to Bybee (2002:67) more frequent words change more rapidly: "change will be more advanced in productions that are more highly practice, i. e. high-frequency words and phrases." The data show the word *ya* is more variable than *yo*. *Ya* has different meanings depending on the context (i. e. 'already' 'now' 'enough' 'since', etc.). On the contrary, the subject pronoun *yo* has two characteristics that may be disfavoring the rate of variability:

1. *Yo* only means 'I'.

2. Spanish, as a pro-drop language, frequently omits subject pronouns as *yo* because the person and number agreement are in the conjugated verb.[7]

Despite the fact the frequency of *yo* seems to be higher than *ya*, some findings suggest that the sound replacement of [ʒ] by [ɟ] might start with the word *ya*. The box below shows the frequency of use of *yo* and *ya* in each speaker:

Speakers Gender, age, years lived in Mexico	Mexican pronunciation ɟa	Argentinean pronunciation ʒa	Total tokens of YA	Mexican pronunciation ɟo	Argentinean pronunciation ʒo	Total tokens of YO
a. Fem. 29, 3	1	9	10	3	8	11
b. Male, 32, 3	2	18	20	0	35	35
c. Fem. 32, 12	2	18	20	1	45	46
d. Male, 38, 6	4	3	7	3	7	11
e. Fem. 44, 14	16	0	16	30	3	33
f. Male 70, 29	24	0	24	52	3	55

FIGURE 6

If we look at speaker (b), who is the less adaptable, we will see that two of twenty times he used *ya* he pronounced [ɟa]; instead, none of his tokens of *yo* was pronounced as [ɟo]. In fact, the only cases of sound replacement speaker (b) used were those two tokens. In the case of speaker (d), more than the 50% of tokens of *ya* were pronounced as [ɟa]; in comparison, he pronounced more [ʒo] than [ɟo].

My own process of accommodation during the interviews supports the idea that *ya* might be the context in which the sound replacement begins. Another variable that was considered at the beginning, but was excluded in the final results, was the occurrence of the sound replacement during the course of the recording. I thought it might be possible that the speaker would replace more sounds not at the

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[7] Poplack (1982) says that the frequency of pronoun dropping is 80%. Leonor Orozco (personal communication) reports that 66% of subject pronoun *yo* was dropped in data from phonic conversations she is analyzing.

beginning of the interview, but near the end. I thought the more time they spent speaking with a Mexican speaker in a Mexican context, the more possibility the accommodation would take place. The variable <placement of the replacement within recording> was not significant in first Goldvarb analysis. However, listening to the recordings, I realized that I pronounced [ɟ] as [ʒ] in two different interviews after the 30 minute mark. In both cases, the tokens were *ya*:

> Dinorah: Sí, era lo que te quería preguntar, [ʒa] ahora que tienes conocimiento
> 'Yeah, it was that I wanted to ask you, now you know more about…'
> Dinorah: En estos seminarios [ʒa] empezamos la tesis
> 'In these seminars, we already started the dissertation.'

On other hand, *yo* and *ya* are both monosyllabic words; I am not sure if that characteristic is a determinant factor or not in a second dialect contact acquisition. Further studies should explore if monosyllabic words in Spanish tend to promote sound replacement faster than two-syllable or three-syllable words in dialect contact situations.

WORD LEARNED IN MEXICO

If the word was learned in Mexico, it is more likely to be pronounced with [ɟ]. I am assuming that the speakers learned the names of some places and other typical cultural elements, like food or colloquial words of the Mexican dialect in Mexico. The results show the variable <word learned in Mexico> as highly significant (0.954 in Figure 8). This suggests that sound replacement in dialect contact situations may spread by lexical difussion. Pedro Martín Butragueño (2004: 97) explains that people who have lived some years in Mexico, experience wide processes of lexical diffusion. That has phonetic consequences within isolated

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items. For example, some Spanish immigrants in Mexico pronounce *pozole* (a Mexican soup fixed with white corn and meat) as [posole] (the Mexican pronunciation) instead [poθole] (with the Spaniard pronunciation for the letter *z*). The significant expressions for the results in this paper were words related to Mexican food, as *tortilla*, and names of famous places in Mexico City:

	Tokens	Pronunced with [ɟ]
Tortilla	5	5
Villa Coapa	4	4
Villa Dante	2	2
Universidad del Valle de México	2	2

FIGURE 7

Thus, it seems that the sound change in dialect contact situation is related to lexical diffusion[8].

ATTITUDE TOWARD THE SECOND DIALECT

Figure 4 points out that the friendly attitude toward the second dialect favors (0.714) the sound replacement. Trudgill (1986:12) suggests, "the variant retention implies the lack of accommodation". In agreement, data shows that speakers who have a friendly attitude toward the Mexican dialect are more adaptable and favor the sound replacement more than the speakers who are indifferent to the second dialect.[9]

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[8] Lexical diffusion theory (WANG, 1977) suggests that words are the basic units for linguistic changes. LABOV (1994: 767) maintains that lexical diffusion is not the basic device for linguistic change but it frequently appears with regular change. *See also* Bybee (2002a; 2002b); Chambers and Trudgill (1998:160): lexical diffusion is "the theory that a linguistic change spreads gradually across the lexicon, from word to word".

[9] However, when the tokens were recoded, the attitude was not significant in the sound replacement.

AGE

About the significance of the variable <age> in Figure 4, I would say that maybe the age is not exactly favoring the sound replacement. The issue is that middle age and older people (group of age 2 and 3) have been living in Mexico for more years than the people of group 1. Therefore, I decided to run the Goldvarb analysis without the variable <age>. The results showed that besides <type of word> and <word learned in Mexico>, the variable <years lived in Mexico> favors the sound replacement in dialect contact situation, as it was expected:

The box below shows the probabilistic weight of the factors[10] that may be favoring the sound replacement in dialect contact situations.

Input probability= 0.453

TYPE OF WORD	PROBABILISTIC WEIGHT
Adverbs	0.605
Verbs	0.488
Toponym	0.138
Pronouns	0.515
Discurse markers	0.157
WORD LEARNED OR NOT IN MEXICO	PROBABILISTIC WEIGHT
Word not learned in Mexico	0.471
Word learned in Mexico	0.954
YEARS OF RESIDENCE	PROBABILISTIC WEIGHT
Less than five years	0.108
Five to twelve years	0.496
More than thirteen years	0.924

FIGURE 8

Total Chi-square = 18.3032
Chi-square/cell = 0.7321

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[10] Best stepping up run: #11; best stepping down run: #24

The crossing of the variables <sound replacement of [ʒ] by [ʝ]> and <years of residence> is shown in the following graph (Figure 9). It may be seen that the sound replacement increases in accordance with the years the speakers have been in contact with the second dialect. The fact that the percentage of replacement of speaker (b) is more than the speaker (a) (with the same rate of years living in Mexico), may be signifying that women are more susceptible to the sound replacement than men. Moreover, speaker (d) has been living in Mexico half the number of years that the speaker (e) and their rates of sound replacement are almost the same (82% and 90%). Nevertheless, data in this paper are not sufficient for determining that women lead the linguistic change in dialect contact situations, but the results may be suggesting that as a possibility.
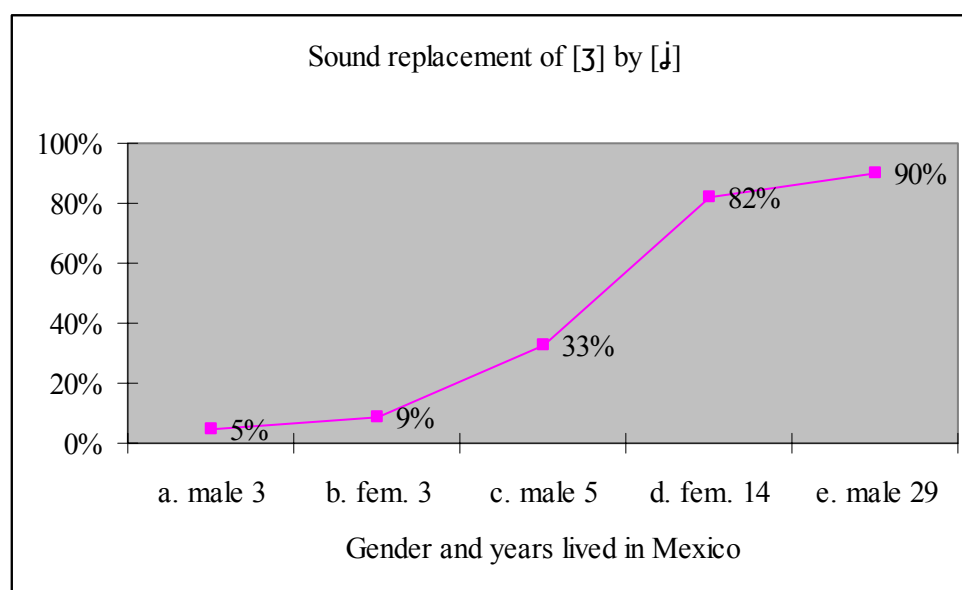

FIGURE 9

CONCLUSION AND DIRECTIONS FOR FURTHER STUDY

Data collected at the time has been planned for evaluating different types of linguistic variables. Besides the attitudes and beliefs test, there were also a reading

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test (used for analyzing intonation variables in formal style) and a lexical test.[11] Results of the lexical test were analyzed last year[12]. Besides the significance of the probabilistic weight of the variable <years in Mexico>, data show that lexical replacements are more likely in women (0.583) than in men (0.339). Speakers who arrived before they were 27 years old are more adaptable (0.609) for using lexical items of the second dialect. Speakers who have a Mexican family not only acquire new words (0.896) but also replace the first dialect lexical items for the second dialect forms. According to the results above, it was expected that sound change was related to the variables <years lived in Mexico> and <Mexican family>. It was also expected that women replace the sound [ʒ] by [ʝ] more rapidly than men do. It might be possible that sound change was associated with the desire for staying in Mexico forever, but the results were different from the expected ones. In this study, the variables <gender>, <age of arrival> and < Mexican family> were not related to the sound replacement as they were to the lexical replacement. Social factors that favor or disfavor lexical and sound replacements in dialect contact situation may be summarized in the box below:

	Gender	Age of arrival	Years lived in Mexico	Mexican family
Lexical replacement	Yes	Yes	Yes	Yes
Sound replacement	No	No	Yes	No

FIGURE 10

On other hand, the speed of the linguistic change does not seem to be equal for lexical and sound replacement. The graph below shows not only the use of [ʝ], but also the lexical test's results of the four most adaptable speakers of the sample. In

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[11] The interviewer describes some items or concepts and the speaker has to say the word he/she uses for referring to each one of those descriptions.

[12] PESQUEIRA 2004.

the case of the first speaker, the one who has been living in Mexico only during three years, the use of Mexican lexical items is larger than the replacement of [ʒ] by [ɟ]. Chambers (1992:667) suggests in the first principle of dialect acquisition that "lexical replacements are acquired faster than pronunciation and phonological variants". The results shown in this graph agree with Chambers's principle. The low rate of lexical replacement in the data from the second speaker may be explained because, according to Goldvarb analysis, men are less disposed to acquire second dialect lexical items (0.339) than women are (0.583)[13]. Lexical replacements of the third speaker show low rate percentages in contrast with the sound replacement. It might be possible that the third speaker had acquired Mexican lexical items as fast as the first one did, but after years, lexical acquisition did not continue in the same way. This is in agreement with the Chamber's second principle of dialect acquisition (1992: 680): "lexical replacements occur rapidly in the first stage of dialect acquisition and then slow down". Data of the fourth speaker helps confirm that <years of residence> is a significant factor for the linguistic change within dialect contact situations.
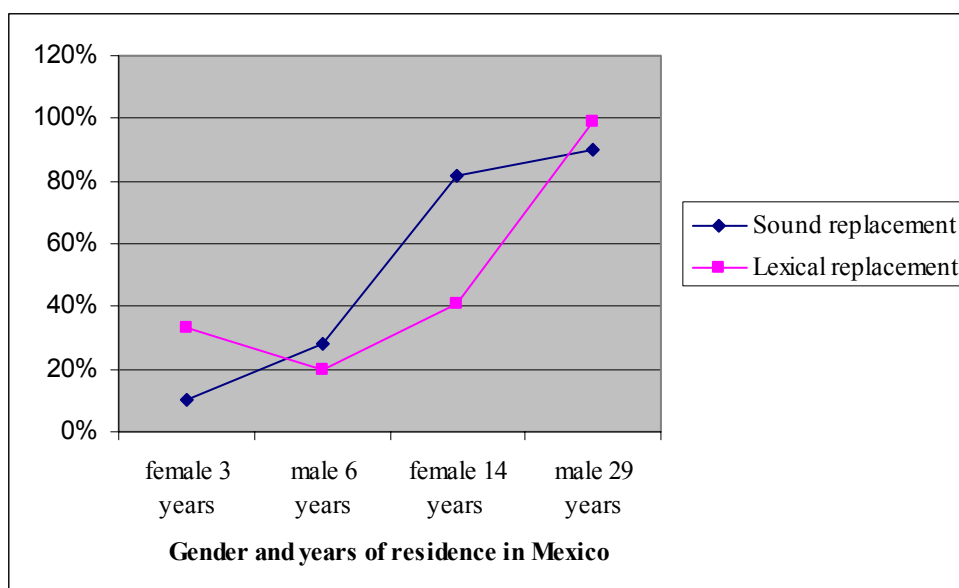
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[13] Pesqueira 2004.

FIGURE 11

Thus, it seems the linguistic change occurs in different way depending on the type of sociolinguistic rules[14]. For the moment, it is possible to say that sound replacement seems to occur later but faster than lexical replacement. Further studies are indicated in this area.

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[14] Dittmar (1996) distinguishes three type of sociolinguistic rules: I. Rules for grammatical variation; II. Rules for variation in (lexical) semantic concepts; III. Rules of "interactive" meaning. Phonetic variation is a type I rule.

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