Variation, evolution and the syntax of Afro-Bolivian Spanish gender agreement

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This paper combines sociolinguistic and formal syntactic approaches to characterize the constraints regulating gender agreement variation across the Determiner Phrase (DP) in Afro-Bolivian Spanish (ABS). Our results indicate a case of cross-generational change, consisting in the systematic replacement of stigmatized basilectal Afro-Bolivian features with more prestigious Bolivian Spanish ones. In light of recent minimalist models (Adger & Smith 2005; Adger 2006), the variability encountered in the corpus can be accounted for by reducing variation to the specification of uninterpretable features in a derivation.

**Keywords:** Afro-Bolivian Spanish, gender, determiner phrase, syntactic variation, minimalism

1. Introduction

This study investigates gender agreement configurations in Afro-Bolivian Spanish (ABS), an Afro-Hispanic dialect spoken in Los Yungas, Department of La Paz, Bolivia. ABS is supposed to be the oldest surviving Afro-Hispanic dialect in Latin America. Its speakers are believed to be the descendants of African slaves taken to the New World to work in Potosí silver mines during the XVI century, and subsequently, around the XVIII century, employed in Los Yungas (Department of La Paz) tropical valley, where they could better acclimate and do agricultural work (Lipski 2007).

Since that period till 1952, when the Land Reform took place, Afro-Bolivians have been employed in Los Yungas as slaves in haciendas. After the Land Reform, the majority of the Afro-Bolivians remained in the region becoming the new owners of small parts of the land that once belonged to the plantation, where they used to work in slavery. Even though Afro-Yungueños are
nowadays free people and their life conditions improved during the last 60 years, their situation is far from being optimal, as daily per-capita incomes, proceeding from growing and selling café and coca, do not reach $4 (Lipski 2005).

The most important North Yungas communities containing high concentrations of Afro-Bolivians, are Tocaña, Mururata, Chijchipa, Coscoma, Dorado Chico and Khala Khala. In South Yungas, the principal black community is Chicaloma. Both areas are mainly inhabited by Aymara-speaking indigenous population. Black Yunguenos in South Yungas have frequently intermarried with Aymaras and speak the Aymara language (Lipski 2006a). As a result, in this area only a few of the traditional dialect traits are heard. On the other hand, in the North Yungas communities, Afro-Bolivians remain linguistically and culturally separate from Aymaras and a restructured post-bozal Afro-Hispanic speech still survives as intra-group means of communication.

In addition to what is left of the traditional post-bozal Afro-Yungueño dialect, all contemporary Afro-Yungueños speak a variety of Highland Bolivian Spanish (HBS), according to their level of education and contact with other areas of Bolivia. In North Yungas communities, the majority of older Afro-Bolivians have at least passive competence in the traditional dialects. However, as Lipski (2007) observes, full competence is probably limited to at most a few hundred individuals.

Typically, until 1952 black peons were not allowed to attend school. Several older members of these communities are therefore nearly or totally illiterate. However, after that date, the haciendas system ended and basic public education reached Afro-Yungueño communities. According to Lipski (2007), the result of studying Spanish through school education caused a gradual drop of the traditional dialect by Afro-Bolivians, so that some features of this vernacular have gradually been displaced by Highland Bolivian Spanish ones. As far as ABS gender marking is concerned, this substitution is not random. Rather, what can be observed is the transition from one agreement system to another, according to specific syntactic constrains.

The focus of the present study is on the social and linguistic implications of this transition. The remainder of the paper is organized as follows: Session 2 is a brief illustration of ABS DP features; Section 3 elaborates on the methodology
used; Section 4 provides a framework and a possible hypothesis to account for the data variability; Section 5 presents the statistical results; Section 6 elaborates on the findings; and finally, Section 7 introduces our conclusions.

2. Afro-Bolivian Spanish DP features

Lipski (2006b) points out five features as quintessential of the Afro-Yungueño DP, which distinguish this dialect from other Spanish varieties: (a) lack of noun-adjective gender agreement; (b) invariant plurals, that is, no plural suffixes on nouns, adjectives, or determiners; (c) use of a single invariant plural definite article; (d) elimination of definite articles in generic constructions; (e) frequently, the retention of plural /s/ only on the first element of a plural DP.

Cases of (a) and (b) can be exemplified by the following examples: *siempre contaba algunos cosa [algunas cosas] ‘he always told some things’; esos fiesta [esas fiestas] ‘those parties’. Lipski notices that cases of gender and number inflection are more likely to appear on determiner and pre-nominal adjectives, while post-nominal adjectives present a lower rate of concord: *esa casa chico [chica] ‘that small house’.*

In ABS a robust presence of the single invariant plural definite article (*lu*) is found (c): *lu taza [las tazas] ‘the cups,’ lu juamía [las familia] ‘the families.* However, due to this process of “feature substitution” instances in which the article agrees in gender and number with the noun can sometimes be attested: *las novias ‘the girlfriends’* Lipski (2006d). The definite article may also be eliminated in generic constructions (d), while it is required in other Spanish dialects: *perro ta flojo [los perros están flojos] ‘dogs are worthless’.*

The last quintessential Afro-Bolivian DP feature reported by Lipski is the frequent retention of plural /s/ only on the first element of plural DPs (e): *en idioma antigo di mis abuelo [en el idioma antiguo de mis abuelos] ‘in the old language of my grandparents’.*

For the purpose of this article, only tokens involving gender agreement across the DP (a, c) are analyzed, leaving cases of number marking (b, d, e) for another study (cf. Sessarego and Delicado-Cantero 2009).
3. Methodology

Formal syntactic theories have traditionally been built on partly-idealized standard languages, on the basis of well-formedness judgments of a limited set of informants. This methodology produced an impressive amount of data, generalizations and insights, precisely because it was intended to abstract away from certain kinds of empirical data. Yet, for these same reasons, such a model has often been criticized by sociolinguists, who instead based their observations on bigger corpora of naturalistic production data, and developed several techniques to study the ‘real vernacular’, the real language spoken by people when paying no metalinguistic attention to their speech (Labov 1972).

Recent works on microvariation attempt to combine these previously contrasting approaches to compare a speaker’s intuitions with real production data, with the goal of developing more fine-grained, empirically-testable generalizations (Cornips and Poletto 2005). In collecting data for microparametric analysis, it is therefore crucial to gather both grammaticality judgments as well as naturalistic data. For this reason, the informants who participated in the present study were first interviewed and than asked to answer to grammaticality judgments from an oral questionnaire.

A total of 12-recorded interviews were conducted during July 2008, for a total of almost 12 hours of conversation with Afro-Bolivian speakers residing in the communities of Tocaña, Mururata and Chichipa, North Yungas. The informants were native speakers of the dialect who did not speak any other language spoken in Bolivia, such as Quechua or Aymara. The interviews were conducted by letting the speaker talk about any topic of their liking and asking them follow-up questions, in line with the principle of Tangential Shift (Labov 1984:37). The goal was therefore to attempt to reduce the Observer’s Paradox (Labov 1972) as much as possible.

Only later, usually after one or two days from the time of the interview, the same informant was asked for grammaticality judgments. This was done in order to not affect the results of the interview by telling the speaker the nature of the phenomena under analysis in advance.
Responses on acceptability judgment tasks rely at least in part on explicit, prescriptive notions held by the speakers. One way of diminishing this effect which proved successful, according to experimental methods described in Labov (1984), is to ask for grammaticality judgments in an indirect way. Thus, to discover whether or not a variable was present in the community, not only the direct intuitions were elicited: ‘Do you judge X a grammatical/better sentence than Y?; ‘Can you say X?’; also indirect questions were asked: ‘Is variant X present in this community?’; ‘Do you know anybody who can say X?’ The comparison of these two different sources of data resulted in the interesting -but not unexpected- finding that almost everybody who claimed not to say X, but to know people who could say it, were found using an X structure several times during the naturalistic interview, thus indicating that such structure was indeed part of their grammar.

Rates of gender agreement vary widely according to the grammatical category considered (e.g. strong/weak quantifiers, articles, adjectives, etc.) and the speaker interviewed. In fact, some informants claimed to know people presenting grammatical gender agreement only on singular definite articles, while showing default-masculine concord on the rest of the elements (1):

(1)  

a. **Todo la comida delicioso**  
all-M-Sg the-F-Sg food-F-Sg delicious-M-Sg  
‘All the delicious food’

b. **Todo lu comida delicioso**  
all-M-Sg the-M-Pl food-F-Sg delicious-M-Sg  
‘All the delicious foods’

c. **Este/ese comida delicioso**  
this/that-M-Sg food-F-Sg delicious-M-Sg  
‘This/that delicious food’

d. **Mucho/un comida delicioso**  
much/a-M-Sg food-F-Sg delicious-M-Sg  
‘Much/a delicious food’
Other subjects claimed that certain members of the community would present
gender agreement also on plural definite articles and demonstratives (2), but not
on other categories; one informant indicated that (2) “has his own grammar”:

(2)  a.  Todo   la     comida  delicioso
    all-M-Sg the-F-Sg food-F-Sg delicious-M-Sg
    ‘All the delicious food’

    b.  Todo   las    comida  delicioso
    all-M-Sg the-F-Pl food-F-Sg delicious-M-Sg
    ‘All the delicious foods’

    c.  Esta/esa   comida  delicioso
    This/that-F-Sg food-F-Sg delicious-M-Sg
    ‘This/that delicious food’

The majority of the informants (7/12) used agreement on plural and singular
definite articles, demonstratives, pre-nominal adjectives, and also on weak
quantifiers (3):

(3)  Mucha/ una   comida  delicioso
    Much/a-F-Sg food-F-Sg delicious-M-Sg
    ‘Much/a delicious food’

The last group (4/12) claimed to use gender agreement for all the elements,
including strong quantifiers and post-nominal adjectives (4):

(4)  Toda   la     comida  deliciosa
    all-F-Sg the-F-Sg food-F-Sg delicious-F-Sg
    ‘All that delicious food’

This would intuitively lead us to argue in favor of four different grammars;
however, a closer look at the empirical data from the oral interviews complicates
the picture. In fact, it was common for somebody to claim to speak a certain
grammar and then be found using patterns belonging to another. Sometimes, speakers would freely alternate between forms within the same sentence, like the following informant (5), whose grammaticality judgments indicated a grammar of type (4):

(5) Todo la comunidad participaba; mucha gente venía, mucho gente venía desde lejos. Todas, toditas las personas se reunian. Muy bonito la fiesta era

“All the community used to participate, many people used to come, many people used to come from far away. All, all the people gathered. The party was very nice...” (PP32)

Speakers of this type present gender agreement on strong quantifiers in 50-60% of instances, thus indicating that cases of agreement mismatches are very common and should not be regarded as E-language phenomena. A closer analysis of the data, also seriously undermines hypotheses claiming the existence of several parallel grammars, accessible to the speaker at the same time (Kroch 1989; Henry 2005). Henry (2005), for example, argues for the existence of a ‘formal’ and an ‘informal’ grammar in Belfast English. In formal situations speakers would employ a grammar for which the forms there is/there are require agreement, while for informal situations a different grammar would allow the verb not to agree with the subject, thus resulting in the default singular construction. See also den Dikken et al (2006), for some reflections on individual data and abstract grammar.

As far as Afro-Bolivian Spanish gender agreement is concerned, such a claim is not foreseeable. Within the one-hour interview period, the switches between the 4 potentially parallel grammars could be so many that no formal/informal style alternation might serve as a reasonable justification.
Additionally, if the data for plural marking are introduced into the picture, the number of potentially competing grammars increases exponentially (Sessarego and Delicado-Cantero 2009; Delicado-Cantero and Sessarego 2009), thus further constraining the feasibility of such a processing.

4. A framework to account for variability

The study of language variation seems at first to be at odds with formal linguistic analyses that strive to hypothesize principles and generalizations based on Universal Grammar. Nevertheless, in the Principles and Parameters paradigm, several attempts were made to capture dialectal and inter-speaker variation, exploring the notion of parametric variation and, in the last decade, fine-graining it to include so-called “micro parameters” (Benincà 1989, Kayne 2000 etc). Language intra-speaker variation, on the other hand, has long been excluded from formal linguistic analyses. However, during the last years, several scholars have taken into account variation beyond the usual parametric inter-language domain (Adger & Smith 2005; Adger 2006). Intra-speaker variation becomes the core of linguistic research, bringing previously disregarded phenomena –considered as belonging to E-language - to the fore (Adger & Trousdale 2007).

The advent of the Minimalist Program entailed a derivational approach that was inconsistent with parameter-based accounts. Thus, an extension of the parameter/micro-parameter idea to intra-speaker variation seems to not be a straightforward matter. In the most recent formulations of the Minimalist Program (Chomsky 2001, 2002, 2006), syntactic derivations are viewed as strictly dependent on feature valuation and checking. The distinction between interpretable and non-interpretable features, though controversial, has proven very useful. Several features have an interpretation at LF, thus they are semantically-interpretable features. Other features, however, lack such semantic import and are present to trigger the necessary merger or agreement operations during the derivation. Said uninterpretable features have to be matched via Agree and are finally deleted before Spell-out.

Given these theoretical assumptions, the Minimalist Program seems to show enough promise to account for important aspects of variation because it
admits several phonological outputs for a given semantic interpretation. Adger and Smith (2005) argue for characterizing syntactic variation in terms of (un)interpretable features. Certain uninterpretable features may be present in one category but absent in another. Since they are uninterpretable, they would have no semantic repercussion, thus being equally legitimate for a convergent derivation. Therefore, variation is reduced to the specification of the uninterpretable features in a derivation (Adger & Smith 2005: 161). As expected, syntax per se remains invariable or “perfect” (Brody 2003), given that variation is located only in the lexical component. Variation will occur when one item or other enters the numeration and takes part in a syntactic derivation. Several (social) factors may affect the outcome: ease of lexical access (probably linked to frequency of use), speaker-hearer relationships, social identity, etc. (Adger & Smith 2005: 164).

Such (variable) underspecification for gender is what we observe when analyzing the ABS DP. Taking the array of DP features described in section 2 into account, ABS has been classified by Lipski (2006c: 9) as a case of “DP impoverished agreement”. While in standard Spec-Head agreement processes, a certain feature should percolate to all elements m-commanded (Chomsky 1986) by the head, in cases of “impoverished agreement”, concord can be limited to some of them. Within the GB framework, DP features are claimed to percolate up from the noun to the determiner (Grimshaw 1991; 1997). Thus, in this agreeing relation, the relevant feature is transmitted from the head to all the elements m-commanded by it.

Lipski (2006c) adopts this model to explain ABS gender agreement processes. Looking at data from several speakers of different ages and levels of education, presenting variable gender-agreement configurations, he noticed that no case of post-nominal gender concord is found unless pre-nominal elements agree, as shown in (6):

(6) a. Una curva ancha (Lipski 2006c)
   a-F curve-F large-F
   ‘a large curve’

   b. una curva ancho
   a-F curve-F large-M
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‘a large curve’

c.  *un curva ancho
   a-M curve-F large-M
   ‘a large curve’

d.  *un curva ancha
   a-M curve-F large-F
   ‘a large curve’

Our data, when analyzed cross-generationally, are generally in line with those reported by Lipski. However, an important difference can be noticed in the speech of several informants. Many speakers present almost a complete lack of gender agreement in strong quantifiers, as shown by (7) and also by examples (1-4):

(7)  a.  Todo las casa bonito
       all-M-Sg the-F-Pl house-F-Sg nice-M-Sg
       ‘all the nice houses’

       b.  Todo la chica de Tocana
       all-M-Sg the-F-Sg girl-F-Sg of Tocana
       ‘all girls from Tocana’

       c.  Todo la comunidad
       all-M-Sg the-F-Sg community-F-Sg
       ‘all the community’

Cases like these seem to violate the pre-nominal to post-nominal percolation order (Grimshaw 1991; 1997), unless we postulate that strong quantifiers are elements external to the DP, and then we argue in favor of a different mechanism for the checking of the gender feature in languages where they agree in gender and number with N, like Standard Spanish. Additionally, the feature-percolation account of gender agreement runs into problems when compared with data from other Romance varieties in which post-nominal adjectives may agree with N and disagree with D (cf. Pomino and Stark 2009 for Fassano Ladin). Alternatively,
one might propose a system with one or more agreement projections inside DP and with the relevant displacement operations applied to agreeing elements so that they enter into a spec-head relation (Sportiche 1998, Koopman 1996). This type of approach would be problematic too in that the number of internal agreement projections required would not be limited, and would most likely be established on an ad-hoc basis. It also runs against recent minimalist ideas supporting the elimination of Agreement projections (Chomsky 2002).

For these reasons, an account of gender agreement, based on a minimalist model seems more adequate to describe the phenomena encountered in ABS. In fact, within the minimalist framework, gender agreement is conceived as the result of valuation processes which do not necessarily require movement but just a configurational feature-checking mechanism (Picallo 2008). Gender agreement, in fact, involves the transmission or sharing of features with nominal origin to other lexical items (adjectives) or to functional elements (determiners, quantifiers). Neither the demonstrative nor the adjective comes from the lexicon with a value for gender. The gender feature of determiners and adjectives is lexically unvalued (Chomsky 2001), and gets valued as a consequence of a syntactic process of agreement with the gender feature of the noun (cf. Pesetsky & Torrego 2007).

Recent work on agreement operations advocates a version of agreement which departs from the previous view of this operation as ‘feature assignment’ mechanism (Chomsky 2000). Rather, the process is seen as an instance of ‘feature sharing’ (Frampton and Gutmann 2000; Pesetsky and Torrego 2007), in line with the view of agreement as feature unification common in HPSG (Pollard & Sag 1994). Within the probe-goal theory of the syntactic computation, the operation Agree can be formally defined as in (8).

(8) **Agree** (Pesetsky and Torrego 2007:4)

(i) An unvalued feature F (a *probe*) on a head H at syntactic location $\alpha$ (F$\alpha$) scans its c-command domain for another instance of F (a *goal*) at location $\beta$ (F$\beta$) with which to agree.

(ii) Replace F$\alpha$ with F$\beta$, so that the same feature is present in both locations.

If a goal is valued for F, replacing the token-value of the probe with the value of the goal results in an instance of valued F substituting for the specification of the unvalued probe. A valued F may now serve as the goal for some ulterior operation of Agree triggered by an unvalued, higher instance of F.
serving as a new probe. The result is that a single feature F will be shared by several positions, and the process could iterate further.

An element drawn from the lexicon with an uninterpretable valued feature will be specified as $u(\text{u(ninterpretable)})F(\text{eature})[\text{val}]$; a feature of the same kind that has not participated in Agree and is not already valued is annotated (where relevant) by an empty pair of brackets: $uF[ ]$ and, after the Agree operation takes place, it turns into $uF[\text{val}]$. On the other hand, an element coming from the lexicon without a specification for such a feature, will be annotated as $\text{no-F}[ ]$, and it will not be able to act as a probe for Agree operations of that particular kind.

(9) $uF[\text{val}]......uF[\text{val}]....uF[\text{val}]......uF[\text{val}]\times\times\text{no-F}[ ]$

Therefore, if we postulate that an uninterpretable feature such as gender may be present in certain nominal elements but absent in others, and that variation is the result of lexical differences in the feature specification of certain items, it follows that contrasts in overt syntax will be the result of differences in the computation of varying specifications. We propose an account of the different gender agreement configurations across DP strings in ABS that can be summarized in the following fashion:

(10) a. [DP una [NP curva ancha] $uG[fem]......uG[fem]...............uG[fem]$
[DP a [NP curve large] ‘A large curve’

b. [DP una [NP curva ancho] $uG[fem]............... uG[fem]\times\times\text{no-G[ ]}$
[DP a [NP curve large] ‘A large curve’

c. [DP un [NP curva ancho] $\text{no-G[ ]}\times\times\times\times\times\times\times\text{no-G[ ]}$
[DP a [NP curve large] ‘A large curve’
Therefore, this minimalist approach can account for all the gender agreement configurations encountered in the ABS Determiner Phrase by postulating the presence/absence of unvalued gender features on the different DP components. The differences between ABS and HBS reported in (7) can be explained without recurring to different mechanisms of feature percolation or different movement operations involving one or more agreement heads. Rather, we just need to assume that the quantifier todo often does not have gender/number specification in ABS while it does in HBS.

Having clarified this point, we can now proceed to solve a different empirical issue, namely why no instances of post-nominal gender concord can be found on adjectives unless pre-nominal articles agree (6), in both Lipski’s (2006c) and our corpora.

Results from cross-generational statistical analyses (Sessarego 2009) suggest that ABS is undergoing a cross-generational “change in progress”, in which stigmatized basilectal ABS features are being substituted by more prestigious HBS ones. One result of this transition is the introduction of a wider range of gender agreement configurations in a language which originally made little use of it. In minimalistic terms, this phenomenon can be seen as the emergence and development of unvalued features on elements which previously were not specified for them. This is in line with current approaches to grammaticalization in the minimalist framework (Roberts & Roussou 2003, Van Gelderen 2004).

The non-occurrence of strings like (11) might indicate that cross-generationally indefinite articles developed an unvalued gender-feature specification before post-nominal adjectives. Therefore, speakers mastering post-nominal agreement would also present concord on indefinite articles.

(11) a. *[DP un]…………………uG[fem]………………… uG[fem]  
   [NP curva]…………………no-G[ ]…………………uG[fem]………………… uG[fem]  
   [DP a]…………………[NP curve]…………………[NP curva]………………… [NP curve]  
   ‘A large curve’

   b. *[DP una]…………………uG[fem]…………………uG[fem]  
   [NP curva]…………………[NP curva]…………………[NP curva]………………… [NP curva]  
   ‘A large curve’
Given these data, we may hypothesize that in ABS unvalued gender features developed gradually: first on elements closer to the nominal head (e.g. articles) and only later on those further away from it (e.g. strong quantifiers, post-nominal adjectives). However, even though this is the general tendency, different linguistic and social factors may affect the selection of an item, and therefore the overt syntax result. Thus we may conclude this section with the following hypothesis on gender agreement and locality (12):

(12) Locality Hypothesis

Syntactic Locality appears to play a crucial role in the determination of gender agreement configurations in ABS. Gender agreement does not apply randomly; it rather seems to manifest itself according to an “orderly and heterogenic” pattern (Weinreich et al. 1968: 100–1), where elements closer to N show higher probability of agreeing with its gender.

In section 5 we will present the statistical results of the present study, while in section 6 we will reconcile them with the Locality Hypothesis.

5. Statistical Results

Heterogeneity is essentially the observation that language varies. As Weinreich et al. (1968: 100–1) say:

The key to a rational conception of language change – indeed, of language itself – is the possibility of describing orderly differentiation in a language serving a community … It is absence of structural heterogeneity that would be dysfunctional.

Furthermore, heterogeneity is not random, but patterned. It reflects order and structure within the grammar. Variation analysis aims to characterize the nature of this complex system (Tagliamonte 2006). We will elaborate on our results combining these sociolinguistic assumptions with formal minimalistic theories of agreement processes.

Findings from grammaticality judgments led to the identification of four different patterns of agreement (see 1-4); however, the comparison of such results with the data recorded by means of sociolinguistic interviews revealed a
considerable amount of variability between the grammars claimed and the grammars encountered, thus indicating that agreement patterns are not completely stable in the grammar of these informants.

For these reasons, the model proposed by Adger and Smith (2005) to account for unvalued uninterpretable features seemed more adequate to capture the nature of the phenomena found in the ABS speech. The nature of the element occurring with the nominal head (e.g. articles, adjectives, strong/weak quantifiers, etc.), seems to have a clear effect on the output; however, not only internal factors might condition the agreement operation; also external ones seem to play a crucial role.

A closer look at the interview transcripts revealed that gender mismatches on adjectives and determiners between ABS and Standard HBS are common, with the masculine gender prevailing over the feminine one. We claim that these differences are due to two separate factors:

(a) Certain words listed in the HBS lexicon as feminine are listed in the ABS one as masculine and vice versa;

(b) The valuation process of agreement in ABS departs from the standard Spanish one in that certain ABS elements lack the unvalued features present in their Spanish counterparts.

While grammaticality judgments were discordant for certain syntactic categories among informants, every participant agreed on the use of *el* and *la* as respectively the masculine singular definite article and the feminine singular definite one. Lipski (2009) reports no instances in ABS where *el* is used with nouns that are grammatically feminine in HBS, while he comments on some cases in which *la* is used with nouns that are grammatically masculine in HBS (13).

(13) a. *Mi quita mi gorro pa poné aquí la pulmón*
   Me take my hat to put here the-F lung-M
   ‘He took off my hat to put it here over my chest’

b. *Yo llegaba la patio*
   I arrived the-F doorway-M
   ‘I arrived at the doorway’
On the other hand, our corpus includes several cases indicating that agreement mismatches involving definite articles can be found under both conditions, thus suggesting that a differential lexical specification exists and is bidirectional.

(14) a. Él dice que es el máximo autoridad
   ‘He says he is the highest authority’

   b. El serpiente no se come; se mata con escopeta
      ‘The snake cannot be eaten; it must be killed with a rifle’

   c. La problema de Tocaña era lu patrón
      ‘The land owners were the problema of Tocaña’

   d. La sistema de hacienda no sirve pa’ nada
      ‘The hacienda system is useless’

Setting aside those mismatches that are due to different specifications in the lexicon, all the rest have to be viewed as the by-product of a specific valuation constraint, which is conditioned by the type of grammatical category entering the derivation with the nominal head.

In fact, cross-generational VARBRUL results for internal factors (Table 1) indicate that the unvalued gender-feature distribution among grammatical categories is highly variable (Range 61), with post-nominal adjectives disagreeing the most (Factor Weight .95), while plural and singular definite articles show the highest level of concord (Factor Weight .23).

Within the Minimalist framework, several external factors may affect the item selection: ease of lexical access (probably linked to frequency of use), speaker-hearer relationships, social identity, age, etc. (Adger & Smith (2005: 164)). Cross-generational results (Table 2) reflect exactly this prediction.
Table 1. Cross-generational variable rule analysis of the contribution of internal factors to the probability of lack of gender agreement in Afro-Bolivian DP (Total = 2604; Log likelihood = -624.215; Total Chi-square = 202.0101; Chi-square/cell = 21.6291; Significance = 0.001; Input = 0.041).

<table>
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<tr>
<th>GRAMMATICAL CATEGORY</th>
<th>Factor Weight</th>
<th>% Lack Agreement</th>
<th>N</th>
<th>% data</th>
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<td>272</td>
<td>19</td>
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<td>275</td>
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<td>.62</td>
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</table>

Range 61

Generation is, in fact, a significant factor group (Range 32), with the oldest group (80+) strongly favoring disagreement (Factor Weight .67) and the 21-50 group disfavoring it (Factor Weight .35). These data reflect the presence of a cross-generational change in progress, pushing ABS in the direction of HBS. Young generations did not experience the segregation imposed by the *hacienda* system and had more chances to have contact with the Spanish spoken outside the community. These elements, in addition to the stigmatization attached to the Afro vernacular, are pushing the younger members of the community to quickly replace the basilectal features with more prestigious HBS ones.

Table 2. Cross-generational variable rule analysis of the contribution of external factors to the probability of lack of gender agreement in Afro-Bolivian DP (Total = 2604; Log likelihood = -624.215; Total Chi-square = 202.0101; Chi-square/cell = 21.6291; Significance = 0.001; Input = 0.041).

<table>
<thead>
<tr>
<th>GENERATION</th>
<th>Factor Weight</th>
<th>% Lack Agreement</th>
<th>N</th>
<th>% data</th>
</tr>
</thead>
<tbody>
<tr>
<td>80+</td>
<td>.67</td>
<td>21</td>
<td>651</td>
<td>25</td>
</tr>
<tr>
<td>51-80</td>
<td>.56</td>
<td>11</td>
<td>927</td>
<td>36</td>
</tr>
<tr>
<td>21-50</td>
<td>.35</td>
<td>1</td>
<td>1026</td>
<td>39</td>
</tr>
</tbody>
</table>

Range 32
6. Elaborating on the Locality Hypothesis

In the present session we will further analyze the data to show how our findings support the Locality Hypothesis (12), or the claim that gender agreement expanded cross-generationally from the projections closer to the nominal head to those further away.

Even though there are no wider diachronic data available, by looking at the synchronic results for the three generations under analysis, we can get an idea of how the gender agreement domain might have grown in ABS. The statistical findings presented in Table 1 and 2 give only a partial sketch of how unvalued gender feature might have developed. Only if we look at the result for each generation individually, gender-agreement development patterns become clearer.

In order to provide a visual representation of the unvalued gender-features development across the ABS DP, we rearranged data from Table 1 and 2 on three schematic syntactic trees (Compare Fig 1, 2, 3).

As can be noticed, the three generations show three different levels of gender agreement. While for the 60-80 generation agreement is mainly limited to demonstrative, definite articles, weak quantifiers and pre-nominal adjectives; for generation 40-60 also strong quantifiers agree in a majority of instances. On the other hand, post-nominal adjectives agree more than 50% of cases only for the 21-40 generation informants.

**Figure 1. Gender agreement patterns for 80+ generation according to grammatical category (percentages and raw numbers).**
Gender-agreement evolution seems to develop cross-generationally in a systematic way. In fact, for all the three figures, the following gender agreement ranking is maintained across the grammatical categories analyzed:

\[(14) \text{DEMONST. /DEF. ART.} > \text{WEAK Q.} > \text{PRE-NOM. ADJ.} > \text{STRONG Q.} > \text{POST-NOM. ADJ.}\]

This property, in addition to the fact that all singular definite articles agree with the gender of the noun, might indicate that in a previous phase gender
agreement was limited to singular definite articles, and it gradually extended to the rest of the categories. Thus, we can conclude this section by saying that the synchronic data collected seem to support the diachronic model entrenched in the Locality Hypothesis.

7. Conclusions

This study analyzes gender agreement within the Afro-Bolivian Spanish DP by combining sociolinguistic and formal syntactic approaches. As variation is a natural component of all human languages, our findings do not pretend to be completely categorical. On the other hand, we want to stress the importance of characterizing the elements of variation in a systematic way, as computationally determined by operations: more specifically on a locality condition on agree. The great improvement of the minimalist program on previous theoretical frameworks is its capability of accounting for alternation between forms (Adger and Smith 2005).

The stigmatization attached to Afro-Bolivian Spanish and the increasing contact with more prestigious Highland Bolivian Spanish represent the underlying reasons pushing the former dialect to approximate more and more the latter. Contact with Bolivian Spanish increased substantially after 1952, the year of the Bolivian Land Reform, which freed Afro-Bolivians from slavery and introduced education in the black communities. These changes, which have affected the socio-economic scenario of black Bolivia during the last six decades, are reflected in the speech of the members of its community. For this reason generation was proven to be significant factor groups affecting the studied variation. Internal statistical results from the factor group ‘Grammatical Category’ indicate that distinct grammatical elements have different probability of agreeing with the gender feature of N. This fact, in addition to the constant ranking showed cross-generationally (Fig 1-3) and to the 100% agreement for singular definite articles, might indicate that in a previous stage of development agreement was limited to such category, and then it gradually spread to others.

The Locality Hypothesis (12) may be able to account for the nature of such transition by claiming that unvalued gender features developed first on elements closer to the nominal head and later on those further away from it.
From a theoretical perspective, this work sheds some light on the linguistic constraints regulating gender agreement in an Afro-Hispanic vernacular approximating to a more prestigious Spanish dialect. The process is driven by social factors through a path that is highly constrained by syntactic ones.

References


Variation, evolution and the syntax of Afro-Bolivian Spanish gender agreement


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