



THE PHONOLOGY OF /s/ IN UNAFFECTED PUERTO RICAN JÍBARO SPEECH

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0. INTRODUCTION. As a dialect zone of American Spanish, the Spanish of Puerto Rico is further sub-categorized more specifically as being one of the major dialect regions of Insular Caribbean Spanish. The different dialect areas of Insular Caribbean Spanish share a matrix of relatively identical lexical, syntactic and phonological characteristics which uniquely differentiate this dialect area from all other dialect zones of both Peninsular and American Spanish. Within the realm of phonology, for example, the different regions of Insular Caribbean Spanish all tend to velarize final /n/'s, e.g. [pán] versus standard American Spanish [pán] pan 'bread'; Insular Caribbean Spanish dialects also tend to neutralize final /l/'s and /r/'s, e.g. mal [mál] 'evil' and mar [már] 'sea' of standard American Spanish are often both pronounced as [mát] in the Insular Caribbean dialect zone; word-final systematic /d/ is almost always deleted in normal speech in Insular Caribbean Spanish, e.g. verdad [berdá] 'truth' of standard American Spanish appears phonetically in Insular Caribbean Spanish as [berdá]; and final systematic /s/'s in Insular Caribbean Spanish very frequently undergo a weakening process through which a lexical item such as entonces [entónses] 'then' of standard American Spanish is most commonly realized phonetically as either [entónseh] or [entónse]. While none of the four above mentioned phonological characteristics commonly attributed to Insular Caribbean Spanish dialects is at all unique to this dialect zone, the combination of these four phonological characteristics along with numerous others of lesser renown will serve to uniquely identify the Spanish of this geographical region as being what is traditionally called Insular Caribbean Spanish.

As is to be expected, however, based on many previous sociolinguistic studies carried out in numerous dialect areas of diverse languages of the world, the Spanish spoken on the island of Puerto Rico is far from being a completely unified linguistic entity, as there are numerous factors which bring about some rather distinct vertical stratification in the Spanish language of Puerto Rico. This lack of linguistic unity found in Puerto Rico is due to a number of different sociolinguistic factors such as education, professions, economic status, experience, and other variants among the speakers of this dialect zone. In a lengthy and on-going analysis of the Spanish spoken on the island of Puerto Rico based on

three different sociolinguistic levels, I am attempting to identify and quantify the exact nature of these phonological differences. In this present study, the findings based on an analysis of the phonology of the systematic phoneme /s/ of one of these sociolinguistic levels, that of the Puerto Rican Jíbaro, will be discussed.

1. **METHODOLOGY.** In the present study those data utilized are the result of an analysis of approximately four and one-half hours of tape recordings made of informal conversations of nine native Jíbaro speakers of Puerto Rican Spanish. One significant methodological aspect of the data-gathering process employed herein is that all of the data analyzed were gathered from the normal, spontaneous conversations of these nine Jíbaro informants without the use of a questionnaire or any other type of structure which might have tended to elicit affected speech. Another important aspect of this data-gathering process was that the individual who was trained to collect these data was also a native speaker of Puerto Rican Jíbaro Spanish, and furthermore, he was an accepted member of the communities in which he was collecting these data. This factor is often overlooked and can be of great significance depending, of course, on the type of data being dealt with. All too frequently those who collect linguistic data are outsiders or non-native speakers of the dialect in question whose presence tends to put informants on their 'best linguistic behavior'. Since all speakers possess various levels of speech for use at the appropriate occasion, the result of an outsider or non-native speaker of said dialect collecting data is often that informants tend to produce their 'best', i.e. most standard, version of the language they speak. This version can, of course--depending on how much the dialect in question varies from the standard language--differ greatly from the dialect being analyzed.

The nine Puerto Rican Jíbaros whose speech has been analyzed herein consist of five males and four females whose ages vary from 46 to 73 years. The median age of these informants is 58.2 years. The nine individuals all reside in the interior mountainous region of Puerto Rico in the rural areas of the neighboring towns of Coamo and Aibonito, and by their own accounts, all nine informants consider themselves to be authentic Jíbaros. These informants completed between three and eight years of formal education and are employed in the following manner: three are farmers; four are housewives; one is a cabinet-maker, and the other is a woodcutter. All of these nine informants were born on the island of Puerto Rico, are monolingual speakers of Spanish, and have never left the island.

It should also be mentioned that the term *jíbaro* is a word which has been used in Puerto Rico since the eighteenth century as both a noun and an adjective to refer to the rural, lower-class residents of the island in much the same way as the general term *campesino* is used in other Spanish dialects (Braun 1904:181; Álvarez Nazario 1977:67) or in the same manner as more specific terms are used in other Insular Caribbean dialects such as *quajiro* in Cuba or *montaño* in the Dominican Republic.

2. ANALYSIS OF /s/ IN PUERTO RICAN JÍBARO SPANISH. Table I presents a summary of the different percentages of occurrence of the surface realizations of the systematic phoneme /s/ as they appeared in the speech of the nine informants used in the present study. This table includes all the possible final phonological environments in which the phoneme /s/ may occur in Spanish. Throughout this study, three different variants of /s/ are included in all environments: [s], a voiceless alveolar grooved fricative; [h], a voiceless laryngeal slit fricative; and [∅], the total deletion of the systematic phoneme in question. In those relevant environments, two additional surface manifestations of /s/ are also included: [z], a voiced alveolar grooved fricative, and [ʰ], a voiced laryngeal slit fricative. Throughout the analysis of the data utilized in the present study, therefore, all phonetic occurrences of /s/ have been placed into one of the five above mentioned discreet categories.

TABLE I
Surface Realizations of /s/ in All Environments

Surface realization	Number of realizations	Percentage of realizations
[s]	568	7.8
[z]	32	0.4
[h]	3424	47.3
[ʰ]	64	0.9
[∅]	3154	43.6
Totals	7242	100.0

Table I shows that the most frequent surface realization of systematic /s/, when taking into account all final environments, is the voiceless laryngeal phonetic variant, also known as aspiration, being manifested phonetically at a percentage rate of 47.3. The other very frequent phonetic manifestation of /s/ was total deletion of the underlying segment, which occurred in these data 43.6% of the time. The systematic phoneme /s/ was realized phonetically in 7.8% of all cases, while the remaining two surface forms of /s/, [z] and [ʰ] occurred in the almost negligible rates of 0.4 and 0.9% respectively. Since in all of the data under analysis in the present

study the latter two phonetic variants [z] and [h] appear at very low percentage rates, the discussion of the data throughout the remainder of this study will include [z] with the surface realization [s], and [h] with [h], as these two voiced surface manifestations of /s/ are very closely related in Spanish to their [-vce] counterparts through a phonological process of voicing assimilation. Therefore, [s] occurred at a percentage rate of 8.2, [h] at a rate of 48.2%, and [∅] at a rate of 43.6% when considering all final environments.

The percentages of occurrence of the different phonetic realizations of the phoneme /s/ as they manifested themselves in absolute-final position are displayed in Table II.

TABLE II
Surface Realizations of /s/ in Absolute-final Environments

Surface realization	Number of realizations	Percentage of realizations
[s]	139	7.0
[h]	554	28.2
[∅]	1274	64.8
Totals	1967	100.0

It can be seen that the most recurrent phonetic variant of /s/ by far in this environment is [∅], the systematic phoneme being deleted in 64.8% of the cases. The second most frequently occurring surface form of /s/ in absolute-final position was [h], being realized 29.2% of the time, while [s] appeared phonetically at a percentage rate of only 7.0.¹ Comparing these data to those previously presented in Table I, we find that when considering all environments [h] and [∅] are manifested phonetically at similar frequencies (48.2% and 43.6% respectively), but when taking into account only absolute-final environments, there is a very strong preference for [∅] over [h] (64.8% versus 28.2% respectively).

Shown in Table III are the different rates of phonetic manifestation for the surface realizations of /s/ as they occurred in all word-final environments within a breath-group for the data under analysis in the present study.

TABLE III
Surface Realizations of /s/ in All Word-final Environments
Within a Breath-group

Surface realization	Number of realizations	Percentage of realizations
[s]	244 } (251)	6.2 } (6.4)
[z]	7 }	0.2 }
[h]	1981 } (2003)	50.9 } (51.5)
[ɦ]	22 }	0.6 }
[∅]	1638	42.1
Totals	3892	100.0

Considering all word-final environments, [h] was the most common surface realization of /s/ (51.5%), while [∅] appeared at a percentage rate of 42.1, and [s] manifests itself in only 6.4% of the cases. In this environment, as opposed to absolute-final environment, [h] occurred more frequently than [∅], and the relative percentages of occurrence of [h] and [∅] were much less disparate (as was the case with [∅] and [h] in absolute-final position).

In an effort to ascertain whether the [[±] syllabic] status of the following segment has any effect on the frequency of occurrence of the surface realization of the phoneme /s/, the data in Table III were separated into two distinct groups: those realizations of /s/ which appeared before consonants and those which occurred before following vowels. These data are revealed in Table IV and Table V respectively.

TABLE IV
Surface Realizations of /s/ in Word-final Environments
Before a Consonant

Surface realization	Number of realizations	Percentage realizations
[s]	163 } (170)	5.9 } (6.2)
[z]	7 }	0.3 }
[h]	1487 } (1509)	53.8 } (54.6)
[ɦ]	22 }	0.8 }
[∅]	1084	39.2
Totals	2763	100.0

TABLE V
Surface Realizations of /s/ in Word-final Environments
Before a Vowel

Surface realization	Number of realizations	Percentage of realizations
[s]	81	7.1
[h]	494	43.8
[∅]	554	49.1
Totals	1129	100.0

Table IV shows that in word-final environments before a following consonant there is a fairly strong preference for [h] over [∅] (54.6% vs. 39.2%). These percentages of occurrence are quite similar to those shown previously in Table III which considered all word-final environments without regard the [syllabic] status of the following segment.

Table V, however, illustrates a preference for the [∅] surface realization of /s/ before vowels, this phonetic form becoming manifest at a percentage rate of 49.1, while the second most frequently occurring surface occurrence of systematic /s/ in this environment, [h], appeared 43.8% of the time. Based on these data, it is clear that the nine Jíbaro informants in the present study showed a marked tendency to aspirate /s/ word-finally before consonants, while before vowels there was an actual preference for deletion ([∅]) over aspiration ([h]), although the percentages of occurrence were relatively equal.

The rates of surface realization of the different phonetic variants of the systematic phoneme /s/ as they occurred in syllable-final position within a word are presented in Table VI.²

TABLE VI
Surface Realizations of /s/ in Syllable-final Environments
Within a Word

Surface realization	Number of realizations	Percentage of realizations
[s]	185	13.4
[z]	25	1.8
[h]	889	64.3
[ɦ]	42	3.0
[∅]	242	17.5
Totals	1383	100.0

This table indicates an overwhelming preference for the [h] surface variant of /s/ in syllable-final environments within a word,

this form occurring at a percentage rate of 67.3. Although [h] was also the most common manifestation of /s/ in other final environments (being realized at rates of between 48.2% and 54.6%), in no case was its occurrence so totally dominant. The other surface forms of /s/, [∅] and [s] were manifested phonetically at percentage rates of 17.5 and 15.2 respectively in this environment.

3. SUMMATION AND COMPARISON OF DATA HEREIN WITH PREVIOUS ANALYSES OF /s/ IN PUERTO RICAN SPANISH. In the data under analysis in the present study, either the surface realization [h] (aspiration) or [∅] (deletion) was the most frequent phonetic manifestation of /s/ in all of the environments in question, [h] being most frequent in four phonological environments: 1.) syllable-final within a word; 2.) word-final before a following consonant; 3.) the general environment of word-final within a breath-group; and 4.) when considering collectively all final environments in question. The phonetic manifestation [h] occurred in the four above environments at percentage rates of between 48.3 and 67.3. The [∅] surface realization of /s/ appeared most commonly, at rates of 49.1% and 64.8%, only in word-final environments before vowels and in absolute-final position. The phonetic variant [s] was the least frequent realization in all environments.

While it would seem appropriate to compare the results just summarized above with other analyses of /s/ in Puerto Rican Jíbaro Spanish, rather than with Puerto Rican Spanish in general, such a task would appear impossible at this point, as I know of no other analyses of /s/ in Puerto Rican Jíbaro Spanish.

The Spanish of Puerto Rico is probably, per square mile, the most frequently and carefully studied and analyzed of any dialect of Spanish. Since the publication of Tomás Navarro Tomás' well-known analysis of Puerto Rican Spanish in 1948 based on data he collected in 1927-28 throughout the island of Puerto Rico, a very large number of studies mostly concentrating on small sections (municipios) of the island have followed, principally in the form of M.A. and Ph.D. theses done in the department of Estudios Hispánicos at the University of Puerto Rico. To my knowledge, only three of these (Pérez Sala 1971, Carillo de Carle 1974, and Mauleón Benítez 1974) have been published in their entirety, while in addition to these, three others (Cerezo de Ponce 1966, Vaquero de Ramírez 1966, and Figueroa Berríos 1965) appear in summarized versions in the 1971 inaugural edition of the Revista de Estudios Hispánicos. In addition to these six, I personally have seen 10 others, and I am sure there are many more which are almost totally inaccessible to the average researcher.³

While a presentation here of a detailed analysis of the treatment of the systematic phoneme /s/ in the above mentioned 16 studies, along with others carried-out on the Spanish of Puerto Rico would be both uninspiring and beyond the scope of the present study, those data can be easily and very briefly summarized.

In the aforementioned study by Navarro Tomás (1948:71-3), the author reports only that among his informants /s/ was generally aspirated in syllable-final position, normally deleted in absolute-final environments, and [s], [h], and [∅] all occurred in word-final position within a breath-group. As is the case in the vast majority of these studies carried out on the Spanish of Puerto Rico, no indication is made of any quantitative nature as to how frequently each of the surface realizations of /s/ occurs in any of the environments in question.

Very little specific information about the surface realizations of /s/ can be gleaned from the 16 theses and dissertations on Puerto Rican Spanish that I have examined, beyond general statements which inform the reader the [s], [h], and [∅] may at times occur in all final environments.⁴ Only Carillo de Carle (1974:77-81) specifically states that among her informants /s/ was aspirated in syllable-final environments within a word at a percentage rate of 85.7. It seems that her data can also be interpreted as stating that word-finally within a breath-group /s/ was aspirated at rates of between 11.42% and 22.85%, and deletion of /s/ took place in the same environment at percentage rates of between 11.42 and 60, although these percentages are somewhat unclear because of the way the author has combined her data and percentages in this environment. In his short monograph del Rosario (1974:10) states only that [s] and [h] both occur syllable-finally within a word and word-finally within a breath-group, but he goes on to state that if anyone insists on pronouncing final [s], that such speech would be considered affected.

Because of the generality of the descriptions contained in the aforementioned studies, the only one brief comparison that can be made with the data in the present study is with Carillo de Carle 1974, in which she states that her informants aspirated /s/ 85.7% of the time in syllable-final position within a word. It can be recalled that the data in the present study show that [h] was also the overwhelming preference of the 9 Jíbaro informants in this same environment (67.3%).

4. CONCLUSIONS. The one significant and definitive conclusion that can be drawn from the data analysis presented in the present

study is that in the speech of the Puerto Rican Jíbaro the phonetic retention of /s/ as a strident sibilant is the exception, not the rule, in all final environments, and that either [h] or [∅] was the strongly preferred surface manifestation of /s/ for these 9 Jíbaro informants. How this preference differs from the speech of other sociolinguistic levels of Puerto Rican Spanish must remain unanswered until quantitative data on these other levels of speech become available. I strongly suspect, however, based on quantitative studies carried out on other Caribbean dialects of Spanish and on my own personal observations, having lived in Puerto Rico, that in no unaffected sociolinguistic level of speech is [s] the normal, i.e. the most frequent, surface realization of /s/ in any final environment, and that both [h] and [∅] are quantitatively far more common. Just how the specific percentages of occurrence among the distinct phonetic variants of /s/ in the different final environments will compare between Puerto Rican Jíbaro Spanish and other sociolinguistic levels of speech must remain at present an open question. Arce de Vázquez (1971:130) even makes the rather strong claim that "There is no level of speech that can be called Jíbaro Spanish which has homogeneous characteristics which distinguish it completely from the speech of the illiterate population of urban centers".⁵ Perhaps Arce de Vázquez is correct, but such a claim would appear to be something of a deus ex machina at present. Until we have enough available quantitative data to compare the speech of the Puerto Rican Jíbaro with that of other illiterates who reside in urban areas, such a claim can neither be supported or refuted. My own intuitive impressions, however, based on having listened to many hours of Jíbaro speech as well as that of the speech of other Puerto Rican illiterates, is that, based on a matrix of phonological, syntactic, and lexical characteristics, there may indeed be a level of Puerto Rican speech identifiable as Jíbaro Spanish. Sadly, however, by the time this question can be empirically answered, because of improvements in education, communication, and transportation systems on the island, the Puerto Rican Jíbaro will probably have become nothing more than another extinct element in the linguistic history of Puerto Rico.

NOTES

¹The surface realizations [z] and [ɲ] may occur in Spanish only when /s/ is followed directly by a voiced consonant in the same breath-group, hence these two surface forms are not included in absolute-final environments or in word-final environments before a vowel.

²Because of the CV syllable-structure of Spanish, all occurrences of /s/ in syllable-final position within a word must occur before a following consonant.

³See Vaquero de Ramírez 1972 for the titles of 16 of these theses and dissertations. Also, del Rosario (1971:10) mentions that he is aware of a total of 26 such studies.

⁴See for example Cerezo de Ponce (1971:16); Vaquero de Ramírez (1971:28); Figueroa Berríos (1971:61); Carillo de Carle (1971:78).

⁵Translated here from the original Spanish: "No hay un habla jíbara con caracteres homogéneos que se distinga netamente del habla de la población iletrada de los centros urbanos."

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