

# Negative Prestige and Sound Change: A Sociolinguistic Study of the Assibilation of /χ/ in Piauí Portuguese

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## 1. Introduction

In standard Brazilian Portuguese (BP), when the phoneme /χ/ appears post-vocally in coda position it is realized with a variety of allophones [r, h, x, χ, β, ʝ, ɣ] (Parkinson 1988). On the surface there appears to be free variation between the pronunciations although the variation is affected by regional and social factors (Netto 2001). Our study focuses on the Brazilian Portuguese of Piripiri (BPP), which is spoken in a small town in the rural state of Piauí in the northeast part of the country. Perhaps the most salient regional characteristic of BPP is that when /χ/ appears in coda position preceding a /t/ it is realized as a voiceless apical alveolar fricative [ʃ] or voiceless alveopalatal fricative [ʃ̟] as in *quarta* [kwaʃtɐ] [kwaʃtɛ] ‘fourth.’ Assibilation of tapped /t/ has also been documented in Spanish and its usage has been tied to sociolinguistic variables such as age, gender, and social class (e.g., Adams 2003; Chela-Flores and Chela-Flores 2002; Gomez 2003; Matus-Mendoza 2004). For example, Adams (2003) found that in the face of negative prestige, rural Spanish speakers from Costa Rica tend to preserve the assibilation of /t/ as a local identity marker. In Brazilian Portuguese, however, the assibilation of /χ/ has not been given a systematic treatment. Our goal is to document assibilation as a regional characteristic of the BPP dialect and to shed light on what factors influence its use. The assibilation of /χ/ preceding /t/ is perceived as a regional, non-prestigious pronunciation and our study demonstrates that it is being lost in favor of one of the more prestigious non-assibilated pronunciations. The loss of assibilation suggests that the language variety of the region may be undergoing dedialectalization, the process by which a local dialect adopts characteristics from a prestige variety to the point of losing its own unique characteristics, often times resulting in dialect death (Trudgill 2002).

The assibilated /χ/ of BPP is associated with the lower-class and low education levels. This makes it similar to the Greek spoken in the village of Chora Sfakion (Trudgill 2002: 44-45) where the use of a retroflex approximant [ɹ̠] is used as an allophone of /l/, which is lacking in standard Greek but is found in the pronunciation of older villagers. It has attracted enough “sociolinguistic awareness” that it is the subject of mocking by the younger, more socially-conscious residents of the village. It is our contention that Piripiri can be seen as a sociolinguistic analog of Chora Sfakion. Given that the voiceless apicolalveolar/alveopalatal fricative is not found as an allophone in standard BP, its users draw upon themselves the same sort of attention given to the non-standard speakers in Chora Sfakion.

## 2. Piripiri, Piauí

Situated in the northeast of Brazil, Piauí is one of the poorest and least formally educated Brazilian states according to the *Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira* (Pinto et al. 2003), and also has the highest index of illiteracy (49.2%). Despite the state’s economic difficulties, Piauí’s capital, Teresina, is considered to have some of the most advanced healthcare facilities in the Northeast. In addition to this, Teresina is home to both federal and private universities, making it a desirable and prestigious place to live for educated *Piauienses*. Situated about 150 kilometers to the northeast of Teresina, Piripiri is the state’s fourth largest city with about 60,000

residents (Pinto et al. 2003). Piripiri's economy is dependant mostly on agriculture and livestock; however tourism does exist due to the nearby *Parque Nacional das Sete Cidades*.

In terms of linguistic characteristics, the assibilation process under investigation appears to be unique to Piripiri. Although we presently have no documented evidence to support this claim, the nearby cities of Campo Maior, Altos, Parnaíba, Pedro II, and Teresina are not known to show this pronunciation, and residents of Piripiri never mentioned observing an assibilated /χ/ in those areas. It is important to note that the characteristic assibilation in BPP in words such as in *perto* 'close', *porta* 'door', and *lagarto* 'lizard' does not go unnoticed by speakers of other cities and regions of the country. On the contrary, it is highly stigmatized to the point that it has become the subject of jokes, much like the *caipira* retroflex approximant [ɻ] of São Paulo and Minas Gerais (Azevedo 2005: 224). In addition to being used jocularly, the assibilation of /χ/ is usually associated with illiteracy and a general lack of education.<sup>1</sup>

### 3. A Sociolinguistic Study of Assibilation in BPP

Our motivation for carrying out a study of assibilation in BPP is two-fold. First, we were unable to find any previous study of the phenomenon in the literature. Second, we were interested in how negative social stigma would affect it and hoped that a sociolinguistic analysis would give us some clues.

	Male			Female		
Lower-class	5	4	5	5	5	5
Middle-class	5	5	5	5	5	5
Upper-class	3	3	4	5	5	4
Age group	1	2	3	1	2	3
Age group 1=18-40; Age group 2=41-60; Age group 3=61+						

Table 1. *Number of participants interviewed by sex, class, and age group*

#### 3.1. Participants

A sample of the population of Piripiri was obtained through 83 participant interviews, chosen according to the sociolinguistic variables of age, sex, and social class (see Table 1). Under the assumption that a very large sample not only becomes a burden quantitatively, but also "tend[s] to be redundant" (Sankoff 1980: 51-52), it was predetermined that five interviews would be obtained, ideally, from each cell as to provide a corpus of data as representative of the general population as necessary for this study.

Obtaining the age and sex of the participants was not problematic, but determining social class was, since we felt that questions about income and the like would not be appropriate. We relied on the principal investigator's judgment regarding the participants' social class, which were based on a number of criteria. Piripiri, as in other cities in Brazil, has a very visible social stratification. The *bairros* 'districts or neighborhoods' are frequently segregated according to social class and income level, with the poorest *bairros* found on the outskirts of town. More often than not, social class could be determined by noting what part of the city the participant lived in. However, without familiarity with the social norms and economic situation of the area, one could be led astray relying solely on geography. Many times a very large home owned by a doctor or lawyer was encountered in a poorer area, almost outside of town, probably having been built before the lower-class populated the area. All

<sup>1</sup> On the way from the bus terminal to a hotel, the primary investigator was discussing the research to be done in Piripiri with a taxi driver, but he argued that there was nothing to be studied. He was convinced that only illiterate people talked that way.

of the interviews took place in the participant's homes, which gave a second, more intimate clue as to social class. Again, classification of participants in regards to social class was ultimately based on the experience and intuition of the primary investigator. All classification of social class was done prior to analysis, so as to avoid bias.

### 3.2. Methodology

Due partly to the limitations and difficulties related to the high illiteracy rate and the desire to not discriminate or disqualify any group of the sample population, it was not possible to obtain stylistic differences using the methods developed by Labov that entail having the participants read written passages. With this in mind, the interview was designed to elicit 13 words using a series of questions, drawings, and photographs. Contrary to Carvalho's study investigating Uruguayan Portuguese, the use of photographs and drawings did not elicit "an extremely formal style" (2004: 129-130). In her study, participants paid very close attention to lexical choice and pronunciation, often giving a local and a "correct" form. It seems that the use of visual aids in Piripiri had the opposite effect. In fact, when approached and asked to be interviewed, most participants seemed reluctant until it was explained that the interview would consist mostly of describing pictures and drawings. Perhaps the difference has to do with the high illiteracy rate, or perhaps it is purely cultural. Some participants expressed fear or embarrassment at the possibility of incorrectly answering a question, but not one was hesitant around the visual stimuli. The fact that using this technique elicited assibilated tokens from the most educated and most formal individuals suggests that it was an adequate method for obtaining uninhibited speech in Piripiri. Eight questions were designed to investigate the phonetic environment of syllable-final /χ/ followed by /t/. The remaining five elicited words containing the environment of /χ/ followed by /d/; however, no data was used from this line of questioning as no tokens with the environment /χd/ were assibilated (see Appendix 1 for interview questions). Interviews were recorded using a minidisc recorder and a lapel microphone, which proved to be an effective means of obtaining data without visibly intimidating the participants.<sup>2</sup>

### 3.3. Analysis

The results of the interviews were analyzed with logistic regression using GoldVarb (Robinson, Lawrence, and Tagliamonte 2001; Rand and Sankoff 1990; Rousseau and Sankoff 1978) in order to determine the influence of sex, age, and social class on the pronunciation of /χ/ before /t/. An additional variable was the specific test word that the *-rt-* cluster appeared in. The difference between an assibilated and non-assibilated /χ/ is quite pronounced, and it was a fairly simple matter to classify assibilated and non-assibilated tokens without performing acoustic analysis.

The results of the first GoldVarb run indicated that the particular lexical items elicited played no role in the assibilation of /χ/, and for this reason they were eliminated as variables. We also observed that there were no significant main effects in the use of assibilation according to sex, nor between the members of the two oldest age groups (41-60 years and 61+ years). As a result we eliminated sex as a factor group, and recoded the two oldest age groups into a single group and reran the analysis. For the purposes of the study, we consider any factor weight above .550 to favor the assibilated pronunciation, and conversely, any factor weight below .450 to disfavor it; weights between .450 and .550 are not considered particularly telling of a strong trend in either direction. Table 2 contains the results from the second GoldVarb run. It is clear that participants between the ages of 18 and 40, along with those belonging to the upper-class disfavor the assibilated pronunciation. The lower-class and the older participants tended to assibilate /χ/, while the middle-class neither significantly favors nor disfavors assibilation.

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<sup>2</sup> Except for in the case when a male participant was not wearing a shirt, which because of the heat, was not a rarity. The participant would have to hold the microphone in his hands and was more noticeably worried about the visible presence and position/distance of the microphone.

	Total N of Assibilated Tokens	Total N of Tokens	%	Factor Weight
Lower-class	48 (19%)	241	33	0.704
Middle-class	24 (8%)	272	38	0.497
Upper-class	7 (3%)	197	27	0.261
18-40 years	8 (3%)	239	66	0.255
41 and older	71 (15%)	471	33	0.633
	79 (11%)	710		
Total $\chi^2= 3.68$ $\chi^2/\text{cell} = 0.61$ Log likelihood = -219.37 p = .000				

Table 2. *GoldVarb results for assibilation of /χ/ by sociolinguistic factors*

While we did observe significant main effects for class and age, we were also interested in possible interactions between factor groups. For this reason, we combined the factor groups to produce new interaction groups (sex by age, sex by social class, age by social class) and carried out an additional logistic regression analysis. Only the age by social class was selected as significant (Table 3). The interaction analysis is quite revealing. It shows that regardless of age, the upper-class strongly disfavors assibilation. In the analysis of main effects it appears that the lower-class strongly favors it; however, this does not hold true for the youngest members of the lower-class because regardless of class, the youngest speakers disfavor the pronunciation of /χ/ as a sibilant.

	Factor Weight
Lower-class, 41-60 years	0.849
Lower-class, 61 or older	0.782
Middle-class, 61 or older	0.726
Middle-class, 41-60 years	0.524
Upper-class, 60 or older	0.437
Lower-class, 18-40 years	0.35
Upper-class, 18-40 years	0.277
Middle-class, 18-40 years	0.27
Upper-class, 41-60 years	0.163
Total $\chi^2= 105.94$ $\chi^2/\text{cell} = 0.74$ Log likelihood = -214.47 p = .000	

Table 3. *GoldVarb results for assibilation of /χ/ by interaction*

### 3.4. Discussion

As we discussed above, the use of an assibilated variant of /χ/ carries with it negative prestige. It is recognized as a regional shibboleth and is one of the elements that Brazilians from other regions use to parody the speech of Piauí. As a result, *Piauíenses* are self-conscious of it. It is avoided most often by the higher social class. The youngest group of speakers uses it less than older speakers; this change in apparent time, coupled with the fact that even young lower-class speakers avoid it suggests that the negative prestige associated with the assibilated /χ/ is leading to its demise in the community and may disappear completely within a generation.

## 4. Historical and phonetic aspects of /χ/ assibilation

The general distribution of the phones represented by the graphemes *r* and *rr* in Brazilian Portuguese is that the tap /r/ only contrasts with the fricative /χ/ (with its variants [h, x, χ, ʁ, ʝ, ʎ]) in word-internal intervocalic position yielding minimal pairs such as *coro/ corro* ‘choir/I run.’ The only other position

in which taps occur is syllable-initially following another consonant as in *Brasil* [braziiu]. A fricative variant appears in all other contexts. The allophonic distribution in Piauí differs in that /χ/ is realized as [ś] or [ʃ] when followed by [t].<sup>3</sup>

One question that remains is the historical origin of the assibilated variety. One possibility is that the velar/uvular/glottal fricative underwent place of articulation assimilation due to /t/. This would be unexpected for two reasons; /t/ is dental in Portuguese yet [ś] and [ʃ] are alveolar or alveopalatal, so the assimilation would not have been complete. The second oddity is that phonetic changes from [h, x, χ, ɣ, ʁ, ʁ̃, ʁ̄] to [ś] or [ʃ] are not common. Our contention is that the assibilated pronunciation derives from an earlier tap which underwent spirantization. The fact that it is often rendered as an apicoalveolar makes this highly plausible, as does the fact that the BP fricative pronunciations themselves evolved from alveolar taps and trills in Romance. The assibilated [r] has also been observed in certain dialects of Spanish (Adams 2003; Chela-Flores and Chela-Flores 2002; Gomez 2003; Matus-Mendoza 2004) which lends further support to the notion that we are dealing with a case of tap assibilated.

In the data we obtained, our initial auditory impression of the assibilated rhotic was that it was apicoalveolar; however, we wanted to confirm our suspicion. Therefore, we examined a sampling of tokens taken from the speech of 8 different informants and found both apicoalveolar and alveopalatal pronunciations. We identified the articulation of the token as apicolalveolar and alveopalatal based on their acoustic properties described by Ladefoged (2003) and MacMurrough (1974). Although we only looked closely at a small number of tokens, it appears that even the articulation of the token under investigation is variable. For the purposes of the present paper it was not necessary to submit all assibilated variants to spectrographic analysis; this is a topic that further research into BPP may want to consider.

## 5. Conclusions

As a small, poor city in a small, poor state, Piripiri seems to have either retained an allophone of /χ/ that standard Brazilian Portuguese has lost or developed its own allophonic distribution. Historically, Piauí, along with the rest of the northeastern states, has been a region from which large numbers of residents have moved seeking better opportunities in the more prosperous southern and central states. By the same token, Piauí has received little to no immigration in the past few centuries, due to impoverished living conditions and drought. It seems, then, that the dialect spoken in Piripiri, Piauí is not the result of the type of dialect mixing and leveling that large prestige-centers receive (Penny 2000), but represents a dialect that has not been highly influenced by contact with other dialects, holding on to regional features, namely the assibilated /χ/.

Despite the possibility of having retained older features of Brazilian Portuguese or having developed its own, the evidence suggests that BPP is seen as a less prestigious dialect by many speakers. Our data suggest that the assibilated realizations of /χ/ have been associated with negative prestige which may be responsible for its falling out of use by those comprising the younger generation, as well as those of the upper-class, regardless of age. One possible explanation for this is that the younger and more affluent residents of Piripiri have more contact with the nearby capital, Teresina, and with the rest of Brazil through education, mass media, travel, or business when compared with the older, poorer residents. As a result they may have had more exposure to other varieties of BP. Those who travel outside of their own dialectal boundaries are also more likely to become aware of the negative prestige associated with their particular speech patterns. Therefore, those wanting to move up the social ladder would want to avoid the sort of negative sociolinguistic awareness discussed by Trudgill (2002) and would tend to move toward a less regional pronunciation. As a result, BPP appears to be in the process of dedialectalization, losing one of its more salient features as *Piripirenses* adopt the standard features of BP.

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<sup>3</sup> Of the 83 participants, there was only one who produced an alveolar tap before alveolar stops. However, during one question, after being distracted by a neighbor she pronounced the word *lagarta* with the assibilated variant.

## Appendix 1. Interview Questions

1. *Quais são os dias da semana?* ‘What are the days of the week?’
2. *Qual é a capital do Ceará?* ‘What is the capital of Ceará?’
3. *Como se chama alguém que não ouve?* ‘What do you call someone who can’t hear?’
4. *Qual mão é esta?* ‘Which hand is this?’ (Showing right, then left hand)
5. In addition, the following pictures and drawings were shown as to elicit the following words: *lagarto* ‘caterpillar,’ Roberto Carlos, *porta aberta* ‘open door’, *forte* ‘strong,’ *carta* ‘letter,’ *farda* ‘uniform,’ *guarda-chuva* ‘umbrella,’ and *verde* ‘green.’

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