An adaptive approach to noun gender in New York contact Spanish

Ricardo Otheguy and Naomi Lapidus
Graduate Center, City University of New York

1. Introduction

In the study of Spanish in the United States, scholars have proposed descriptions of contact-induced change that draw on the notion of simplification (Silva-Corvalán 1994:207). Similar descriptions have been made of developments in many other contact situations, including that of French in contact with English in Canada (Mougeon & Benjak 1991:91). Some scholars have cautioned that simplification in one component of the grammar often leads to complications in another, and that no generalization about simplification as the over-all result of contact is tenable (Thomason & Kaufman 1988:28). But others continue to find the construct useful for describing, if not necessarily the overall impact of contact, at least many of the more localized changes taking place in the subordinate varieties of language in bilingual settings.

Simplification, moreover, appears to offer the hope of not only describing but explaining many contact-induced changes. Simplification portrays the behavior of speakers of subordinate contact varieties as a reaction to the higher cognitive loads and increased storage and retrieval demands brought about by bilingualism. Simplification gains additional explanatory force by connecting changes in contact varieties to similar simplificatory processes in acquisition, foreigner talk, pidginization, and language loss, all of which are said to be linked to psycholinguistic universals (Silva-Corvalán 1994:207ff., 213ff.).

We propose here a modest but significant extension of the explanatory value of simplification. We suggest that contact-induced changes should additionally be understood in terms of the notion of adaptation. We outline how an adaptive model adds to a simplificatory one, and apply the notion of adaptation to the study of the most common of all contact phenomena, namely cross-language lone lexical
insertions, in one of the most complex contact settings in North America, New York City (henceforth NYC). Specifically, we apply the notion of adaptation to the study of English lexical insertions (henceforth ELIs) in the Spanish spoken in NYC. Our ELIs are long English-origin words that appear in an otherwise Spanish discourse. For reasons that we discuss in the Limitations section below, we do not distinguish in our ELIs between borrowings and single-word codeswitches. This distinction is controversial, but it appears increasingly feasible after the results of research by Poplack and her followers (cf. Poplack & Meechan 1998; Turpin 1998; Budzajk-Jones 1998; and other studies in the same volume).

As in nearly all contact situations, most of the ELIs in NYC Spanish are nouns. We use adaptive reasoning to test specific predictions regarding simplificatory changes involving these nouns, focusing on the nearly complete lack of applicability of the Spanish arbitrary gender system to this portion of our informants' vocabulary. We see the new facts revealed by these predictions as useful expansions of our empirical knowledge regarding Spanish in NYC, and as support for the idea that contact-induced change is adaptive.

1.1 The corpus

Our corpus is taken from 33 sociolinguistic interviews conducted with NYC Latinos. These interviews are part of the much larger City University of New York (CUNY) Project on the Spanish of New York, initiated by Ana Celia Zentella and currently led jointly by her and Ricardo Otheguy. The internal characteristics of our sample are not directly germane to the point of this paper, but we have nevertheless looked for balance and representativeness on the relevant parameters. With regard to age upon arrival in NYC: 13 of our informants came to NYC as adults (age 20 or older) and 13 were born in NYC. The remaining seven are also balanced: three came to NYC as children and four arrived as teenagers. With regard to national origin, the sample reflects the make-up of the NYC Latino population, diminishing in number, in the sample as in NYC, from Puerto Ricans (13), to Dominicans (6), Mexicans (5), Colombians (4), Cubans (3), and Ecuadorians (2).

We collected all ELIs found in the transcripts, ending up with 535 tokens, which included 477 noun tokens. These 477 noun tokens were the items used to form our corpus.

In order to qualify as an ELI for this study, items had to be characteristic of Spanish in NYC and not already adopted in the countries of origin. Items in active use in Latin America most likely are current in New York Spanish not because of contact with English, but because the communities represented in the study brought the word from Latin America or acquired it through dialect borrowing from other Latino groups in NYC. So, for example, we excluded from our cor-

<table>
<thead>
<tr>
<th>ELIs used as</th>
<th>N Tokens</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbs</td>
<td>11</td>
<td>2</td>
</tr>
<tr>
<td>Interjections</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Adjectives</td>
<td>38</td>
<td>7</td>
</tr>
<tr>
<td>Nouns</td>
<td>477</td>
<td>89</td>
</tr>
<tr>
<td>TOTAL INSERTIONS</td>
<td>535</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 1. ELI tokens in 33 informants, by word category

pus such words as cake, chance, closet, estándar, Internet, OK, lonchar, and rolo. While these words are not all current in all countries of origin, they are common in enough of them to make it unlikely that their importation from English has taken place in NYC.

The 477 ELIs that we found in the corpus of our Spanish-speaking informants consist for the most part of single words. But following the practice of most researchers, we also include among our ELIs some NPs that are slightly heavier than a word (cf. Poplack 1982:9; Turpin 1998:224; among many others). We try to formalize the criteria for inclusion of these NPs in the study. To qualify as an ELI here, the additional weight of the NP can consist only of (a) nominal or adjectival modifiers, such as credit in un credit card, or elementary in elementary school, producing NPs consisting of noun + modifier, or (b) conjoints of such NPs, like for example the daily word and the daily bread, or (c) lists that appear to function as a unit, such as drugs, rock'n'roll and love, all of which we counted as ELIs.

Not regarded as ELIs and excluded from the study are (a) English-origin NPs consisting of nouns modified by prepositional phrases, such as un credit card with miles, (b) English-origin NPs consisting of nouns modified by relative clauses, such as un credit card that gives you miles, (c) English-origin PP's such as in all fairness, and (d) temporal and locative adverbial phrases such as most of the time, or somewhere between Manhattan and Brooklyn. We also excluded from our original collection of 535 ELIs all occurrences of tags and tag clauses, such as so and you know, which are ubiquitous in the Spanish of many of our informants but not relevant to our study.

1.2 Adaptation

The notion that the changes taking place in a bilingual community's subordinate language are adaptive is not new. Nearly twenty years ago Poplack urged that the study of bilingualism "shed light on the language adaptations of speech communities in complex demographic social conditions" (1983:125, our emphasis). In a more explicit appeal to adaptation, Nettle (1999:449) has drawn a parallel between the biological adaptiveness hypothesis and the linguistic adaptiveness hypothesis. The
former says that "the reproductive success of organisms is related to their adaptedness to their environment," while the latter says that "the probability of adoption of linguistic forms into a grammar is related to their communicational or cognitive utility." This idea of utility that is at the center of adaptive thinking is itself reminiscent of the early construct high functional yield, first advanced in the study of phonology by Martinet (1952: 8ff). While Martinet did not propose that high functional yield explained the adoption of forms, he did suggest that it favored the related phenomenon of their retention over time.

Our proposal centers on two general principles of adaptive change and retention. First, we bear in mind the well-known adaptive generalization that structure is, to a considerable extent, determined by function. Second, we study cost-benefit balances, and see a tendency in simplificatory adaptive change to proceed economically, obtaining large cost savings with small losses of benefits.

The first principle, that function is the central determinant of structure, is used here to explore its converse. We are led to hitherto unknown facts of function through predictions based on newly found facts of structure. The facts of structure in turn gain a larger measure of explanation by the previously unknown functional facts. With regard to the second principle, having to do with cost-benefit balances, the term cost here refers to cognitive load. In simplificatory changes, cost savings are produced by eliminating, diminishing, and automating or reducing to general rule, elements that otherwise would require individual storage; benefits refers to the selective realization of these simplificatory changes in those parts of the grammar where the changes save the most while disrupting communication the least.

These two principles of adaptive reasoning are used here to shed light on the lack of stored masculine-feminine gender contrasts in the English-origin part of the Spanish vocabulary of our informants. We show that this simplification of the language's overall gender structure is tied in predictably specific ways to the very limited gender-related functions carried out by this portion of the vocabulary; that is, we show that the structural gender contrast is missing because the function performed by that contrast is also missing. Analogous situations that are routinely understood in adaptive terms in biology are ready at hand. Animal species that are blind (a fact of structure) often dwell in dark ocean depths or caves where it is impossible to see (a fact of function that explains the structure), while related species whose structural make-up includes eyes live in lighted environments where the seeing function is possible (Futyma 1998). Bony surfaces whose structure is large, dished out, and roughened tend to anchor muscles whose function is to exert great force when contracted (and that thus need large rough surfaces to fasten their ligaments), while bones holding muscles that function to exert less force tend to develop smaller and smoother structures (Lieberman 1998: 53).

1.3 Addressing circularity in adaptive reasoning

The adaptive approach to contact-induced change should heed the warnings by Nettle (1999: 451) regarding the danger of circularity in adaptive explanations in both biology and linguistics. In biology, the trap of the evolutionary tautology springs when the explanation for surviving structures is that they are the fittest, and the fittest structures are identified by their having survived (Nettle 1999: 451). To avoid the trap, adaptive structures have to be described independently of the observed facts, constructing a functionally explanatory model that can then be checked against the observed inventory of survivors.

In adaptive approaches to contact phenomena, similar dangers of circularity loom, and similar solutions need to be adopted. The most secure protection against circularity is for the factual observations that check a prediction to be, not only conceptually independent of the predicting principles, but also chronologically posterior to them. In the sections that follow, we attempt to inch away from circularity in precisely this way. We make predictions regarding contact-induced simplifications that are independent of the two predicting principles outlined above. In addition, we use the two principles of adaptive reasoning to anticipate contact-induced patterns that we have not observed.

2. Applications of the gender system

As is well known, in Spanish in general, nouns are assigned to two gender classes. For animates, nouns referring to males are for the most part masculine and those referring to females are for the most part feminine. For nouns referring to inanimate objects, gender assignment is in part based on several generalizations that users of Spanish can make regarding word endings, the clearest among them being that many a-ending nouns are feminine. But these generalizations, even including that of a-ending feminines, have many exceptions (e.g., masculine planeta, cometa 'planet, kite'). Thus the process of gender assignment for inanimates is ultimately arbitrary and dependent on memorization. While violín, vaso, planeta, fuerte ('violin, glass, planet, fort') are masculines, crín, moto, casa, suerte ('mane, motorcycle, house, luck') are femenines. Among our informants this general Spanish pattern of dividing nouns into masculines and feminines has been strongly retained for their Spanish-origin, native nouns, but as we shall see, the pattern has not been extended to their ELIs. The pattern for native nouns is shown in Table 2a.

The table shows that, in spoken texts studied in the countries of origin by Navarro Tomás, roughly half of Spanish nouns are masculine and half feminine (45 vs. 55 percent). We sampled three of the spoken texts produced by our informants and found similar results for their Spanish-origin nouns: 53 percent mascu-
Table 2a. Proportion of masculine and feminine nouns in general Spanish

<table>
<thead>
<tr>
<th></th>
<th>Masc</th>
<th>Fem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native words, Corpus a</td>
<td>45</td>
<td>55</td>
</tr>
<tr>
<td>Native words, Corpus b</td>
<td>53</td>
<td>47</td>
</tr>
</tbody>
</table>

Corpus a = Navarro Tomás (1968), in Poplack (1982)
Corpus b = From 3 of our 33 informants, 300 nouns

Table 2b. Proportion of masculine and feminine ELIs in contact Spanish

<table>
<thead>
<tr>
<th></th>
<th>Masc</th>
<th>Fem</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELIs, Corpus a</td>
<td>87</td>
<td>13</td>
</tr>
<tr>
<td>ELIs, Corpus b</td>
<td>87</td>
<td>13</td>
</tr>
<tr>
<td>ELIs, Corpus c</td>
<td>88</td>
<td>12</td>
</tr>
</tbody>
</table>

Corpus a = Poplack (1982)
Corpus b = 234 noun tokens from our 33 informants
Corpus c = Carlos Mota: 98 nouns

line, 47 percent feminine. But a very different result is obtained when we compare this pattern of native words in contact speakers to that of their ELIs, as shown in Table 2b.

The table shows that, among ELIs, the vast majority of words are masculine. A count by Poplack and one performed by us on ELIs in the corpus used for the present study obtained identical results.\(^5\)

The counts in Table 2a take into account every native noun in a transcription, whether the native noun appears by itself, with an article or with a modifier. The investigator simply relies on his knowledge of Spanish to tally some native nouns as masculine and others as feminine. If the word metro 'subway' appears in a transcript without articles or modifiers, as in the phrase se fue en metro 'he went by subway', the investigator can tally it as masculine simply based on his knowledge that metro is a masculine word.

But a different method must be used to calculate gender in ELIs. Investigators can only reliably establish gender in those ELIs that appear with an article or a modifier. When the ELI subway appears in a Spanish transcript, as in the phrase se fue en subway, it cannot be tallied for gender, for we have no reliable knowledge of whether subway is masculine or feminine. The ELI subway appearing in a Spanish text can only be tallied for gender when we find el subway or la subway, subway suizo or subway suiza, etc. Both the count by Poplack (1982) and our own count reported in Table 2b take this into account. This is why our calculation is not based on the 477 ELIs in our corpus, but only on the 234 that could be used for this purpose.

To check these findings, and to attempt to solve the problem of not being able to ourselves determine the gender of ELIs appearing in isolation, we had our graduate research assistant Carlos Mota ask a group of NYC Latino high school students to list as many 'Spanglish' words as they could think of, along with the article el or la (so we could establish gender). This experimental corpus produced strikingly similar results to Poplack's and our natural corpora. In Mota's corpus, 88 percent of ELIs are masculine and, as was the case in Poplack's 1982 study, there was near unanimity in gender assignment when the same word was produced by different students. All three corpora agree, then, that the vast majority of ELIs in New York Spanish are masculine.

Two processes, one based on phonology and the other on animacy, explain why this preference for masculine gender for ELIs does not reach 100 percent. A procedure that is independent of memorized gender assignment makes feminine most ELIs ending in -/a/. These are words that in their original English form usually ended in schwas, or in schwas followed by consonants that are deleted as the words are phonologically adapted to Spanish. This final schwa appears to be systematically perceived by Spanish-speaking New Yorkers as a Spanish -/a/.

Through this process are derived feminines like la bolla, la repacho, and la experiencia, from English boiler, report card and experience. (We think that this process extends not only to words ending in -/a/ but also to those ending in -/ay/, and that this is why we get the very common la high, referring to a high school.) These feminines are the result of a general rule, and not of a memory-based process of arbitrary assignment like the feminines suerto, moto, mano (recall masculines fuerte, vaso, beso). As such, these a-ending feminines do not represent the sort of cognitive burden that becomes fodder for contact-induced simplification. The second process that produces ELIs in the feminine is the familiar Spanish pattern of assigning gender to nouns referring to animates on the basis of sex. Through this process we get una licha (a woman who drinks heavily), una teenager, una school aid, and, merging with the a-ending process, la principa or la principal. Both the tendency to assign gender to animates on the basis of the sex of the referent, and to assign feminine gender to words perceived as ending in -/a/ have been widely noted in most studies dealing with English loanwords in English.

It is significant, however, that even this pattern is losing hold among our contact speakers. Many of them, in a usage that is very unlike that of non-contact speakers, use masculine ELIs to refer to females, as in un social worker or los midwives. In addition, and though not attested in the present corpus, we often hear in NYC el student teacher, el baby sitter, el travel agent, etc for references to women.

Our informants' reluctance to make ELIs feminine (unless they end in -/a/) even in some references to females is especially notable in cases of repairs. In (1), the informant refers to a female with a masculine ELI, and then, seemingly wanting to use the feminine for this female, finds it necessary to switch to Spanish.\(^5\)
(1) ¿Y tú mamá? Ella es un social worker, una trabajadora social … 228D
“And your mother? She is a social worker, a social worker.”

Our informants, then, have essentially suspended the application of the common Spanish pattern of arbitrary, memory-dependent gender distinctions when it comes to their ELs. They have preserved for these words only the automatic, rule-based assignment of a-ending (and perhaps ay-ending) words to feminine, as well as the equally rule-based pattern of assigning ELs referring to females to feminine, even though this latter process is itself considerably eroded.

Our findings run counter to those of scholars who point out that, in Spanish and other languages where ELs are found, the arbitrary assignment of gender to inanimates is an active process. Under what has come to be known as the analogical criterion, the EL is said to take the gender of the word it displaces (cf. Zamora 1975 among others). This suggestion, made long ago by Weinreich (1953:45), has been repeated with support from anecdotal or experimental data ever since. Some scholars doing empirical work have also thought that their data justified this belief. But even in Poplack’s careful 1982 empirical study of NYC Puerto Rican Spanish, 78 percent of ELs that would have been feminine under this analogical criterion have in fact come into the Spanish of NYC as masculines (1982:18). In any case, and setting aside the difficulty of actually establishing cross-linguistic word equivalences, the prediction that displaced Spanish feminines will be replaced by feminine ELs does not hold up in our data. We have found masculines los parties, el swimming, el vegetable soup, un full-size bed, un pool table, etc., even though these words are presumably replacing feminines las fiestas, la natación, la sopita, una cama, una mesa. The only sure exception to this general pattern in our data are the following three words:

- la liquor store (possible analogy to feminine tienda)
- una deli (possible analogy to feminine tienda)
- la high school (possible analogy to feminine escuela)

While liquor store and deli appeared only in the feminine, the situation is different for high school. We found two tokens of feminine high school, but in addition found five tokens of high school that are identifiable masculine, and 24 tokens where gender cannot be established.

2.1 Adaptive simplification in gender

The treatment by our informants of gender assignment in the English-origin part of their nominal lexicon is a classic case of simplification under contact. A process that normally incurs a heavy memory cost is automatized or eliminated in a portion of its range of applicability, thus producing considerable savings in cognitive load. No memorization is involved with ELs referring to inanimates, all of which are masculine unless they are a-ending. For ELs referring to animates, no memory effort is needed either, just as no effort is needed for animates in the native lexicon. The pattern in the Spanish of our informants, then, is clear. The routines of arbitrary, memory-based gender assignment are applied to native nouns, but are suspended in the processing of ELs.

This bifurcation in structural cognitive investments (spend in the native vocabulary, save in the ELs) should lead us to predict an equivalent bifurcation in differential functional benefits in communication.

By indicating through agreement which words are to be construed together, gender in Spanish serves in general to insure textual cohesion and facilitate the parsing of strings. This cohesion-maintaining function of gender is seen primarily in three environments:

- Adjectives in construction with nouns
- Articles in construction with nouns
- NPs receiving anaphoric reference from demonstratives, headless articles, and clitics

(2) A. la casa de ladrillo rojo / la casa es roja
   “the red house made of brick” / “the house is red”
B. la casa de ladrillo rojo / el ladrillo es rojo
   “the house made of red brick” / “the brick is red”

(3) A. El tan esperado premio
   “the long awaited prize”
B. La tan esperada medalla
   “the long awaited medal”

(4) A. ese que costó tanto dinero
   “the one (brick, prize) that cost so much”
B. ese que costó tanto dinero
   “the one (house, medal) that cost so much”

(5) A. el que costó tanto dinero
   “the one (brick, prize) that cost so much”
B. la que costó tanto dinero
   “the one (house, medal) that cost so much”

(6) A. lo perdí
   “I lost it (brick, prize)”
B. la perdí
   “I lost it (house, medal)”
If the adaptive approach is correct, we should expect that, among ELIs, on which large savings in gender marking have been realized, the losses represented by diminished discourse cohesion should be small. Our prediction should be:

- The inserted English vocabulary, which has no assigned gender, should participate in cohesion phenomena much less than the native vocabulary, which does have assigned gender.

This general prediction can be operationalized in the following four specific predictions:

- Bare nouns, appearing without articles or modifiers, should be much more frequent among ELIs than among native nouns.
- Nouns in construction with articles should be much less frequent among ELIs than among native nouns.
- Nouns in construction with adjectives should be much less frequent among ELIs than among native nouns.
- Anaphoric reference from demonstratives, headless articles, and clitics should be directed less frequently to ELI antecedents than to native noun antecedents.

2.2 Prediction with regard to bare nouns

In our transcribed texts, we predict that examples like (7), where ELIs appear without agreeing articles or adjectives, should be common, whereas examples like (8), where they appear with agreeing articles and modifiers, should be rare. The prediction is, further, that this pattern is peculiar to ELIs and will not hold in the same proportion for the native words of the same corpus.

(7) Common: ELIs, bare:

A. ¿Estás yendo a la escuela? Sí, estoy en college. 024C
   "Are you going to school? Yes, I’m in college."
B. Pero ¿Qué pasó? Oh, no querían ... no ... son ... allá, creen las muchachas algunas que son high class. 117D
   "But what happened? Oh, they didn’t want, they are, the girls, some of them, they think they are high class."
C. Ah deja ver ... Ah cuando yo fui a The Phillipines ... yo fui a The Phillipines mi amiga se iba casar y me dije que si yo quería salir en la boda y yo le dije que si pues nosotros fuimos para The Phillipines. 401P
   "Let me see when I went to the Phillipines my friend was going to get married and she asked whether I wanted to be in the wedding ... and we went to the Phillipines."

(8) Uncommon: ELIs, with articles, modifying adjectives or adjectival complements:

A. Regresé a mi viejo high school, fui con la Sra. W., trabajé con ella como student field observer. 300E
   "I went back to my old high school, I went with Mrs. W. I worked with her as a student field observer."
B. El cuarto del nene es grande. Tiene un full size bed. Tiene un hockey, un un juego de hockey de la mesa que se parece como un pool table pequeño. Tiene la televisión, el bureau de dl. So, es bien grandecito. 403P
   "The baby’s room is big. It has a full-size bed. It has a hockey, a hockey game that looks like a small pool table. It has his TV and his chest. So it’s pretty big."
C. Porque yo había oído en otro ... que en otros lados con ... le metes un credit card y se abre, verdad, porque si no están bien cerradas las dos ... 301E
   "Because I had heard that in other places ... you put the credit card in and it opens up, ‘cause otherwise both are closed ... ”
D. Y yo dije, yo no puedo dormir en ese cot y yo tengo la espalda mala y eso cot son bien mala. 405P
   "And I said, I can’t sleep in that cot. I have a bad back and those cots are very bad."

The results of a count testing the prediction are given in Table 3.

Table 3. Noun tokens appearing with and without gender-marking articles or adjectives, in ELIs and native words

<table>
<thead>
<tr>
<th></th>
<th>ELIs</th>
<th>%</th>
<th>Native nouns</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>N, + Art or Adj</td>
<td>236</td>
<td>49</td>
<td>458</td>
<td>92</td>
</tr>
<tr>
<td>N, − Art or Adj</td>
<td>241</td>
<td>51</td>
<td>39</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>477</td>
<td>100</td>
<td>497</td>
<td>100</td>
</tr>
</tbody>
</table>

p < .005
ELIs = English-origin lexical insertions in the speech of 33 informants
Native nouns = Spanish-origin nouns in the following five informants: 271M, 300E, 301E, 401P, 405P
The table confirms the prediction. More than half (51 percent) of ELIs appear bare. In order to place this 51 percent figure in perspective, that is, in order to insure that the bare-noun pattern is not found in ELIs simply because our informants leave all their nouns bare, we also looked at native nouns in a subset of our informants. The table shows that among native nouns, a considerably smaller proportion, 8 percent, occurs bare.

2.3 Prediction with regard to adjectives

The same prediction can be refined by looking at nouns occurring with adjectives. The results of the count testing the prediction that ELIs will disproportionately disfavor adjectives are shown in Table 4.

The table shows that 95 percent of the ELI tokens used by our informants occur without adjectives. In order to place this 95 percent figure in perspective, that is, in order to insure that the no-adjective pattern is not found in English-origin nouns simply because our informants have lost the capacity to use adjectives altogether, we also looked at native nouns used by a subset of our informants. The table shows that among native nouns, a significantly smaller proportion, 76 percent, occurs without adjectives.

Observed cases of discourse repairs lend qualitative support to the findings shown in Table 4. In (9), the speaker appears reluctant to use the combination of ELI + adjective that would yield high school católica, and switches to the Spanish escuela católica, and then, seemingly dissatisfied with that too, switches again to the English catholic high school to accommodate the adjective.

(9) Em, en la escuela católica. Es que está en una, em, high school cat... es una escuela católica... cató... eh, high school. High, Catholic high school. 180C

| Table 4. Noun tokens appearing with and without adjectives, ELIs vs native nouns |
|-----------------------------------------|-----------------|-----------------|-----------------|
|                                       | ELIs            | Native nouns    |
| N                                      | %               | N               | %               |
| N, + Adjective                         | 23              | 118             | 24              |
| N, – Adjective                         | 454             | 379             | 76              |
|                                         | 477             | 497             | 100             |

p < .005 ELIs = English-origin lexical insertions in the speech of 33 informants Native nouns = Spanish-origin nouns in the following five informants: 271M, 300E, 301E, 401P, 405P

2.4 Prediction with regard to articles

The next refinement of the prediction applies to articles. As in any Spanish text, many nouns in our transcriptions are blocked from occurring with an article by the presence of other modifiers. Once a word occurs with a possessive, a preposed demonstrative, or a preposed menos 'less' or más 'more,' no article is possible. Thus a count to establish the proportion of nouns occurring with and without articles in our corpus had to exclude such NPs as su bachelor's degree, mi boss, menos créditos, menos trouble, and este dance. We also excluded nouns that occurred with an English article, such as the Philippines.

The results of the count that tested the prediction that ELIs would occur without articles much more than native nouns are shown in Table 5.

The table shows that, out of the slightly more than 400 ELIs appearing in environments where articles can occur, 51 percent occur without articles. In order to place this 51 percent figure in perspective, we also looked at native nouns in a subset of our informants. The table shows that among native words, our informants use a much smaller proportion of their nouns, only 21 percent, without articles.

2.5 Prediction with regard to anaphora

Confirming that in work based on naturalistic data in linguistics, no less than in any other empirical science, nature yields its secrets grudgingly, our predictions with regard to anaphora were not confirmed.

The table shows that, contrary to our expectation, there is very little difference in the rate of receipt of anaphoric reference between ELIs and native nouns. That is, ELIs are antecedents to anaphoric clitics and demonstratives at rates no smaller than native nouns.

| Table 5. Proportion of nouns with and without articles, ELIs vs native nouns |
|-----------------------------------------|-----------------|-----------------|-----------------|
|                                       | ELIs            | Native nouns    |
| N                                      | %               | N               | %               |
| Nouns + Art                            | 239             | 310             | 78              |
| Nouns – Art                            | 224             | 85              | 21              |
|                                         | 443             | 395             | 100             |

p < .005 ELIs = English-origin lexical insertions in the speech of 33 informants Native nouns = Spanish-origin nouns in the following five informants: 271M, 300E, 301E, 401P, 405P

Totals are different from the ones in the adjective table because the data are only from articles-allowing environments.
At present we do not know whether the very scarce use of anaphora, and its operation for the most part on the basis of either masculine or unmarked pronouns, is a fact of Spanish in general or peculiar to contact speakers. But at least among our informants, it may be that the limited use, and the absence of feminine anaphors, does not provide enough functional motivation for structural differences between ELIs and native nouns to emerge.

3. Limitations

3.1 Codeswitching vs. borrowing

In addition to the still not entirely understood issue of gender in anaphora, our study contains several important limitations. We have not distinguished loans from switches, not so much because the distinction is controversial, or because the psycholinguistic status of single-word codeswitches is not at all clear, but because the distinction is not directly relevant to our study. In the important empirical studies summarized in Poplack and Meechan (1998), for example, the investigation into English-origin items in Ukrainian by Budzik-Jones (1998) and in French by Turpin (1998), careful consideration is given to features of contact varieties that are similar to the ones we have investigated here, namely gender, article use, and adjectival modification. These studies succeed in establishing statistical comparisons between the above-mentioned areas of the contact variety and analogous areas in the two possible grammars with which the cross-language lexical items might be associated: that of the target language for words regarded as loans, that of the donor one for the switches.

But these considerations are not central to our study. Our concern has been neither the general taxonomic one of classifying single-word foreign-origin items in discourse, nor the developing of theories of codeswitching. Nor were we attempting to define constraints on possible switches that would force us to carefully define what does or does not constitute a switch. Our interest has been rather in establishing the connection between low levels of investment in morphosyntactic structure and scarce incidence of the functions served by that structure. It would thus be outside the scope of our paper to determine how our ELIs would fare under a study of the Poplack-Meechan type. It may very well be that, as in one of the possibilities contemplated in their approach, some ELIs would be loans and others switches. Since our informants deploy ELIs referring to inanimates with a much lower level of engagement of the Spanish gender system than they use for inanimate-reference native words, some of our ELIs may fall, on this test, more toward the codeswitching than the borrowing end of the spectrum. On the other
hand, the gender system is fully engaged for ELIs referring to animates and, in a sense, also for -a-ending words, suggesting that perhaps these ELIs are loans.

With respect to articles and adjectives, the ELIs appear as a group to be more like switches. But the picture becomes complicated by the fact that some of the bare ELIs appear to conform to the grammar of English (cf. example (7A)), while others to that of Spanish (cf. example (7D)), while still others may fit with the grammar of both (cf. (7B)) or perhaps of neither (cf. (7C)). Some of these would thus appear to be switches under the Poplack-Meechan criterion, while others might be loans. Moreover, our inanimate-reference ELIs, which might seem to be switches under the criteria constituted by gender, articles, and adjectives, would perhaps be loans under the criterion of anaphora. Additionally, some ELIs in NYC Spanish have some of their tokens appearing in the masculine and other tokens in the feminine, as in the case of high school in our corpus. Our purpose, in short, is neither to evaluate the project of distinguishing loans from switches, nor, at the moment, to try to apply it to our data.

Instead, the important consideration for us is that a project which attempts to separate loans from codeswitches frames the problem in a manner that tends to obscure our own explanatory attempts. Consonant with their purposes, Poplack and her followers tend to combine considerations of gender with those of article choice and modifier agreement. But in our adaptive approach, we regard gender as a structural feature that earns its continuing survival in the grammar by contributing to certain communicative-functional purposes, chief among them the maintenance of discourse cohesion in the deployment of articles and adjectives. Thus gender, articles, and adjectival modification fall on two sides of the explanatory dyad. The gender system, its solid engagement with native words and its robust engagement with animate and a-ending ELIs, contrasted with its near inoperativeness with inanimate ELIs, is our explanandum, the structural fact of the contact variety that needs to be understood. The rate of use of ELIs with articles and adjectives, the rate, that is, at which the cohesive function of gender is exploited in discourse when compared to the rate for native words in the same corpus, is our explanans, the functional fact that sheds light on the peculiarities of gender in NYC Spanish.

We thus face a familiar situation. By asking a different question, the data take on a different shape. So for example, it is not relevant for us that some of the bare ELIs appear to conform more to the syntax of Spanish while others to that of English. We notice rather that the rate of occurrence of bare nouns, which do not tap the functional utility of gender, is in general much higher for the gender-inhibiting ELIs than for the gender-operative native words of the same corpus. Thus while the switch versus loan question is an important one for a variety of theoretical and analytical issues, it is avoided here because it categorizes the data in a way that would make our explanation of structure in the contact variety on the basis of function very difficult to draw out.

Note, finally, that our study is not prey to dismissal through the argument that the reason that gender is disengaged among our ELIs is that they are not Spanish, but simply English words that, as such, should not be expected to have gender. Speakers of NYC Spanish appear to keep the gender system engaged at all times during their production of discourse, processing all nouns through it, including ELIs, on which the gender system operates as long as this can be done while keeping memory loads under control through the rule-based assignment of gender on the basis of word-ending and referent sex. It is simply not true that ELIs, being in some sense English, do not have gender. They do, as long as they can tap into those parts of the gender system that are less taxing on memory. The dismissal argument would be in the difficult position of regarding animate-reference and -a-ending ELIs as Spanish while tagging inanimate-reference ELIs as English, a line of thinking that approaches circularity and does not appear promising. The fact that precisely those areas of gender that create opportunities for adaptive simplification are the ones that change in the contact dialect provides strong support for the explanation sketched out in our study.

We keep an open mind regarding the possibility that a Poplack-Meechan type analysis might show that our predictions work much better for the switches than for the loans (in fact, the very definition of a switch under Poplack-Meechan may necessarily yield such a result if applied to our data). But if it turned out that words that would be classified as switches retained a less robust gender system than those that would be classified as loans (and, again, this may turn out to be true by definition), we would predict that the switches would appear with articles and adjectives much less than the loans, preserving the structure-function connection that has been of interest here. So while we remain open to the criticism that we may have lumped together very different items under our ELI category, the facts suggest that, with regard to arbitrary gender, ELIs do constitute a single group; and they suggest that, with regard to the issue of adaptation, strong confirmation is found in them for the structure-function connection that we have tried to uncover.

3.2 Excluding words used in the home countries

Another limitation of this work is that we have not formalized our native-country adoption as a criterion for excluding an English-origin word from our ELI category. We exclude cake, closet, Internet, etc., simply on the basis of our considerable experience, which tells us that these words circulate widely in Latin America. A possible refinement of this study would involve spelling out a formal criterion for exclusion.
3.3 Mechanism of change

Finally, an important limitation is that no path or mechanism for the function-sensitive structural change is specified. We limit ourselves to establishing that, as in biological adaptation, function appears to play a key role in determining structure. But an analogy is not a mechanism, and we still need to learn exactly how diminished functions lead to structural reductions. Moreover, our analogies themselves have limitations. The comparison with sighted and blind fish is more telling than the one about bone and muscle, but is misleading in that it compares words to organisms, when a better comparison might be of languages to organisms. The bone-muscle analogy is less graphic, but better in that it compares words to substructures (the different bone types) of the same organism.

4. Discussion of article and adjective predictions

The three versions of our prediction regarding modifiers have been statistically supported with high levels of confidence. Much more so than native nouns, our informants use ELIs without articles or adjectives. The confirmation of the predictions supports adaptive thinking in general, and in particular the principle that structure in language, as in biology, is in large measure a response to function. Finding that the structural gender-distinguishing system was robustly applied to the native-origin lexicon but inoperative in the ELIs, we looked for the functional difference to which the observed structural pattern must be a reaction. Since gender is primarily involved with adjective and article agreement, we predicted that among ELIs, where arbitrary gender is inoperative, there must be disproportionate levels of non-participation in adjective and article agreement. That our expectations were fulfilled in a large sample shows that adaptive expectations, in this case true chronological predictions insulited from the dangers of circularity, can illuminate the behavior of contact speakers.

We end by repeating the biological analogy, and spelling it out more fully than when we introduced it above. The functional differences in vision opportunities for fish inhabiting relatively shallow, translucent waters and those inhabiting the darkest oceanic depths explain their structural differences. Through natural selection, the former have ended up investing in a complex vision system, while the latter are blind. A functional difference, namely being able to see in the light versus not being able to see in permanent darkness, explains a structural difference, namely having a vision system versus not having it. In parallel, the functional differences in the degree to which cohesion is maintained through agreement explains the structural differences between gender-operative native words and gender-inoperative ELIs. In native words (the equivalent of fish in the translucent shallows), an agreement-mediated, cohesion-maintaining function exists (equivalent to seeing in the light). In response, in native words a structural cost is incurred in the form of memorized gender assignment (equivalent to the structural cost of having a vision system). In ELIs (the equivalent of fish in the dark depths), the cohesion function does not exist (the equivalent of not seeing). In response, in ELIs a structural savings is obtained by not applying the distinction between masculine and feminine (the equivalent of structural savings obtained from eliminating vision).

Notes

1. Many of the interviews were conducted and transcribed by Ana Celia Zentella and her team of research assistants, under Rockefeller Foundation and PSC-CUNY grants. Others were conducted and transcribed by Nydia Flores as part of her on-going dissertation research. Still others were conducted and transcribed by Ana Celia Zentella and Ricardo Otheguy, and their graduate assistants, under joint CUNY Collaborative (1998–2001) and PSC-CUNY (1999–2000) grants. Transcription and coding work has also been supported by a current joint grant to Otheguy and Zentella from the National Science Foundation (2001–2004). The authors wish to thank these scholars for allowing the use of their data. The support of the funding agencies is also gratefully acknowledged.

2. The highly diminished role of gender in English insertions in Spanish in New York is not surprising, and neither is the move to a borrowed lexicon whose assigned gender is essentially all masculine. Gender is known to undergo considerable erosion under contact. Haugen (1969) found a tendency towards masculine-only items among nouns borrowed from English in U.S. Norwegian, and Correa-Zoli (1973) found the same tendency in U.S. Italian. Romaine (1995) reports that Asia Minor Greek has lost much of its gender under heavy contact with Turkish. Closer to our topic, a strong tendency toward masculine gender assignment to English-origin loanwords in Spanish is reported in Prado (1982). Less consistent with our findings are the results of Zamora (1975) and Wegner (1990). More generally, while it is true that inserted nouns in many contact situations do assimilate morphologically, they fail to assimilate in many others. Heath (1989), for example, reports that Berber, French, and Spanish insertions in Moroccan Arabic often fail to acquire the definite marker /-1/.

3. The number at the end of an example indicates the informant transcript from which it was taken.

References


AMSTERDAM STUDIES IN THE THEORY AND HISTORY OF LINGUISTIC SCIENCE

General Editor
E. F. KONRAD KOERNER
(Zentrum für Allgemeine Sprachwissenschaft, Typologie und Universalienforschung, Berlin)

Series IV – CURRENT ISSUES IN LINGUISTIC THEORY

Advisory Editorial Board
Raimo Anttila (Los Angeles); Lyle Campbell (Christchurch, N.Z.)
Sheila Embleton (Toronto); John E. Joseph (Edinburgh)
Manfried Krifka (Berlin); Hans-Heinrich Lieb (Berlin)
E. Wyn Roberts (Vancouver, B.C.); Hans-Jürgen Sasse (Köln)

Volume 238

Rafael Núñez-Cedeño, Luis López
and Richard Cameron (eds)

A Romance Perspective on Language Knowledge and Use.
Selected papers from the 31st Linguistic Symposium on Romance Languages (LSRL), Chicago, 19–22 April 2001

JOHN BENJAMINS PUBLISHING COMPANY
AMSTERDAM/PHILADELPHIA

A ROMANCE PERSPECTIVE ON LANGUAGE KNOWLEDGE AND USE
SELECTED PAPERS FROM THE 31ST LINGUISTIC SYMPOSIUM ON ROMANCE LANGUAGES (LSRL), CHICAGO, 19–22 APRIL 2001

Edited by
RAFAEL NÚÑEZ-CEDENO
LUIS LÓPEZ
RICHARD CAMERON
University of Illinois, Chicago
# Table of contents

Introduction and acknowledgment
  Rafael Núñez-Cedeño, Luis López, and Richard Cameron

Phonology and morphology

Pronominal clitics in Picard revisited
  Julie Auger

Spanish /s/: A different story from beginning (initial) to end (final)
  Esther L. Brown and Rena Torres Cacoullos

Consonant intrusion in heterosyllabic consonant-liquid clusters in Old Spanish and Old French: An Optimality theoretical account
  Fernando Martínez-Gil

A constraint interaction theory of Italian raddoppiamento
  Mario Saltarelli

Pragmatics and sociolinguistics

Ground/Focus: A perspective from French
  Claire Beyssade, Jean-Marie Marandin, and Annie Rialland

The subject clitics of Conversational European French: Morphologization, grammatical change, semantic change, and change in progress
  Bonnie Fonseca-Greber and Linda R. Waugh

A scalar propositional negative polarity item in Spanish
  Javier Gutiérrez-Reuch and Scott A. Schwenter

A pragmatic analysis of Imperfect Conditionals
  Michela Ippolito

Indirect objects in ditransitive constructions in Brazilian Portuguese
  Heloisa Maria M. Lima Salles and Maria Marta P. Scherre