

PHONOLOGICAL AGREEMENT IN GUÉBIE

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INTRODUCTION

- Guébie is an Eastern Kru language (Niger-Congo) with fewer than 1000 speakers spoken in southwestern Côte d'Ivoire.

Phonological background of Guébie

- All syllables are open and contain maximally one vowel.
- Four contrastive tone heights, marked with numbers 1-4.
- Ten contrastive vowels distinguished by height, backness, ATR

- 3rd person subject and object pronoun clitics are of the form V.
- The vowel non-human 3rd person pronouns agrees in backness with the final vowel of the antecedent.

Pronoun/antecedent agreement in Guébie

Noun	Gloss	Subj clitic	Gloss	Obj clitic	Gloss
nove ^{2.3}	'bee'	e ³	3.sg.nom	e ²	3.sg.acc
k'ala ^{4.2}	'farm'	e ³	3.sg.nom	e ²	3.sg.acc
to ³	'battle'	u ³	3.sg.nom	u ²	3.sg.acc

1. Front vowel phonological agreement data

- a. dʒie^{2.3}
'prison'
- b. e- ni- ^{e^{4.2}} ji³
l- see-it(a prison).acc see
'I see it (a prison).'
- c. e³ kade^{3.2}
it(a prison).nom be.big
'It (a prison) is big.'

2. Central vowel phonological agreement data

- a. k'ala^{4.2}
'farm'
- b. e- ni- ^{e^{4.2}} ji³
l- see-it(a farm).acc see
'I see it (a farm).'
- c. e³ kade^{3.2}
it(a farm).nom be.big
'It (a farm) is big.'

3. Back vowel phonological agreement data

- a. to³
'battle'
- b. e- ni- ^{u^{4.2}} ji³
l- see-it(a battle).acc see
'I see it (a battle).'
- c. u³ kade^{3.2}
it(a battle).nom be.big
'It (a battle) is big.'

Agreement as phonological

Claim: Pronoun/antecedent agreement in Guébie is phonological.

Loan word/pronoun agreement

- Pronouns also show phonological agreement with loan words.

Loan words	Agreement vowel	Gloss	Origin language
sukulu ^{2.2.3}	u	'school'	English
barage ^{2.3.2}	e	'dam'	French
kaseti ^{2.3.2}	e	'cassette'	French
bagio ^{4.1.1}	ə	'ring'	French

4. Phonological agreement in loan words from French/English

- a. sukulu^{2.2.3}
'school'
b. e- ni- ^{u^{4.2}} ji³
l- see-it(a school).acc see
'I see it (a school).'
- c. u³ kade^{3.2}
it(a school).nom be.big
'It (a school) is big.'

Nonce word/pronoun agreement

- Using a nonce word prompts the same kind of phonological agreement as words in the Guébie lexicon.
- The nonceword [fo²] would be replaced by the pronouns [u³] for subject and [u²] for object.
- The nonceword [gbele^{4.3}] would be replaced with [e³] and [e²].

5. Phonological agreement in loan words from French/English

- a. fo²
nonceword
- b. e- ni- ^{u^{4.2}} ji³
l- see-it(fo).acc see
'I see it (a fo).'
- c. u³ kade^{3.2}
it(fo).nom be.big
'It (a fo) is big.'

Evidence for phonological agreement

- Not only established lexical items undergo this agreement. Loan words and nonce words follow the same phonological agreement pattern, predictably.
- It is ungrammatical and incomprehensible to use any pronoun vowel other than the one which agrees in order to refer to a given noun.
- The group of nouns that corresponds to a given pronoun vowel does not correspond to any coherent semantic class.
- A non-phonological analysis misses the generalization that the agreement is so consistently (always) phonologically determined.

As far as I know, this pattern is unattested outside of Kru.

For descriptions of similar phonological agreement patterns across Kru, see also Bing (1987), Koopman (1984), and Marchese Zogbo (2012).

AGREEMENT BY CORRESPONDENCE

What agrees? The V of a pronoun clitic agrees with the final V of its nominal antecedent.

In what feature? The corresponding vowels agree in backness.

Question: Can an ABC approach account for the Guébie data?

- Previously used to account for:**
 - Long-distance C agreement (Hansson 2001; Rose & Walker 2004)
 - Vowel Harmony (Sasa 2009; Walker 2009; Rhodes 2012)
 - Long-distance C Dissimilation (Bennett 2013)
 - Local effects of assimilation/dissimilation (Inkelas & Shih 2013a,b; Shih 2013)
- Here used to account for an interface phenomenon, vowel agreement between DPs that have the same referent:
Phonological agreement by semantic correspondence
- Requires expanding ABC to domains outside of phonology, namely, to syntax or perhaps even to semantics (cf. Lionnet 2013 for an expansion of ABC to subphonemic correspondence).

Defining Correspondence in Guébie

CORR-XX_a (REFERENT)
DPs in an output string are in **correspondence** if they refer to the same object or set of objects.

CORR-VV_a (CORR-DP)
Vowels in an output string are in correspondence if they are contained within corresponding DPs.

If correspondences are aligned from the right edge of a morpheme/word, the pronoun clitic will correspond with the final vowel of the corresponding DP, which is what we find in the data.

Assumption 1: Pronoun vowels are underspecified for place features.

Assumption 2: Each input vowel with unspecified place features can be in correspondence with only one vowel in the output.

IDENT_a-OO[BK]
Vowels in an output string **agree** in the phonological feature [back] if they are in the correspondence relation CORR-VV_a(Corr-DP).

Analysis of the Guébie data

CORR-XX_a(REF): Correspondence between DPs that have the same referent

CORR-XX_a(DP): Correspondence between vowels that contained within corresponding DPs

ALIGNRIGHT: Penalizes correspondence aligned from the left edge of a word

IDENT_a-VV[BK]: Penalizes differences in backness.

Here I account only for the backness of pronoun vowels that covaries with the antecedent final vowel, I do not discuss height.

In the tableau here, assume the two DPs correspond in referent.

Analysis of the Guébie data

/nove ³ ...V ² /	CORR-XX _a (REF)	CORR-XX _a (DP)	ALIGN-RIGHT	IDENT _a -VV[BK]
a. nove ^{2.3} ...e ²				*!
b. nove ^{2.3} ...u ²				*
c. nove ^{2.3} ...e ²			*!	
d. nove ^{2.3} ...e ²				

Extension to DP-internal agreement

6. Final V of adjective agrees with final V of noun in backness.

a. bit^{2.3} lele^{1.2} dʒela^{1.1}
house new red
'a new red house'

b. nove^{2.3} leli^{1.2} dʒeli^{1.1}
bee new red
'a new red bee'

front **mid**

Note: the vowels still agree in backness, but their height specifications are distinct from the pronoun vowels in (1-3).

- We would either need to say that modifiers refer to the same object in the world as the noun that they modify,
OR
- We need a different correspondence constraint.
- Unifying DP-internal agreement and pronoun-antecedent agreement is a question for future research.

Alternative analyses

Claim: Pronoun/antecedent agreement it is phonological.

- Why not syntactic?
A syntactic analysis can only account for the agreement by assigning nouns arbitrary classes and saying that pronouns agree in class with their antecedent.
The fact that agreement is consistently phonologically dependent is then merely a coincidence.
- Why not just a noun class system?
By this account the phonological agreement would be arbitrary and unpredictable. Perhaps the analysis here could be extended to analyses of other noun class systems crosslinguistically.
- Could the final vowel on the noun be a determiner suffix?
I. Nouns always surface with a consistent final vowel, no matter their definiteness in context.
II. Final vowels as suffixes would have to be assigned randomly, since nouns that take a given vowel do not form a coherent semantic class.
- Is the noun root present in the syntax?
This would require phonological features of roots to be present in the syntax and available for morphological agreement, or it would claim that all pronouns are underlyingly full DPs.

CONCLUSION

Summary: We have seen an ABC account of phonological agreement between pronouns and their antecedents in Guébie

Question: Do we want ABC to extend to syntactic and semantic domains in order to account for phonological phenomena?

For future research:

- Account for height of the pronoun vowels
- How to account for correspondence when antecedent is not present in the output string?
- Unify DP-internal agreement and pronoun-antecedent agreement under a single ABC account
- Explore the consequences for allowing ABC to access semantic and syntactic domains.
- Explore an analysis where phonological features of nouns are available to the syntax/morphology.

Current line of research