

# On Person as a Model for Logophoricity\*

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Following a line of thought initiated by Kuno (1972), it has been suggested that the coconstrual of first person pronouns is a model for the coconstrual of a logophoric pronoun with its antecedent. This particular proposal has been extended to the forms of logophoricity that have been observed in some African languages (e.g., Ewe, as remarked in passing by Clements, 1975, and Amharic, as proposed by Schlenker, 2000).

In Ewe, for example, there is a special form of pronoun, *yè*, that is only used when the antecedent is a *logophoric antecedent*, that is, a speaker, believer or experiencer (and in some cases, in Ewe at least, also a hearer). The use of this pronoun insures reference to the matrix logophoric antecedent, as in (1) from Clements (1975:156).<sup>1</sup>

1) Ama gblɔ be yè-do nku nyɔnuvi hi dze yè gbɔ dyi

Ama say that yè set eye girl wh stay yè side on

"Ama said that *she* remembered the girl who stayed with *her*."

Nothing in the English translation of (1) insures that the pronouns *she* and *her* must refer to *Ama*, although either one of them, or both, or neither might be interpreted to refer to *Ama*.

The intuitive idea of Kuno's shifted person approach to logophoricity (SPAL, henceforth), is that the special logophoric form (*he-logo*) marks the shift in antecedent from the speaker to "John" in the idealized example (2c).

2a) *I* said *I* was smart.

b) *John* said, "*I* am smart".

c) *John* said that *he-logo* was smart.

Schlenker (2000) argues in support of the SPAL that in some languages, the morphologically first person subject of the complement clause can be translated as third person just in case it is anteceded by the logophoric subject. Schlenker suggests that the first person morphology is a residue of the shift from speaker to reported speaker reference. Amharic shows this pattern.

Example (3) is from Schlenker (2000:124).

3) john Jägna näNN yt-lall

John hero I-am says-3sg.m

"*John says he is a hero.*" or "John says I am a hero."

This sentence is ambiguous between a reading where the first person pronoun refers to the speaker of the utterance as opposed to a reading where the first person pronoun refers to the reported speaker, *Jáan*. While such examples may appear suggestive, the fact remains that logophoric pronouns are, by definition, morphologically marked, and in an overwhelming number of languages with logophoric pronouns, that marking is not first person. Suppose the first person form simply doubles as the logophoric pronoun in Navaho and Amharic, sensitive to the logophoric antecedent in place of a weak third person pronoun. In the absence of a theory of why the exception should be the rule, the SPAL does not fare better than other accounts for examples like (3), nor does it reveal why cases like Amharic should be exceptional (rather than the rule).

The central contention of this short paper is that the relation between a logophoric pronoun and its antecedent is one of variable-binding, and further that coconstruction of first person pronouns is *not necessarily* a variable-binding relation. As a result, the relationship between a logophoric pronoun and its antecedent should not be analyzed as shifted first person anaphora,

and thus any parallels between logophoricity and first person do not reside in the mechanism of variable binding.

Before I can make my case against the SPAL, it is necessary to clarify a few terms and distinguish some of the relevant relations, particularly with respect to what counts as an identity relation between nominals. When I do not want to presuppose the sort of identity relation I am presenting, I will use the non-technical term "coconstrual", by which I mean some sort of identity relation or other between nominals. I mark coconstrual by italics, as I have in examples (1-3).

There are at least three different coconstrual relations that will be of particular importance for this discussion (for discussion of some of the others, see Safir, 2004a, 2004b).

One such relation is *independent coreference*. In a sentence such as, "*John is Bill*,"

independently identified discourse descriptions are asserted to have the same referent.

*Covariation* occurs when the same term consistently picks out the same referent, such that any use of that term will reliably pick out the same referent. The first person pronoun reliably achieves this effect, even across sentences, if the speaker does not change, as in (4), for example

4) *I watch TV. I go to bed. I sleep well.*

A third relation is dependent covariation, or, as I will call it, *dependent identity*, as in cases of bound variable interpretation. Bound variable interpretation is possible (not required) in examples like (5), insofar the value of *he* depends on the variable determined by *each player*. For example, if the players are *x*, *y*, and *z*, then *x* says that *x* is smart, *y* says that *y* is smart, and *z* says that *z* is smart, but, but bound reading does not assert any mixed variable readings, e.g., that *x* thinks that *y* is smart. In other words, the identity of the subject of the subordinate clause

depends on the identity of the matrix clause under the bound variable reading.<sup>2</sup>

5) *Each player says he is smart.*

Using this typology of coconstruals (which I expand further below), we can now consider what sort of coconstrual first person is. Now it is a simple fact about first person coconstrual that every mention of a first person pronoun refers to the utterer of the pronoun (setting aside direct quotation, which is a special case). By comparison, third person makes no commitment as to the identity of any antecedent it might have, unless it has additional marking as in the case of reflexives (and logophors, as discussed below). Thus (7a) is ambiguous (the second *he* does not have to be coconstrued with the first) in a way that (6a,b) and (7b) are not.

6a) *I believe I am smart.*

b) *I criticize myself.*

7a) *He believes he/he is smart.*

b) *He criticizes himself.*

At minimum, the first person relation is one of covariation, and the reflexive relation is one of dependent identity - (6b) illustrates both relations. Is it the case, however, that non-reflexive first person picks out the utterer with each mention "fresh", as in the case of independent coreference, or is it the case that subsequent mentions of the first person by the utterer all depend on the first mention by that utterer? It is possible to distinguish such cases.

Consider the hypothetical in (8) (a sort of example first introduced by Lakoff, 1968).

8) *If I were you, I would be happy.*

Examples like (8) permit an interpretation where the speaker imagines what it would be like to have the consciousness (or physical instantiation) of the addressee, and asserts that he, the

speaker, would be happy to be the addressee. I will call this sense of retaining one's own identity inside the shoes of another as a *guise* (see Safir, 2004a, for discussion) such that (8) asserts (on one of its readings) that the speaker would be happy in the guise of the addressee. With this reading in mind, consider (9).

9a) Speaker A: If *I* were *Bill* *I* would hate *me*.

Speaker B: I would too.

b) Speaker A: If *I* were *Bill* *I* would hate *myself*.

Speaker B: I would too.

Every mention of first person in (9) implicates a guise of the first person, yet the first person me in (9a) *does not depend* on the first person *I*. It is not a possible reading of (9a) that Speaker A is in a self-hate relation such that the Speaker A in the guise of the Bill hates the speaker in the guise of the Bill. Rather, if the subject of (9a) is interpreted as Speaker A in the guise of Bill, then *me* in (9a) requires a reading where the speaker is in his own guise. The ellipsis uttered by Speaker B makes this clear, as it can only mean that Speaker B in the guise of Bill would hate Speaker A. By contrast, Speaker A in (9b) is saying that he would indeed be a self-hater in the guise of Bill, and the ellipsis uttered by Speaker B is most easily interpreted to mean that Speaker B would be a self-hater in that circumstance too. That second reading is like a bound variable reading, such that substituting the second speaker in the position of the first requires the second variable (*myself*) to correspond in guise with the subject of the elided sentence. If (9b) is a dependent identity reading of the object on the subject, then it appears we must conclude that (9a), where the speaker is in a different guise, but is still the speaker, is not a dependent identity relation even though it is a coconstrual. To notate the dependent reading, I introduce

Higginbotham's (1983) dependency arrows, such that the anchor "/" designates what is depended on and the hook "-" indicates the dependent term. The relevant difference between (9a) and (9b) is illustrated in (10a,b), respectively, in that only (10b) marks a dependency relation of *myself* on the subject of *hate*.

10a) If *I* were *you*, *I* would hate *me*.

/)-

b) If *I* were *Bill*, *I* would hate *myself*.

/)-/)))))))-

Returning now to (6a) we predict that there are two possible ways in which the second *I* could covary with the first one, in that there could be a reading where the covariation is dependent identity or where the covariation is not dependent. This distinction is illustrated in (11a,b).

11a) If *I* were *anyone of you*, *I* would believe *I* was smart.

/)))))-

b) If *I* were *anyone of you*, *I* would believe *I* was smart.

/))))-/)))))))-

In (11a), all of the addressees have the same belief, the speaker in their place would share that belief, and the belief in question is that speaker is smart. If the speaker is not smart, then all of the addressees would be mistaken to believe that he was. The reading in (11b) is a bound variable reading for the subject of *was smart*: the addressees do not share a single belief about the speaker - rather they each have beliefs about themselves. The speaker in the place of any of the addressees will have a correct belief if that addressee has a correct belief about himself.

Whatever the guises are interpreted to be in (11a,b), it is clear that every mention of first person requires that the speaker of the utterance be evoked by either the consciousness inside the viewpoint or the viewpoint itself of both. This constancy of reference has always been taken to be the hallmark of first person reference, even across discourse, as long as the speaker of the utterances is the same, as illustrated in (12).

12) I walked out. I waited until my neighbor saw me. Then I punched him in the nose.

Since logophoric pronouns behave formally like third person pronouns in most languages (they agree, where agreement can be seen, with third person on verbs and in concord), it is useful to compare the effect of first person constancy of reference with third person reference. In (13) we see a comparison of first person with names and third person pronouns.

13a) I think that the invention of Viagra lets me improve my chance at happiness

b) Bob Dole thinks that the invention of Viagra lets Bob Dole improve Bob Dole's chance at happiness.

c) He thinks that the invention of Viagra lets him improve his wife's chance at happiness.

Bob Dole, former presidential candidate, later made commercials for Viagra and was also known for referring to himself in the third person, often by his full name. However, unless the hearer of (13b) knows otherwise, it is possible to assume there is more than one Bob Dole just as there is surely more than one John Smith. Such a discrepancy depending on real world knowledge does not arise for first person, which reliably picks out the speaker with every mention in (13a). The three third person pronouns in (13c) could refer to a total of three people, or to just two people, or to just one. Only knowledge of the world can determine which of these possibilities is the more likely reading in the context. Following Benveniste (1966), I shall take what is commonly

called "third person" to be "non-person", as opposed to first and second person, which both have an indexical quality. Compare (14a,b) as opposed to (14c), where context C is the context of utterance (see Nunberg, 1993:18).

14a) I like cashew nuts.

b) You like cashew nuts.

c) He likes cashew nuts.

Whenever (14a) or (14b) are uttered, it is asserted that someone in context C likes cashew nuts, but this is not necessarily the case for (14c), which is not tied to the context of utterance in the same way.

Reliable constancy of reference tied to conditions on the context of utterance is what I take to be the hallmark of person marking, as opposed to non-person marking. Dependent identity is not necessary to achieve coconstrual if person marking picks out the exact same referent every time, given constant conditions on the context of utterance. I draw the following conclusions.

15) **Person:** Person morphology identifies the referent of the nominal it marks with every mention - it preserves constancy of reference across a discourse span. No dependency or "referring back" is necessary, the referent is picked out freshly with each mention.

16) **First person:** 1st person morphology means that the nominal it marks refers to the utterer of the utterance in context c.

As stated in (16), the first person mechanism is a *constant function* (and is essentially a version of the proposal in Kaplan, 1989). If first person achieves reference by constant function, it is never necessary for one first person form to refer back to any other in order to reliably refer to

the utterer in the context of speech. Thus there is no necessary dependency of one first person mention on a previous one. Moreover, if the constant function approach embodied in (16) is the correct then there is no syntax regulating coconstrual for first person in a constant conversational context and no variable binding. Just because (16) does not require variable binding, however, nothing prevents a first person form from also being dependent on its antecedent, as in the reflexive cases noted above.

Now if variable binding were involved in first person reference, one would have to posit the presence of a first person operator that would have scope over all of context  $C$  (e.g., as in (12)), not only over particular syntactic structures in  $C$ , such as individual sentences. While it is certainly possible to posit operators that range over discourses that might contain many sentences, the question arises as to whether a notion of variable binding that strays so far from the usual syntactic limitations captures constancy of reference in the right way without ultimately reducing to a restatement of (16). Suppose we posit an operator "P1" which scopes over a discourse and such that every variable it binds will be assigned the constant value, "speaker of the utterance." Cases like (10) and (11), where different first person forms do not share complete identity with other first person forms in the sentence, could be posited to be semantically bound by different operators. Suppose there is an operator  $Q$  (the "in someone else's shoes" operator, to put it very informally) in the scope of the supposed person operators  $P1$  and  $P2$  and that  $Q$  binds the variable  $y$  jointly with  $P2$ . Assume  $P1$  also binds  $w$ , which is not bound by  $Q$  (or  $P2$ ). Now since  $z$  and  $x$  are both first person, they are bound by  $P1$  as well. The difference between (10a) and (10b) resides in whether or not  $Q$  binds  $x$ . Imagine (10a) and (10b) represented in this way, as in (17a,b) respectively (where italics indicated binding by  $P1$  and

bolding indicates binding by Q, underlining represents binding by P2, and "P1,P2" means that the person operators share the same scope).<sup>3</sup>

17a) If *I* were *you*, *I* would hate *me*.

P1, P2[ Q[ If *w* were **y**, *z* would hate *x*]]

b) If *I* were *Bill* *I* would hate *myself*.

P1,P2[ Q[ If *w* were **y**, *z* would hate **x**]]

The notion that two quantifiers can bind the same variable is hardly a surprise, as it is typically the case for split antecedents in cases like (18).

18) *Each boy in the regiment* told **each girl back home** that *they* should spend the night together because *he* might never see **her** again.

In this scenario, every boy tries the same line on every girl. For our interest, the point is that the two quantifiers bind variables jointly and individually. It is similarly unsurprising that a quantifier Q1 can have another quantifier Q2 in its scope such that Q1 binds a variable within the scope of Q2 (which is already apparent for *they* in (18)).

19) *Every boy* told *his* mother that **some girl** would want *him* to marry **her**.

The *interleaving* of variables bound by separate quantifiers inside the scope of the lower one is just what we would expect for any scopal relation determined by c-command.

However, it is precisely the interleaving property that raises difficulty for a variable-based account of person coconstrual, especially as a model for logophoricity. First person reference is essentially unaffected, insofar as it picks out the speaker, no matter what syntactic context it is in. As mentioned earlier, even when the first person participates in a guise, either the consciousness or viewpoint of the guise must pick out the utterer in context C. In other words,

first person reference is always successful and unambiguous. This is not a requirement of the logophoric reading enforced by pronouns that morphologically mark logophoricity.

It is useful to be more precise about the nature of the argument against the variable-based account of first person by clarifying a bit what the formal relationship is between first person pronouns and the coconstrual that holds between them.<sup>4</sup> If first person pronouns are coconstrued because they are all bound by the same operator, then there must not be more than one operator per speaker or sentence, since the first person always has the same referent in this context. The variable-binding proposal as applied to logophoric contexts (in various forms by Chierchia, 1989, Baker, 1998 and by Schlenker, 2000) presumes that some sort of contextual or attitudinal operator is introduced by the verb that permits logophoricity.<sup>5</sup> This operator, located on the verb (Chierchia) or in the complement Spec CP (Baker) then binds the logophoric pronoun as a variable. I use Baker's proposal for presentational reasons.

20) [<sub>IP</sub> John [<sub>VP</sub> thinks [<sub>CP</sub> LOG<sub>x</sub> [<sub>IP</sub> x is smart]]]] (where value for LOG=John)

The variable-binding analysis of logophoricity may be right or wrong independently of SPAL, but Schlenker (2000: chapter 3) unites a variable-binding analysis of person with that of logophoricity by proposing that person is one of a set of coordinates of context expressed as a contextual operator. The contextual operator has coordinates for speaker, time and world (and addressee in some languages), each with values that are set in the given context. If one of these coordinates binds a variable, then the operator is not vacuous, but all that matters for our purposes is that the person operator binds first person in a matrix clause. The difference in logophoric context, according to Schlenker, is that the value for the speaker coordinate is the subject of the propositional attitude, i.e., the reported speaker/believer/experiencer.

21a)  $\langle Px, Ty, Wz \rangle$  [<sub>IP</sub> x [<sub>VP</sub> think [<sub>IP</sub> x is smart]]]

b) [<sub>IP</sub> x [<sub>VP</sub> think [<sub>CP</sub>  $\langle Px, Ty, Wz \rangle$  [<sub>IP</sub> x is smart]]]]]

A logophoric pronoun is one that shows a morphological effect from being bound by the speaker coordinate of the logophoric operator, as in (21b). This means that first person pronouns are those that show the morphological effect (in languages like English) of being bound by the matrix operator *and no other*.

It is notable, however, that Schlenker does not offer any justification for treating person as a bound variable - in fact the proposal forces him to introduce some odd formal stipulations into his system.. Schlenker notes that first person pronouns can be bound variables sometimes (e.g., "*Only I* think that *I* am smart," permits either the inference that no one else thinks "I" am smart, or that no one else considers her/himself smart.), and of course this is true, as shown earlier. He then follows Heim (1991) in suggesting that since first person *can* be a bound variable suppose it is *always* a bound variable. The reason for this leap is never stated, but clearly it is intended to set up person as a variable-binding model for logophoricity. In other words, logophoricity is really the formal model that is extended to person. Formally, Schlenker is forced to introduce a special first person feature as well as a special agreement relation, to assure that the first person pronouns are always in an agreement relation to the previous mention first person which in turn refers to the speaker of the utterance.

On just this basis, there is reason to doubt that the logophoric binding relation is a good model for the person relation. Yoruba is a language that marks the distinction between logophoric and non-logophoric pronouns such that singular third person pronouns are strong (*òun*) when logophoric, and weak (*ó*) when not focused, but (morphologically marked) first

person pronouns in Yoruba act just as they do in English. Thus in Yoruba a first person pronoun must be stipulated never to be bound by any operator but the highest speaker coordinate.

22) Olú so pé òun rí iyá mi

Olu say that he see mother me

"Olu said that he saw my mother."

The highest operator stipulation (HOS) crucially does not apply to morphologically logophoric pronouns in a sentence, as an argument based on interleaving variable-binding shows. Suppose A and B are antecedents for  $\alpha$  and  $\beta$ , respectively, but A is not B and thus  $\alpha$  is not  $\beta$ . (Examples like (19) are an example of this).

23) [<sub>XP</sub>...A...[<sub>YP</sub>...B...[<sub>ZP</sub>... $\alpha$ ... $\beta$ ...]]]

Suppose that both A and B are logophoric antecedents such that the speaker coordinate of the operator A controls has scope over YP and the speaker coordinate of the operator that B controls has scope over ZP. Thus both  $\alpha$  and  $\beta$  are in the scope of (the operator controlled by) A. If, by virtue of their morphology,  $\alpha$  and  $\beta$  are logophoric, they must, as in the case of first person, be bound by a single operator. One possibility is A, because it has the widest scope. The introduction of another logophoric antecedent B should either not matter, or else B should bind both  $\alpha$  and  $\beta$  by some notion of minimality. What is not expected is that  $\alpha$  and  $\beta$  could be bound, one by A and one by B, if the first person HOS also holds of logophoric pronouns. However, exactly this possibility is manifested in Yoruba, as illustrated in (24).

24) Olú rò pé Ade so pé òun rí iyá òun

Olu think that Ade say that he see mother his

"Olu thinks that Ade said that he saw his mother"

The strong pronouns must refer to either Olu or Ade - both can refer to Olu or both to Ade, or either one can refer to Olu while the other refers to Ade. If logophoric coconstrual is indeed achieved by variable binding, this result is not surprising, and so this is no reason to abandon the variable-binding approach to logophoricity.

However, the fact that HOS must be stipulated for the supposed variable-binding of first person, while it must not be so stipulated for logophoricity, is a contrast that follows directly from the constant function approach to first person. Constant functions pick the same referent freshly every time, not reaching or referring back to previous mention - hence the scope of intervening operators is expected to be irrelevant to the success of their referential function. This point extends to certain contexts of connected discourse presented from a reported speaker's point of view. The Yoruba example (25) is from Adésolá (2001) (see Clements (1975:170-171) for an Ewe example).

25) Olú so pé ó ki bàbá òun nítorí pé bàbá òun fún un

Olu say that he(w) greet father his(s) because that father he(s) gave him(w)

ní owó. Ó tún yin bàbá òun fún isé tí bàbá òun se fún un

money he(w) also praise father his(s) for work that father his(s) do for him(w)

"**Olu** said that *he* greeted **his** father because **his** father gave *him* some money.

*He* also praised **his** father for a job well done (for *him*)

In Yoruba (25), bolded third person references in the translation correspond to strong pronouns in the reported discourse and all of them are Olu. The second sentence continues the report of what Olu said. The weak pronouns (underlined) are third persons who are not Olu, and need not be coconstrued with each other. These cases suggest that the attitudinal operator introduced by

"say" in the first sentence has scope over the second sentence. One way to instantiate this proposal, yet to still limit bound-variable syntax to sentential grammar, is to assume that a matrix attitudinal operator resides in the matrix SPEC-CP of the second sentence, and that the value of the viewpoint can be determined across discourse; sentence internally, however, the relation is syntactic. Alternatively, the logophoric operator would have to have scope over a discourse rather than a sentence.

Whether we adopt the discourse scope proposal or the sentence internal one, we still need to account for the fact that first person reference still picks out the speaker of the utterance, not the reported speaker, even in these reported speech contexts.

26) Olú so pé mo kí bàbá òun nítorí pé bàbá òun fún mi ní owó.

Olu say that I greet father his because that father his give me ? money

Mo sì yin bàbá òun fún isé tí bàbá òun se fún mi

I also praise father his for work that father his do for me.

"**Olu** said that *I* greeted **his** father because **his** father gave *me* some money.

*I* also praised **his** father for a job well done (for *me*)."

For examples such as these, the notion "highest operator" cannot make sense without appealing to a theory of discourse scope hierarchies for person, hierarchies required only by examples like these. A syntactic theory would have to say that the first person operator is always stipulated to be the widest in a sentence even if there is a matrix logophoric operator. The constant function theory need say nothing new about such cases.

It appears that the SPAL is the only motivation for assuming bound-variable analyses for first person coconstrual, so as to draw a parallel with logophoric pronouns, on the assumption

that the relation between a logophoric antecedent is (mediated by) a bound variable relation. Of course it is always possible to construct a bound variable analysis for first person that does not respect sentence grammar and that presides over the same context in which the constant function produces a constant result (i.e., as long as the same individual is speaking). Differences between such a liberalized notion of the bound variable relation and the constant function analysis are then harder to establish. Although I believe there is evidence to distinguish the latter two theories and that there are notable advantages for the constant function approach, I must leave such a demonstration for future work.<sup>6</sup>

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### Notes

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1. The literature on logophoricity in African languages is now extensive, but I shall limit myself here to discussion of Ewe and Yoruba examples. For a richer set of references, see Safir (in preparation).

2. Although it is not crucial for my discussion, I take most third person pronouns to depend on their antecedents, even if their antecedents don't command or are extrasentential, as in sloppy identity cases: *John* loves *his* mother, but **Bill** doesn't [love **his** mother]. The notion that a pronoun might be dependent on a nominal in a preceding sentence is generally permitted in the approach I advocate in Safir (2004a,b), although I also assume that bound-variable relations

must be within the scope of the relevant operator, as is standard.

3. In the approach of Schlenker (2000) discussed below, P1 and P2 are coordinates within the same operator.

4. Another supposed parallel between logophoric and first person is that logophoric readings are obligatory *de se*. Although I originally found the proposal attractive, there are some peculiarities of Yoruba that suggest that neither first person nor logophoric pronouns are thoroughly *de se*, though the data is very tricky. Schlenker does not necessarily assume that first person is always *de se* as a result of variable binding, and not all variable binding by a logophoric antecedent is *de se*, so I have avoided the issue here, though I expect to return to it in future work.

5. Logophoric verbs include verbs of saying, believing or experiencing, with exceptions and extensions that show some crosslinguistic variation.

6. I expect to address the issues discussed here in a longer format (Safir, in preparation) that includes a discussion of the interaction of person and definiteness marking in Hungarian and a discussion of the phenomenon of proximate marking (first reported for the Algonquian languages).