

## The Pronominal System and Reference in Pulaar

Ibrahima Ba  
The University of Kansas

### 1. Introduction

This paper examines pronominal reference and the long-distance anaphor in Pulaar, a West African language spoken from Senegal to Niger and Cameroon. I am focusing on Toore, a dialect of Pulaar spoken in southern Senegal. I will first give a sketch of the pronominal system of Pulaar with specific focus to the facts or paradigm that need to be accounted for. I will further show the different contexts that license the antecedent-pronoun coreference as well as the referential nuances that exist between different classes of pronoun. In this regard, I posit that the differences noted in antecedent-pronoun coreference can be explained by definiteness and/or specificity along the lines of Schwarz (2009) and Enç (1991).

### 2. Pronominal Paradigm

Since I will be specifically referring to 3<sup>rd</sup> person pronoun, I abstract away from the rest of the pronominal system. In this respect, we can distinguish two classes of pronouns: one class that can be referred to as the *mo*-class (human class) and another class of pronouns that can be referred to as the *dum*-class (neuter class). It should be noted that Pulaar is a noun class language. Every noun fall into one of the twenty one noun classes, and this noun class will also serve as a referential pronoun.

#### 2. 1 Paradigm of Human and Neutral Pronouns

The paradigm for the singular human *mo* class is in the first column of (1). Pulaar also has a series of third person neuter pronouns which do not belong to any particular noun class and can be used to refer to any nominal, no matter its class. This paradigms are similar to Potsdam's (1995) and Culy's (1996) accounts of other dialects. The singular forms are given in the second column of (1). Most human pronouns have a corresponding neutral pronoun. We can distinguish five different pronouns in the paradigm:

1)	<i>mo</i> -class pronoun	<i>dum</i> -class pronoun
Subject pronoun	<b>o</b>	<b>dum</b>
Object pronoun	<b>-mo</b>	<b>-dum</b>
Progressive/stative subject pronoun	<b>homo</b>	<b>hudum</b>
Strong pronoun	<b>deeko</b>	<b>deejum</b>
Possessive pronoun	<b>makko</b>	<b>mum</b>
Possessive suffix	<b>-iiko</b>	<b>-um</b>

All *mo*-pronouns refer to humans. However, in Toore, only the possessive *dum*-pronoun, the possessive suffix and the progressive pronoun can refer to humans. Only the object, strong and possessive pronouns are present in Potsdam's (1995) *dum* inventory while Culy (1996) lists only the object pronoun, the possessive pronoun and the possessive suffix. However, for them all those pronouns can refer to humans. These two classes interact in an interesting way. For instance, a *mo*-pronoun cannot be an antecedent to a *dum*-pronoun:

- 2) \**o* *yii*-*ma* *waaji* *mum*.  
He see-perf friend his  
'He<sub>i</sub> saw his<sub>\*i</sub> friend'

The pronoun *o* cannot be antecedent to *mum*. Thus, the sentence is ungrammatical. But if we change *mum* to the corresponding *mo*-pronoun, the sentence will be grammatical.

- 3) *o* *yii*-*ma* *waaji* ***maako***.  
he see-perf friend his  
'He<sub>i</sub> saw his<sub>i/j</sub> friend'

A non-pronoun antecedent binds a *dum*-pronoun, but it does not bind a *mo*-pronoun in the sense that the *mo*-pronoun can refer to the antecedent or another person not mentioned in the sentence.

- 4) a. ***Aali*** *noddu*-*m* *waaji* ***mum***.  
Aali call-perf friend his  
'Aali<sub>i</sub> called his<sub>i/\*j</sub> friend'
- b. *Aali* *noddum* *waaji* ***maako***.  
Aali call-perf friend his  
'Aali<sub>i</sub> called his<sub>i/j</sub> friend'

### 3. Long-Distance Anaphors as Bound Variable

The distinction between *mo*-pronouns and *dum*-pronouns appears to reflect a dichotomy of pronominal reference: coreference and bound variable. In that respect, I hold *mo* to be compatible with coreference and *dum* pronouns are bound variables along the lines proposed by by Potsdam (1995):

- 5) *dum*-series pronouns are always bound variables  
*mo*-series pronouns are never bound

### 3. 1 Quantified DPs as Antecedents

Based on (5), only *dum* pronouns can have a quantified DP as antecedent. As for *mo* pronouns, they are predicted to be incompatible with quantified antecedents. The example (6) appears to support this argument:

- 6) [kala mo won-aa] wiy-a-noo-m huɗum/\*homo waawi naw-or jogorang.  
 [every who be-NEG] tell-PASS-PAST-PERF *huɗum*/he can-PERF take-INSTR weapon  
 ‘Everyone<sub>i</sub> was told they<sub>i</sub> can carry a weapon with them’

The same is true of *Wh*-phrases; they can only be antecedents to *dum* pronouns.

- 7) Ho mo mbii-daa yid-i maa mum/\*maako?  
 Q who say-PERF.you love-PERF mother *mum*/his  
 ‘Who<sub>i</sub> did you say loves his<sub>i</sub> mother?’

### 3. 2 Reference with respect Focus *Only*

According to Reinhart (1986), quoted by Potsdam (1995), bound variable and referential uses of pronouns are ambiguous with the presence of *only*. So a sentence like the one in (8) is ambiguous between (9a) and (9b):

- 8) Only John likes his dog.  
 9) a. Nobody but John likes his own dog (Bound Variable).  
 b. Nobody but John likes John’s dog (Coreferential).

In Pulaar, however, we might expect *mo*-pronouns and *dum*-pronouns to be split between the two readings in (9) so that the following sentences would not be ambiguous, though they contain the focus particle *only*:

- 10) a. ko Aali tan wadɗ-ot-oo welo mum.  
 FOC Aali only ride-IMP-F-MID bike *mum*  
 ‘Only Aali rides his bike’  
 (predicted to be only Bound Variable reading)  
 b. ko deeko tan wadɗ-ot-oo welo maako.  
 FOC him only ride-IMP-F-MID bike his  
 ‘Only Aali rides his bike’  
 (predicted to be only Coreference reading)

It occurs, however, that both sentences in (10) are ambiguous between the two readings. This challenges the prediction that they are strictly consistent with one of the readings. But the ambiguity may only hold to the focus element *only* in the sense that it singles out the antecedent, giving a rather contrastive reading. A similar effect emerges in some other contexts.

### 3. 3 Binding and Reference Ambiguity

When the *dum* pronoun is preceded by two possible antecedents, in the case of double object constructions, ambiguous interpretation arises. In other words, it is compatible with both antecedents. Here, the ambiguity is not between bound and coreference readings, but rather between two bound variable readings, as in (11):

- 11) Aali hollu-noo-m      Muusaa kotoo mum.  
Aali show-PAST-PERF Muusaa brother his  
'Aali<sub>i</sub> showed Muusaa<sub>j</sub> his<sub>i/j</sub> brother'

The example in (11) makes *dum* pronouns look like *mo* pronouns in picking their reference. The effects obtain with a quantified DP as a possible antecedent, whether it is subject or object, as (12) shows:

- 12) a. Hay gotto hollu-aa-noo      Muusaa kotoo mum.  
even one show-NEG-PAST Muusaa brother his  
'No one<sub>i</sub> showed Muusaa<sub>j</sub> his<sub>i/j</sub> brother'
- b. Muusaa hollu-aa-noo      hay gotto kotoo mum.  
Muusaa show-NEG-PAST even one brother his  
'Muusaa<sub>i</sub> did not show anyone<sub>j</sub> his<sub>i/j</sub> brother'

The ambiguity also holds in long-distance for sentences containing quantified antecedents as well as *Wh*-constructions:

- 13) Aali wiy-aa hay gotto yii-ma kotoo mum.  
aali say-neg even one see-perf brother his  
'Aali<sub>i</sub> did not say that anyone<sub>j</sub> saw his<sub>i/j</sub> brother'
- 14) ho mo Aali wii yii kotoo mum?  
Q who Aali say see.perf brother his  
'Who<sub>i</sub> did Aali<sub>j</sub> say saw his<sub>i/j</sub> brother?'

If there are two referential DPs in a sentence like (13), *mum* can refer to either of them, as in (15):

- 15) Aali wiy-aa hay gotto yii-ma kotoo mum.  
aali say-NEG even one see-PERF brother his  
'Aali<sub>i</sub> did not say that anyone<sub>j</sub> saw his<sub>i/j</sub> brother'

The ambiguity disappears, however, when one of the possible antecedents is a *mo*-pronoun and, thus, illicit as antecedent to a *dum*-pronoun:

- 16) o hollu-noo-m Muusaa kotoo mum.  
he show-PAST-PERF Muusaa brother his  
'He<sub>i</sub> showed Muusaa<sub>j</sub> his<sub>i/j</sub> brother'
- 17) o wii ko Aali hollu-noo-m Muusaa kotoo mum.  
he say it's Aali show-PAST-PERF Muusaa brother his  
'He<sub>k</sub> said that Aali<sub>i</sub> who showed Muusaa<sub>j</sub> his<sub>i/j/\*k</sub> brother'

The ambiguity also disappears when the pronoun precedes one of the possible antecedents and is, thus, not bound by it:

- 18) Aali hollu-noo-m kotoo mum Muusaa.  
Aali show-PAST-PERF brother his Muusaa  
'Aali<sub>i</sub> showed Muusaa<sub>j</sub> his<sub>i/\*j</sub> brother'

This does not, however, apply to conditional or adverbial clauses. In these clauses, one of the pronouns will be a *mo*-pronoun:

- 19) Ndey Aali nodd-i kotoo mum, Muusaa yi'i mo.  
when Aali call-PERF brother his Muusaa see.PERF him  
'When Aali<sub>i</sub> called his<sub>j</sub> brother, Muusaa saw him<sub>i/j</sub>'

The examples in (11)-(16) show that *dum*-pronoun cannot have a *mo*-pronoun as antecedent and that a possible antecedent cannot be a barrier. In other words, a *dum*-pronoun can be bound by two antecedents across clauses.

The *mo*-pronouns behave differently in that they can refer outside the sentence. In other words, they are not bound and have a coreference reading. They cannot have a quantified DP or a Wh-phrase as antecedent, as (17) and (18) show:

20) o wiy-aa hay gotto yii-ma kotoo maako.  
he say-NEG even one see-PERF brother his  
'He<sub>i</sub> did not say that anyone<sub>j</sub> saw his<sub>i/\*j/k</sub> brother'

21) Ho mo o wii yii kotoo maako?  
Q who he say see.PERF brother his  
'Who<sub>i</sub> did he say saw his<sub>i/\*j/k</sub> brother?'

They can have two or more antecedents in the same sentence, but still have a reference outside, which supports their coreference reading:

22) o hollu-noo-m Muusaa kotoo maako.  
he show-PAST-PERF Muusaa brother his  
'He<sub>i</sub> showed Muusaa<sub>j</sub> his<sub>i/j/k</sub> brother'

23) o wii ko Aali hollu-noo Muusaa kotoo maako.  
he say it's Aali show-PAST.PERF Muusaa brother his  
'He<sub>i</sub> said that Aali<sub>j</sub> who showed Muusaa<sub>k</sub> his<sub>i/j/k/l</sub> brother'

The examples (17)-(20) show that *mo*-pronoun have a coreference reading, but they cannot have a bound variable reading.

#### 4. Reflexivity in Pulaar

Pulaar has inherent reflexives like Italian as pointed out by Giorgi (2007). However, reflexives anaphors consist of the complex DP 'X's head' in which the possessive 'X's' is expressed by either a *mo*-pronoun or a *dum*-pronoun.

##### 4.1 Inherent Reflexives in Pulaar

The verb in Pulaar can be active, middle or passives. Middle verbs have a reflexive interpretation, as the example below shows:

- |  |         |
|--|---------|
| 24) a. loot-go<br>wash-INF.<br>'to wash'               | Active  |
| b. loot-aa-go<br>wash-MIDDLE-INF.<br>'to wash oneself' | Middle  |
| c. loot-ee -go<br>wash-PASS-INF.<br>'to be washed'     | Passive |



#### 4. 2 Pure Reflexives in Pulaar

Pure reflexives in Pulaar are encoded by a DP in the form of ‘X’s head’ headed by a possessive that can be either a *mo*-pronoun or a *dum*-pronoun. This reflexive DP does not, however, co-occur with the middle morpheme or the reflexive suffix:

- 30) a. Aali femb-it-ii-m  
       Aali shave-REFL-MID-PERF  
       ‘Aali shaved himself’  
       b. Aali fembu-m [hoore **maako**]  
       Aali shave-PERF head his  
       ‘Aali shaved himself’

The DP [*hoore maako*] ‘his head’ behaves as an anaphor subject to principle A and encodes reflexivity. In (26b), the possessive pronoun heading the reflexive DP is a *mo*-pronoun. But it could be a *dum*-pronoun as well, as the following example shows:

- 31) Aali fembu-m [hoore **mum**]  
       Aali shave-PERF head his  
       ‘Aali shaved himself’

However, as shown above, a *dum*-pronoun cannot have a *mo*-pronoun as antecedent:

- 32) O fembu-m [hoore maako/\*mum]  
       he shave-PERF head his  
       ‘He shaved himself’

The facts could be somehow summarized as in the table below:

Reference	<i>mo</i> -pronouns	<i>dum</i> -pronoun
Quantified DPs	-	✓
Wh-phase	-	✓
R-expressions	✓	✓
<i>mo</i> -pronouns	✓	-
Multiple DP-antecedents	✓	✓

Pulaar *mo* and *dum* pronouns are long-distance anaphors that behave differently: *dum* pronouns appear to be bound variables while *mo* pronouns are not bound and allow only coreferential reading.



Only *dum* pronouns can have quantified DPs and *Wh*-phrases as antecedents. Both *mo* and *dum* can have multiple possible antecedents within the same construction. But only *mo* can refer to an unstated antecedent.

Reflexive DPs can contain both series of pronouns, but they are bound locally and never long-distance.

## 5. Characterization of Pronominal Reference in Pulaar

It appears through the data that *mo*-pronouns and *dum*-pronouns are somewhat contrastive in their behavior. Potsdam (1995) characterizes the *mo*-series as [+independent reference] and the *dum*-series as [- independent reference]. In other words, *dum*-pronouns are anaphoric while *mo*-pronouns are not. In a way, the structural properties of the pronouns that I have laid out in this paper fit in that characterization. But Potsdam has not explained why the neuter pronouns do not refer to *mo*-pronouns.

### 5.1 Hypothesis

I want to argue, however, for a slightly different hypothesis:

- 33) a. Pronominal reference in Pulaar is based on specificity, on a specificity scale of [+specific], [specific], [- specific].
  - b. *mo*-pronouns refer to [+specific] and [specific], but not to [-specific]
  - c. *dum*-pronouns refer to [specific] and [-specific], but not to [+specific]

Similar to accounts on specificity found in Enç (1991), I hold [+specific] to refer to *mo*-pronouns in the sense that they pick up entities that have already been mentioned in the discourse. [specific] refers to DPs, R-expressions which refer to some clear entity that is salient in the context of discourse or at least presupposed to be so by the speaker. [-specific] refers to quantified DPs and *Wh*-phrases which refer to less clear entities in the sense that quantified DPs refer to wide range of entities while *Wh*-phrases refer to unspecified entities.

What the hypothesis outlined above clearly means is that:

*Mo*-pronouns will refer to: other *mo*-pronouns (*o*, *deeko*, etc.) and R-expressions (*Aali*, *gorko mo*, etc.), but not to quantified DPs and *Wh*-phrases.

*dum*-pronouns will refer to R-expressions, quantified DPs and *Wh*-phrases, but not to *mo*-pronouns.

According to the hypothesis, both set of pronouns will refer to R-expressions.

## 5. 2 Hypothesis Testing

According to my hypothesis, only *mo*-pronouns refer to other *mo*-pronoun antecedents, as in the sentences below:

- 34) o yii-ma waaji **maako/\*mum**.  
he see-PERF friend his  
'He<sub>i</sub> saw his<sub>i/j</sub> friend'
- 35) o hollu-noo-moo-m kotoo maako/\*mum.  
he show-PAST-HIM-PERF brother his  
'He<sub>i</sub> showed him<sub>j</sub> his<sub>i/j</sub> brother'
- 36) o wii ko deeko hollu-noo mo kotoo maako/\*mum.  
he say it's him show-PAST.PERF him brother his  
'He<sub>k</sub> said that HE<sub>i</sub> showed him<sub>j</sub> his<sub>i/j/k</sub> brother'

The same is true of reflexives:

- 37) O fembu-m [hoore maako/\*mum]  
he shave-PERF head his  
'He shaved himself'

In (34)-(37), all possible antecedents are *mo*-pronouns. Thus, *dum*-pronouns are banned as referring to these antecedents. However, when the antecedent(s) is/are DPs (R-expressions) both *mo* and *dum* pronouns are potential coreferents, as the examples below show:

- 38) **Aali** noddu-m waaji maako/**mum**.  
Aali call-PERF friend his  
'Aali<sub>i</sub> called his<sub>i</sub> friend'
- 39) Aali hollu-noo-m Muusaa kotoo maako/mum.  
Aali show-PAST-PERF Muusaa brother his  
'Aali<sub>i</sub> showed Muusaa<sub>j</sub> his<sub>i/j</sub> brother'
- 40) Jibi wii ko Aali hollu-noo-m Muusaa kotoo maako/mum.  
Jibi say it's Aali show-PAST-PERF Muusaa brother his  
'Jibi<sub>i</sub> said that Aali<sub>j</sub> who showed Muusaa<sub>k</sub> his<sub>i/j/k</sub> brother'

Reflexives work the same way, as seen below:

- 41) Aali fembu-m [hoore maako/**mum**]  
Aali shave-PERF head his  
'Aali shaved himself'

In (38)-(40) both *mo* and *dum* pronoun can refer to all of the available antecedents, with difference being that *mo* can refer to some entity outside the sentence, unlike *dum*. In other words, *dum* is bound and *mo* is not.

Third prediction of the hypothesis is that only *dum*-pronouns can be antecedents to quantified DPs and *Wh*-phrases. The examples below provide evidence for that claim:

- 42) [kala mo won-aa] wiyanoom hudum/\*homo waawi naw-or jogorang.  
[every who be-NEG] tell-PASS-PAST-PERF he can-PERF take-INSTR weapon  
'Everyone<sub>i</sub> was told they<sub>i</sub> can carry a weapon with them'

- 43) Ho mo mbii-daa yid-i maa mum/\*maako?  
Q who say-PERF.you love-PERF mother his  
'Who<sub>i</sub> did you say loves his<sub>i</sub> mother?'

- 44) Aali wiy-aa hay gotto yii-ma kotoo \*maako/mum.  
aali say-NEG even one see-PERF brother his  
'Aali<sub>i</sub> did not say that anyone<sub>j</sub> saw his<sub>i/j</sub> brother'

- 45) Ho mo Aali wii yii kotoo \*maako/mum?  
Q who Aali say see.PERF brother his  
'Who<sub>i</sub> did Aali<sub>j</sub> say saw his<sub>i/j</sub> brother?'

Here too, reflexives confirm the prediction:

- 46) Ho mo fembu-m [hoore \*maako/**mum**]  
Q who shave-PERF head his  
'Who shaved himself'

In these examples, only *dum*-pronoun is an appropriate coreferent. In (44) and (45) though, *mo* can refer to Aali but not to the quantified DP or the *Wh*-phrase, thus, confirming the prediction made by the hypothesis.

## **Conclusion**

Pronominal reference in Pulaar offers two paradigms: *mo*-pronouns and *dum*-pronouns. *dum*-pronouns are anaphoric while *mo*-pronouns are not.

Another way to characterize these pronouns is that *mo*-pronouns refer to more specific (transparent) antecedents like other *mo*-pronouns while *dum*-pronouns refer to less specific (non-transparent) antecedents like quantified DPs and Wh-phrases.

However, both pronoun types can refer to antecedents that are just specific like R-expressions.

## References

- Culy, Christopher. 1993. Fula Pronouns and Agreement. ms., University of Iowa.
- Enç, Murvet. 1991. The semantics of specificity. *Linguistic Inquiry* 22: 1-55
- Giorgi, Alessandra. 2007. On the Nature of Long-Distance Anaphors. *Linguistic Inquiry*, Volume 38, Number 2, Spring 2007, pp. 321-342
- Potsdam, Eric. 1995. "The Long-Distance Anaphor in Fula." In Akinbiyi Akinlabi (ed.), *Theoretical Approaches to African Linguistics*, pp. 167-182. Trenton, NJ: Africa World Press, Inc
- Schwarz, Florian. 2009. Two Types of Definites in Natural Language. Ph.D. dissertation, UMass, Amherst.
- Sylla, Yero. 1979. Grammatical Relations in Fula Syntax. Ph.D. dissertation, University of California, Los Angeles.
- Sylla, Yero. 1982. *Grammaire Modeme de Pulaar*. Dakar: Les Nouvelles Editions Africaines.



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