Deletion of final /s/ in the Spanish noun phrase (NP) involves the morphological problem of loss of plural markers. A study investigated nominal plural markers in the speech of 20 Cubans representing both sexes and various occupations, ages, educational levels, and geographic areas of the island. Results show very little difference between the rate of /s/ deletion for masculine and feminine NPs, contrasting with previous research findings. Very little redundant use of /s/ or concord within NPs was found, also contrasting with previous findings. A small percentage of NPs were ambiguous with respect to plurality, supporting earlier findings suggesting that context usually disambiguates. These findings support the functional theory, that languages tend to maintain elements containing semantically relevant information, only in a global sense. Claims of functional compensation within the phonology are not supported here, but some aspect of the context (morphological, syntactic, semantic, or pragmatic) generally disambiguates NPs that are phonologically ambiguous with respect to number. Remaining ambiguous NPs are tolerated and probably forgotten. (MSE)
FUNCTIONAL THEORY AND SPANISH PLURALS

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Weakening and deletion of /s/ in syllable rhymes is a very well-known phenomenon in Spanish linguistics, having been attested in southern Spain and virtually all coastal areas of Latin America, in addition to the Caribbean. In word-final position, /s/ represents a plural marker for nouns, determiners, and adjectives, thus showing a certain amount of redundancy in the noun phrase (la casa grande 'the large house' vs. las casas grandes 'the large houses'). Weakening and deletion of word-final /s/ in noun phrases involves the morphological problem of loss of plural markers, in addition to the phonological problem of describing the environments in which these processes occur. This paper does not directly address the problem of phonological environment. Rather, we will treat the morphological problem of plural markers on the noun phrase in the speech of 20 Cubans representing various occupations, ages, educational levels and geographic areas of the island, as well as both sexes. All informants came to the United States from Cuba in 1980. As shown in Table 1, these 45-minute interviews contain 4790 potentially plural noun phrases, 1770 feminine and 3020 masculine. 2620 (1112 feminine and 1508 masculine) are NPs involving more than one word which can be marked for plurality with a final /s/. The remainder, 2170, are NPs of only one pluralizable word.

With regard to redundancy within the NP strings of more than one pluralizable word, 17.4% of the feminine, and 18.8% of the masculine NP strings show retention of more than one final /s/. This is shown in item #3 of Table 1. The vast majority (more than 80%) of multi-word NPs, whether feminine or masculine, retain no more than one plural marker, thus showing very little redundancy. This lack of redundancy is a functional finding, since one retained plural marker is sufficient to cue pluralization of the NP.

Only a very small percentage of all NPs, 6.8% of the feminine and 2.0% of the masculine, are truly ambiguous as to number, as shown in item #4 of Table 1. In such cases, all final /s/’s are deleted, and the context does not disambiguate regarding singularity or plurality. This result correlates nicely with the findings of Alba (1980) for nominal and verbal final /s/ in Santiago Dominican Spanish, where very little ambiguity was found, since the morphological, syntactic, semantic, and pragmatic context almost always disambiguates. Similar results are found in López Morales (1979) for verbal /s/ in San Juan Puerto Rican Spanish, as well as in Hochberg (1986) for verbal /s/ in Boston Puerto Rican Spanish.
Approximately one-half of all NPs, 57.6% of the feminine and 50.1% of the masculine, show retention of at least one final plural /s/ (whether it is realized as [s], [h], or [ʔ]). This is shown in #5 of Table 1. The remainder, 42.4% of feminine and 49.9% of masculine, show no plural marker, of course. Again, there is not a great difference in retention of final /s/ between feminine and masculine NPs. This runs counter to the findings of Flores, Myhill and Tarallo (1983), who find that masculine plural determiners and nouns are more likely than their feminine counterparts to lack the plural /s/ inflection. They propose that the /o/ in masculine determiners (los, unos, estos, and aquellos) is beginning to take over as the marker of plurality in Philadelphia Puerto Rican Spanish, thus explaining why other plural markers in an NP are more likely to be deleted when there is a masculine determiner. The findings of my study are thus counterfunctional, because I do not find more deletion in masculine NPs.

Poplack (1980) finds that in Philadelphia Puerto Rican Spanish, one plural marker leads to more:

\[
\text{los primeros trabajos],}
\]

and deletion of a marker leads to further deletions:

\[
\text{lo primero trabajó},
\]

resulting in a tendency toward concord on the string level. Similar results are found for a group of speakers of Puerto Rican Spanish in East Harlem, New York by Poplack (1984). The present study finds very little concord on the NP string level. The only category which shows a considerable amount of concord is that in which every member of the multi-word NP shows deletion (30.1% in the feminines and 23.9% in the masculines), as shown in item #6 of Table 1. This is probably due to the high rate of deletion in general among these informants, rather that to a tendency toward concord within NP strings. Note that in this case there is actually a bit more deletion in feminine NPs than masculine. These findings are counterfunctional, because an NP string with no plural markers may be ambiguous. Furthermore, the higher rate of deletion in feminines again runs counter to the functional claims of Flores et. al. (1983).

A relatively small percentage of multi-word NPs show a type of concord involving retention of weakened variants of /s/ (whether they be [h] or [ʔ]): (9.5% of feminines and 8.8% of masculines), as shown in item #7 of Table 1.

There is virtually no concord in multi-word NPs showing retention of sibilant [s] (0.7% of feminines and 1.3% of masculines), as shown in item #8 of Table 1. This lack of concord contrasts with the findings of Poplack (1980 and 1984), in which NPs tended to show concord: retention in first position led to more retention, and deletion in first position led to more deletion. In my sample, the vast majority of multi-word NPs show...
no more than one plural marker (82.6% of the feminines and 81.2% of the masculines).

A considerable percentage of multi-word NPs show retention of a plural marker (whether [s], [h], or [ʔ]) only on the determiner (27.2% of feminines and 26.5% of masculines). This is shown in item #9 of Table 1. Terrell (1979) finds that plural markers in first position in the NP tend to be retained. The determiner is often in first position, but not always, as evidenced by the very common construction todos los ... or todas las ... 'all the ...', in which the present sample shows retention of the plural marker on the determiner, rather than todos or todas.

There is virtually no difference between feminine and masculine NPs with regard to deletion of a plural marker in the absence of a determiner (32.5% deletion for feminines and 34.8% for masculines), as shown in item #10 of Table 1. It would therefore appear that the deletion rule should not refer to gender, which is not surprising, considering the fact that the present investigation has also failed to find a difference between feminine and masculine NPs when a determiner is present.

Discussion. The present study does not corroborate the findings of Flores et. al. (1983) that plural markers in an NP are more likely to be deleted when there is a masculine determiner. In fact, virtually no difference is found here between feminine and masculine NPs in any category examined.

This investigation also fails to corroborate the findings of Poplack (1980 and 1984), since there is little redundancy and virtually no concord within multi-word NPs, except for concord of all 0, which is probably due to the high rate of deletion, rather than a tendency toward concord. In light of these facts, perhaps there are more differences between Puerto Rican and Cuban Spanish with respect to plural /s/ deletion than has been believed.

A very small percentage of NPs in my sample are truly ambiguous with regard to number. In Uber 1984, I have shown that weakened variants ([h] and [ʔ]) are so weak perceptually that they are not utilized by native speakers for perception of plurality. However, the low percentage of ambiguity found in the present study, as well as in Alba 1980 and López Morales 1979, shows that weakened variants of /s/, or the sibilant [s] itself, are usually not necessary for disambiguation.

If only one plural marker is retained in a multi-word NP, it is retained on the determiner approximately 1/4 of the time. The determiner is not always in first position. Constructions like todos los libros 'all the books' are almost always realized in this sample as:
if there is retention of only one plural marker.

The functional hypothesis states that languages have a tendency to maintain elements which contain semantically relevant information. Therefore, a loss of contrast in one part of the grammar will be compensated for elsewhere. The findings of the present study can support the functional hypothesis only in a global sense. Claims of functional compensation within the phonology are not supported here, but some aspect of the context (morphological, syntactic, semantic or pragmatic) generally disambiguates NPs which are phonologically ambiguous with respect to number. Remaining ambiguous NPs are tolerated and probably forgotten.
1. Total NP strings: 4790
2. Multi-word NPs: 2620
3. Redundancy: multi-word NPs in which more than one plural marker is retained.
   - feminine: 1770, N=193 of 1112
   - masculine: 3020, N=284 of 1508
4. NPs which are ambiguous as to number
   - feminine: 1770, N=121 of 1770
   - masculine: 3020, N=60 of 3020
5. NPs in which at least one plural /s/ is retained.
   - feminine: 1770, N=1019 of 1770
   - masculine: 3020, N=1514 of 3020

Concord on NP string level:
6. Multi-word NPs showing all [0]
   - feminine: 1112, N=335 of 1112
   - masculine: 1508, N=360 of 1508
7. Multi-word NPs showing all weakened variants
   - feminine: 1112, N=106 of 1112
   - masculine: 1508, N=133 of 1508
8. Multi-word NPs showing all [s]
   - feminine: 1112, N=8 of 1112
   - masculine: 1508, N=19 of 1508

Role of determiner:
9. Multi-word NPs in which the only retained plural marker is on determiner
   - feminine: 1112, N=703 of 1112
   - masculine: 1508, N=399 of 1508
10. NPs in which deletion is found in absence of det.
    - feminine: 1770, N=575 of 1770
    - masculine: 3020, N=1050 of 3020

Table 1. Results for entire group.
References


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