

Obligatory nonlocal binding

An exclusively long distance anaphor in Yag Dii

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Abstract Grammatical dependencies, including anaphoric binding relations, are generally assumed not to ignore local relations and refer only to nonlocal relations. Yag Dii (Niger-Congo/Adamawa-Ubangi, Cameroon) provides counterevidence to this otherwise well established generalisation. Yag Dii has a complicated pronominal system, originally described by Bohnhoff (1986, 2010), with pronominal forms whose distribution is determined by the nature of their antecedent, their grammatical function, and the type of clause in which they may appear. One set of forms exhibits an otherwise unattested form of nonlocality: the pronominal form and its antecedent must be separated by at least one clause, and the presence or absence of coreferent phrases in the intervening clause does not affect its appearance or distribution. The relation between this exclusively long-distance pronominal form and its antecedent seems to violate otherwise well-established locality conditions for anaphoric relations and, indeed, for grammatical dependencies more generally. We provide an analysis of binding in Yag Dii which captures the binding requirements for the exclusively long-distance form in a locally constrained manner by reference to an independently motivated feature demarcating the domain in which the exclusively long-distance pronominal must appear.

Keywords Binding, anaphora, locality, Lexical Functional Grammar

1 Locality in grammar

It is generally assumed that languages do not have grammatical dependencies that are exclusively nonlocal – there are no grammatical dependencies that operate at a minimum distance of two clauses away, for example (Fitzpatrick 2002, Sag 2010, among many others). In the context of anaphoric binding patterns, this assumption amounts to the claim that pronouns never ignore their local context. This is the *subset principle* of Manzini and Wexler (1987) for anaphoric binding domains, which states

that larger binding domains always properly contain smaller ones, and the *Locality Condition* of Dalrymple (1993), stated as: “binding constraints ... always refer to local elements, never exclusively to nonlocal ones”. Reference to local elements in binding may take one of several forms: an anaphor may require, allow, or disallow a binder in the local context. In all of these cases, the local context is relevant for binding conditions, in that the antecedent of an anaphor must, may, or may not appear locally.

Binding patterns in Yag Dii¹ (Bohnhoff, 1986, 2010) seem to run counter to these standardly accepted generalisations. The Yag Dii pronominal system contains four types of pronouns with different distributions depending on the binding requirements they must obey and the type of clause in which they must appear. The set of pronouns that Bohnhoff refers to as *ìì* appear as subjects of certain subordinate clauses; *ìì* pronouns cannot be used deictically, and a discourse antecedent is not acceptable. However, the antecedent of *ìì* must be the subject of a clause that is at least two clauses distant. Abstracting away from linear order, the general configuration is as in (1):

- (1) $S_1[\text{antecedent of } \dot{\text{ì}} \dots S_2[\dots S_3[\dot{\text{ì}} \dots] \dots]]$

S3, the clause whose subject is an *ìì* pronoun, may be a complement clause, an adjunct clause, a relative clause, or more deeply embedded within S2. The clause labelled S2 is a grammaticised logophoric domain, which may be either a typical logophoric domain such as the complement of a verb such as ‘say’, or a subordinate clause which does not typically constitute a logophoric domain, such as a subordinate purpose clause or a causal adjunct (Bohnhoff, 1986, 2010). The *ìì* pronoun must be bound by the subject of S1.

The *ìì* pronouns are interesting from the point of view of locality conditions because the subject of S2 may be, but need not be, coreferential with *ìì*. It is not the presence or absence of a suitable binder in S2 that is required by *ìì*, but the presence of a suitable binder as the subject of S1. In other words, the *ìì* pronoun ignores the S2 context, and is sensitive only to the presence of a potential binder in S1. This sets the Yag Dii *ìì* pronouns apart from more familiar long-distance anaphors whose distribution is affected by the presence or absence of a potential binder in S2.

In example (2) the *ìì* pronoun appears as the subject of a relative clause S3 (*in which he.ìì will eat the Easter meal*) which is contained within the complement clause S2 (*where is the house* $S_2[\text{in which he.}\dot{\text{ì}}_i \text{ will eat the Easter meal with his}_i \text{ disciples?}]$). The antecedent of *ìì* is ‘teacher_i’, the subject of the main clause S1, and a discourse antecedent *j* is not acceptable:²

¹ Bohnhoff (1986, 2010) describes the Western (mam be’) dialect, centered around Mbé, Cameroon.

² Glossing conventions for Yag Dii examples follow Bohnhoff (1986, 2010):

CM	clause-final particle	DEM	demonstrative
DU	dual	FUT	future
NEG	negation	PERF	perfective
PL	plural	Q	question marker
SG	singular		

DECL is used for declarative. Glosses for examples in other languages follow the source.

- (2) s_1 [Àkàw $\emptyset$ ò s_2 [lig s_3 [bà ìì lá hẹn lálí páskà kan
 Teacher_i (he_i) say house that **he**.ìì_{i,*j} eat thing eating Easter with
 waa duulí bìì vù wulí máa] bà ò tɛ́lá?]]”
 child following his_i PL there when, that.it is.there where?”
 ‘ s_1 [The teacher_i asks, s_2 [where is the house s_3 [in which **he**.ìì_{i,*j} will eat the
 Easter meal with his_i disciples?]]]’ (L. Bohnhoff, p.c., translation of Luke 22:11)

An abbreviated functional structure (Bresnan, 2001; Dalrymple, 2001) shows the grammatical structure of example (2) and the relation of the ìì pronoun to its antecedent, ‘teacher’, with the matrix clause labelled S1, the grammaticised logophoric domain S2, and the clause S3 whose subject is the ìì pronoun:

- (3)
- $$S1: \left[\begin{array}{cc} \text{PRED} & \text{ask} \\ \text{SUBJ} & \text{teacher}_i \\ \text{COMP} & S2: \left[\begin{array}{cc} \text{PRED} & \text{be.where} \\ \text{SUBJ} & S3: \left[\begin{array}{cc} \text{PRED} & \text{eat} \\ \text{SUBJ} & \dot{\text{I}}_i \\ \text{OBJ} & \text{meal} \end{array} \right] \end{array} \right] \end{array} \right]$$

The clause containing the ìì pronoun may also appear more deeply embedded within S2, as in example (4), where ìì is separated from its antecedent by two clause boundaries. In example (4), ìì is the subject of the relative clause S3, *that he.ìì created and hid*. This relative clause modifies the object *things* of the subordinate purpose clause (*so that*) *they know the things* s_3 [*that he.ìì created and hid*]. This subordinate clause modifies the S2 clause *that I should teach everyone (so that) [they know the things* s_3 [*that he.ìì created and hid*]], which is the complement of the matrix verb *say*, whose subject ‘God’ is the antecedent of the ìì pronoun.

- (4) s_1 [Tayii $\emptyset$ ò s_2 [bà àn tú’ud nán ’wààpád [ùù gàà hẹn s_3 [bà
 God_i (he_i) say that I teach person all they know thing that
kii mbóg yúg yè]]] nɔ].
he.ìì create hide DEM CM
 ‘ s_1 [God_i said s_2 [that I should teach everyone [so they know the things s_3 [that
he.ìì_i created and hid...]]]’ (L. Bohnhoff, p.c., translation of Ephesians 3:9)

The structure of example (4) and the relation of ìì to its antecedent is shown in (5):

(6) *Akàw Ø hɔ̃ lig [bà **ii** lá hɛn lálí páskà kan waa duulí
Teacher_i (he_i) see house that **he**.ìì eat thing eating Easter with child following
bii vu wulí máa].
his_i PL there when
(‘The teacher_i saw the house [in which **he**.ìì will eat the Easter meal with his_i
disciples].’) (L. Bohnhoff, p.c.)

(7) a. *V_u hǐǐ ['ìì làà kaalí].
 they.MÍ want **they**.ìì go town.to
 ('They want to go to town.') (L. Bohnhoff, p.c.)
 b. V_u hǐǐ [**bi** làà kaalí].
 they.MÍ_i want **they**.BI_i go town.to
 'They want to go to town.' (corrected version of Bohnhoff, 1986, 113)

In example (8) the *ì* pronoun appears as the subject of an adjunct clause S3 (*he.ì doesn't leave*) which is contained within a complement clause S2 (*even if he.ì_i doesn't leave, I'll see Moses's thing*). The antecedent of *ì* is 'Papa', the subject of the main clause S1:

- (8) s_1 [Bà'á $\emptyset$ gàà s_2 [s_3 [kóó **ìì** lúu ní s̀'] bà mín hò hẹn
 Papa_i, (he_i) knows time **he.ìì_i** leave NEG even, that I see thing
 Múúsà wòò]].
 Moses his
 's₁[Papa_i knows that s_2 [s_3 [even if **he.ìì_i** doesn't leave], I'll see Moses's thing]].'
 (L. Bohnhoff, p.c.)

The abbreviated functional structure in (9) shows the grammatical structure of example (8) and the relation of the **ìì** pronoun to its antecedent, 'Papa':

- (9)
$$S1: \left[\begin{array}{cc} \text{PRED} & \text{know} \\ \text{SUBJ} & \text{Papa}_i \\ \text{COMP} & S2: \left[\begin{array}{cc} \text{PRED} & \text{see} \\ \text{SUBJ} & I \\ \text{OBJ} & M's \text{ thing} \\ \text{ADJ} & \left\{ S3: \left[\begin{array}{cc} \text{PRED} & \text{leave} \\ \text{SUBJ} & \dot{ì}_i \end{array} \right] \right\} \end{array} \right] \end{array} \right]$$

In example (8), there is no potential binder of **ìì** in S2. In contrast, the subject of S2 is coreferential with the **ìì** pronoun in the structurally similar and equally acceptable example in (10). The syntactic structure for example (10) is shown in (11).

- (10) s_1 [Bà'á $\emptyset$ gàà s_2 [s_3 [sèỵ **ìì** làa téé] bà bín hò hẹn Múúsà
 Papa_i, (he_i) knows time **he.ìì_i** goes when, that he_i see thing Moses
 wòò]].
 his
 'Papa_i knows that [[when **he.ìì_i** goes], he_i'll see Moses's thing]].'
 (L. Bohnhoff, p.c.)

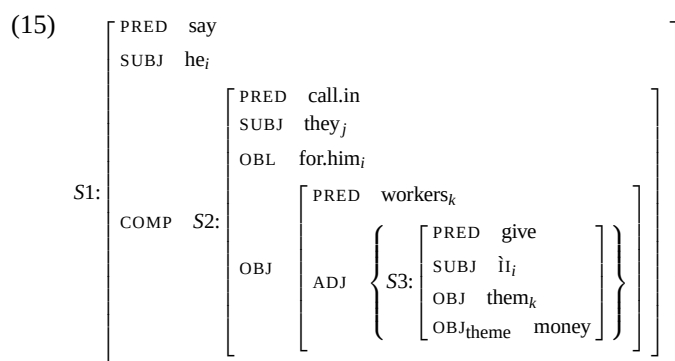
- (11)
$$S1: \left[\begin{array}{cc} \text{PRED} & \text{know} \\ \text{SUBJ} & \text{Papa}_i \\ \text{COMP} & S2: \left[\begin{array}{cc} \text{PRED} & \text{see} \\ \text{SUBJ} & \text{he}_i \\ \text{OBJ} & M's \text{ thing} \\ \text{ADJ} & \left\{ S3: \left[\begin{array}{cc} \text{PRED} & \text{go} \\ \text{SUBJ} & \dot{ì}_i \end{array} \right] \right\} \end{array} \right] \end{array} \right]$$

Besides example (8), examples where the subject of S2 does not corefer with the **ìì** pronoun appear in (2), (4), (12), (13), (14), (16), and (49d). The presence or absence of a coreferential element in S2 does not have an effect on the distribution of **ìì**: rather, **ìì** ignores the S2 context in fulfilling its binding conditions.

- In examples (8) and (10), the binder of the *li* pronoun is the subject that immediately precedes it, but in other examples this is not the case. In example (14), the *li* pronoun appears as the subject of a relative clause³ *S3 (that he.li_i gave (them) money)* within the complement clause *S2 (that they should call in the workers s₃[that he.li_i gave (them) money])*. Although the immediately preceding subject is the pronominal subject *they* of *S2*, the *li* pronominal subject of *S3* must be bound by the subject of the main clause *S1*, the unexpressed subject of *says*. The grammatical structure of example (14) is shown in (15).

- ³ The pronoun *vu* 'them' in the relative clause is a resumptive pronoun.

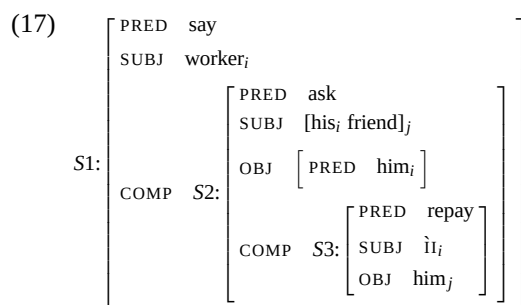
³ The pronoun *vu* 'them' in the relative clause is a resumptive pronoun.



A pronoun coreferential with the ì_i pronoun appears in S2 in example (14), but not in the similarly-structured example (2). As shown in (3), ì_i is the subject of the relative clause S3 (*in which he.ì_i will eat the Easter meal with his disciples*), which is embedded in the complement clause S2 (*where is the house s₃[in which he.ì_i will eat the Easter meal with his disciples]*).

In examples (2), (4), (8), (10), and (14), S3 is an adjunct clause: a concessive clause in examples (8) and (10), and a relative clause in examples (2), (4), (12), and (14). S3 may also be a complement clause within S2, as in (13) and (16):

- (16) _{S1}[Nán ba'ad Ø 'q̣ _{S2}[moo 'èñ dà bì tóó bà ka vì bì
 man work (he_i) say for what friend_j his_i other that he_j ask him_i
_{S3}[bà 'ii súúwɛ 'úlá]]]?
 that he.ì_i repay.him_j CM.Q
 'S₁[The worker_i asked S₂[why his_i friend_j asked him_i S₃[that he.ì_i repay the
 IOU]]].'
 (corrected version of Bohnhoff, 1986, 119)



Thus, the ì_i pronominal forms exemplify an exclusively nonlocal dependency: they must be bound by a subject at least two clauses distant. Their distribution is not affected by the presence or absence of potential binders in S2, by the relative linear order of the subjects of S1, S2, and S3, or by the argument/adjunct status of either S2 or S3.

It is well known that some reflexive pronouns can take nonlocal antecedents; an example is Chinese *ziji*, which can be bound by any commanding subject, whether local or nonlocal.⁴

- It pronouns resemble long-distance anaphors such as Chinese *ziji* in requiring a binder in the same sentence and allowing binding by a nonlocal antecedent. However, It pronouns differ from *ziji* in disregarding potential local antecedents, and requiring binding by a nonlocal antecedent.

Binding patterns for *ì* pronominal forms may appear similar to familiar patterns of switch reference, where clauses are marked to indicate coreference between arguments, often subjects, of two different clauses. Haiman and Munro (1983) provide example (19) from Pima (Uto-Aztecan), citing Langdon and Munro (1979) and personal communication from Etheleen Rosero. The morpheme glossed SS enforces coreference between the subject of *cry* and the subject of *hit*, while the DS morpheme indicates that the subjects of the two verbs are not coreferent:

- The Yag Dii ìì pronoun differs from switch reference in Pima, however, in that the ìì pronoun does not place any constraints on the reference of the subject of the imme-

⁴ This is a simplification; for detailed discussion of binding constraints for Chinese *ziji*, see Huang and Tang (1991) and references cited there.

diately higher clause. In contrast, switch-reference always operates locally: according to Haiman and Munro (1983, xiii), “there seem to be no languages... in which switch-reference is marked *exclusively* between non-adjacent clauses. Thus, if a language has switch-reference marking between non-adjacent clauses, it will also mark switch-reference between adjacent clauses.”

1.3 ÌÌ IS NOT OBVIATIVE

In some constructions in Spanish and other Romance languages, the pronominal subject of a subjunctive complement clause cannot corefer with the matrix subject (Quer, 2006); in the Romance literature, this is generally called “obviation”.

- (20) a. *Queremos que ganemos.
 want.1PL that win.SUB.PRS.1PL
 (‘We want to win.’)
 b. Queremos que ganen.
 want.1PL that win.SUB.PRS.3PL
 ‘We want them to win.’ (Spanish; Quer, 2006, 662)

Analyses of Romance obviation constructions generally assume that the binding domain for the subordinate subject pronoun is extended to the matrix clause (but no further). Extending this analysis to ÌÌ pronouns would be incorrect in two respects: such an analysis incorrectly predicts that ÌÌ disallows a local binder, while in fact ÌÌ neither disallows nor requires a local binder; and the analysis provides no means of enforcing coreference with a more distant binder, as ÌÌ requires.

1.4 ÌÌ IS NOT A PRONOMINAL ANAPHOR

To ensure the presence of a nonlocal antecedent for ÌÌ, we might attempt to state the binding requirements for ÌÌ as a combination of a local noncoreference requirement (as we expect to find with pronominals) and a nonlocal coreference requirement (as we find with long-distance reflexives): that is, ÌÌ would be an overt pronominal anaphor, which must be locally free but bound in a larger domain, as originally suggested for the Malayalam pronoun *taan* by Mohanan (1981) or the Scandinavian pronoun *seg* by Hellan (1988) (see also Dalrymple 1993 and Kiparsky 2002). Mohanan (1981) provides examples (21a) and (21b) to show that *taan* must be bound, and example (21c) to show that the binder of *taan* may not be a coargument of the same predicate – that is, *taan* must be bound within the sentence in which it appears, but may not be locally bound:

- (21) a. *taan aanaye nulli.
self.NOM elephant.ACC pinched
'Self pinched the elephant.' (Malayalam; Mohanan, 1981, 13)
- b. [taan aanaye nulli ennə] kutti raajaawinoṇṇ mara n̄nu.
self.NOM elephant.ACC pinched that child king.DAT said
'The child_i told the king that self_i pinched the elephant.'
(Mohan, 1981, 17)
- c. *moohan taane aa-raaḥhik'k'unnu.
Mohan self.ACC worships
'Mohan_i worships himself_i.' (Mohan, 1981, 15)

Such an approach does not produce the right result for *ìi*, however. We cannot ensure that the antecedent of *ìi* appears at least two clauses removed by requiring *ìi* to be free in the S2 domain but bound in the entire sentence, since *ìi* can appear whether or not there is a potential binder in the S2 domain.

Refining the condition to disallow particular types of binders in S2 does not help. Yāg Dii has three types of pronouns (Mí, ÀÑ, and BÌ, to be described in Section 2) that are in principle potential binders for *ìi* in S2. Since *ìi* must appear in a grammaticised logophoric domain and must corefer with the logophoric antecedent, any potential pronominal binder for *ìi* within the logophoric domain must also be a logophoric pronoun. As we will show in Section 3, the Mí and ÀÑ series are antilogophoric, and cannot appear in the logophoric domain when coreferential with the logophoric antecedent. This leaves only BÌ as a potential binder for *ìi* in S2. In (10), repeated here, the subject of S2 is a BÌ-type pronoun, and there is no problem with coreference between the BÌ subject of S2 and the *ìi* subject of S3.

- (22) Bà'á Ø gàà s₂[s₃[sèy **ìi** làà téé] bà bín hò hèn Múúsà wòò].
Papa_i, (he_i) knows time **he**.*ìi* goes when, that he_i see thing Moses his
's₁[Papa_i knows that s₂[s₃[when **he**.*ìi* goes], **he**.BÌ_i'll see Moses's thing].'
(L. Bohnhoff, p.c.)

2 The Yāg Dii pronominal system

The pronominal system of Yāg Dii is exceptionally complex, with four main classes of pronominal forms morphologically realised as independent pronouns, pronominal affixes, and verbal auxiliaries formed on pronominal bases.⁵ *ìi* pronouns share some properties with ÀÑ pronouns, which usually appear as subjects of subordinate clauses, and also share some other properties with BÌ pronouns. Here we provide a description of the pronominal system of Yāg Dii, situating the *ìi* pronouns in the overall system and demonstrating important commonalities and differences among the four classes of pronominal forms.

⁵ We set aside a fifth class of 'hypothetical' verbal auxiliaries which are morphologically similar to the Mí verbal auxiliaries; see Bohnhoff (2010) for discussion of this class.

Following Bohnhoff (1986, 2010), we refer to the four main types as *Mí*, *ÀÑ*, *BI*, and *ÌÌ* forms, named after the first person forms of each series. Their distribution is roughly as in Table 1.⁶

Table 1 Distribution of *Mí*, *ÀÑ*, *BI*, and *ÌÌ* forms.

	acceptable in nonlogophoric domain, antilogophoric in logophoric domain	only in grammaticised logophoric domain with logophoric antecedent
subject	<i>Mí</i> in declarative main clauses, <i>ÀÑ</i> in imperative main clauses, <i>ÀÑ</i> in most subordinate clauses,	<i>BI</i> , <i>ÌÌ</i> in some subordinate clauses
nonsubject	<i>Mí</i>	<i>BI</i>

Logophoric vs nonlogophoric domain A major division in the pronominal system is between what Bohnhoff calls the ‘nonlogophoric’ *Mí/ÀÑ* sets and the ‘logophoric’ *BI/ÌÌ* sets. The *BI/ÌÌ* sets appear only in a grammaticised logophoric domain or *BI* domain, and cannot be used for deictic reference. The *BI* domain is triggered by five types of subordinate clauses, including typical logophoric domains such as indirect speech as well as domains not usually associated with logophoricity, such as purpose clauses: *BI* pronouns are found in indirect quotations, indirect orders, subordinate desiderative clauses, affirmative purpose clauses, and causal adjuncts introduced by *ka* or *bà* (see Section 4 for more discussion of the logophoric domain and grammaticised logophoricity in *Yɔ̀g Dii*). Note that the *BI* domain includes both complement clauses (indirect quotations, indirect orders) and adjunct clauses (subordinate desiderative clauses, affirmative purpose clauses, and certain kinds of causal adjuncts). *BI* pronouns appear only within the *BI* domain, and must corefer with the subject of the clause that contains the *BI* domain (the ‘logophoric antecedent’): Bohnhoff (1986, 2010) refers to this as the *reference condition* or *REF COND*. The *Mí/ÀÑ* forms may also appear in the *BI* domain, but may not corefer with the logophoric antecedent when they appear there.

Subject vs nonsubject pronoun forms *Mí* and *BI* pronominal forms can appear either as subjects or as nonsubjects. *ÀÑ* and *ÌÌ* forms appear only as subjects. Subject forms in all four types can encode future/nonfuture tense and declarative/imperative mood; they then appear in a fixed position after the full subject phrase and before the verb, in what Bohnhoff calls the *PN-ML-TE* (person-number-mood-logophoricity-tense-emphasis) position. Bohnhoff (1986, 2010) analyses these forms as tensed pronouns, noting that they are transparently related to the free pronoun sets in the case of the *Mí* and *BI* pronouns, and Nordlinger and Sadler (2004a,b) adopt the analysis of these

⁶ Bohnhoff (2010) uses the term “factive” for what we call “declarative” in the following. The term “factive” is commonly used in descriptions of West African languages for the unmarked form signaling past or perfect tense for nonstative clauses and present tense for stative clauses (Welmers, 1973), but Bohnhoff (2010) uses the term for both perfective and imperfective declarative clauses, distinguishing factative from imperative and hypothetical mood.

forms as tensed pronouns in their discussion of nominal tense. Nordlinger and Sadler observe that it can be difficult to distinguish tensed pronoun forms from verbal auxiliaries with pronominal agreement marking, and point out that an analysis of such forms as tensed pronouns is best motivated for languages in which the relevant forms bear case, appear in multiple positions within the clause, and/or bear a grammatical function other than subject. In Yag Dii, however, these forms cooccur with full pronominal and nonpronominal subject forms, always appear after the full subject phrase and before the verb, and do not bear case, suggesting that they are best analysed as verbal auxiliaries and not as tensed pronouns. Specifically, if we assume that clauses are best analysed as of category IP, these verbal auxiliary forms are of category I and head the IP phrase. In functional terms, the forms contribute tense and/or mood information at the clausal level as well as a pronominal subject with the binding properties appropriate to each type of pronoun.

A related issue is whether third person verbal auxiliaries must always be treated as contributing an incorporated third person pronoun; if they are, free pronominal and non-pronominal third person subjects must be treated as topics or appositions to such incorporated third person subject pronouns.⁷ This corresponds to the distinction between what Bresnan and Mchombo (1987) call *anaphoric agreement*, involving an anaphoric relation between a topic or appositional phrase and an incorporated pronominal subject, and *grammatical agreement*. In their exploration of grammatical vs. anaphoric agreement in Chicheŵa, Bresnan and Mchombo (1987) demonstrate convincingly that the Chicheŵa third person object agreement morpheme is best treated as an incorporated pronoun (anaphoric agreement), while the subject agreement morpheme is ambiguously used for grammatical and anaphoric agreement. Austin and Bresnan (1996) provide a thorough discussion of grammatical and anaphoric agreement from a crosslinguistic perspective, demonstrating the necessity of treating many agreement morphemes as ambiguous between grammatical and anaphoric agreement.

In fact, the treatment of third person forms as anaphoric or grammatical agreement in the presence of a full noun phrase subject does not affect the analysis of the binding patterns we examine here, since bound pronouns do not cooccur with an overt full subject phrase in the clause. Hence, for clarity and consistency with Bohnhoff's presentation of examples, we assume that all verbal auxiliaries contain incorporated subject pronouns which may show anaphoric agreement with other nominal phrases in the sentence. However, further research may reveal that the correct analysis of Yag Dii third person forms involves ambiguity between grammatical and anaphoric agreement (as in Chicheŵa), if evidence is found that full third person noun phrases behave as subjects and not appositions in Yag Dii.

3 Nonlogophoric pronouns

The nonlogophoric pronouns *Mí* and *Àŋ* are distinguished in terms of the syntactic environments in which they must appear: roughly, *Àŋ* pronouns appear in imperatives

⁷ Thanks to Lee Bohnhoff for extensive discussion of this issue, and for important observations about differences between grammatical and anaphoric agreement in first and second vs. third person forms.

Table 2 Mí and ẐẐ pronominal forms (Bohnhoff, 1986, 2010).

Mí and ẐẐ verbal auxiliaries:

	unmarked Mí	nonfuture Mí	future Mí	main clause unmarked ẐẐ	subordinate unmarked ẐẐ
1SG	-ń/mí	mín	mín	ẐẐ	
1INCL.DU	-a/ba	bañ	bán	ba	àa
2SG	-m/mó	món	món	Ẑm	
3SG	0		wún, sń, sí, ǵń	à	
1EXCL.PL	vó	vón	vón	òo	
1INCL.PL	ba...ví	bañ...ví	bán...ví	ba...ví	àa...ví
2PL	ví	vín	vín	ì	
3PL	vũ	vũñ	vũñ	ũũ	

Mí free pronoun and affix (non-auxiliary) forms:

	Mí emphatic, non-kinship poss	Mí obj	Mí final, emphatic	Mí kinship poss
1SG	míí	-n/mí	mí	-n
1INCL.DU	bàà	ba		bà
2SG	móó	-m/mó	mó	-m
3SG	wòò	-wũ	wũ	-gà
1EXCL.PL	vóó	vó		
1INCL.PL	bàà ví	ba ví		bà ví
2PL	víí	ví		
3PL	vòò	vũ		vũ/-y

and in most types of subordinate clauses, while Mí pronouns appear elsewhere, in non-imperative main clauses and in some types of subordinate clauses. They do not differ in binding requirements: neither Mí pronouns nor ẐẐ pronouns require a binder, and both are antilogophoric when appearing in the grammaticised logophoric domain.

A partial paradigm for the Mí and ẐẐ nonlogophoric pronominal forms is given in Table 2. The discontinuous 1INCL.PL forms (e.g. *ba...ví*) can be interrupted by the verbal complex (the verb or series of serial verbs and any object pronouns). There are additional emphatic and possessive Mí forms not listed here, as well as portmanteau forms of the verbal auxiliaries incorporating a complementizer; see Bohnhoff (1986, 2010) for the full paradigms. There are no nonsubject ẐẐ forms. For present purposes, it is sufficient to distinguish the members of the Mí and ẐẐ series listed in Table 2, and in fact we will mainly be concerned with the four-way distinction in distribution involving the subject Mí, ẐẐ, BI, and ÌI forms.

In examples (23–26), the Mí subject, object, and possessive pronouns are used:

(23) Subject and object in independent declarative clause:

Mí hò **ví** 'ú.
I.Mí see **you.PL**.Mí CM

'I see you.'

(Bohnhoff, 1986, 110)

Table 3 Distribution of *Mí* and *À̀N* subject forms (Bohnhoff, 2010, 89).

	main clauses	subordinate clauses
<i>Mí</i> :	declarative	indirect quotation, comparison clauses, causal adjuncts introduced by <i>moo</i> , manner adjuncts, ‘until’ adjuncts
<i>À̀N</i> :	imperative	indirect order, relative clause, temporal/locative/conditional adjunct, desiderative clause, affirmative purpose clause, concessive clause, causal adjunct introduced by <i>ka</i> or <i>bà</i>

(24) Subject and possessor in independent declarative clause:

Mí hò lig **móó** sù’ú.
I.Mí see house **your.SG**.Mí already

‘I saw your house already.’

(Bohnhoff, 1986, 110)

(25) Subject of indirect quotation:

... bà **mó** làà kaalí.
that **you**.Mí go town.to

‘... that you go to town’

(Bohnhoff, 1986, 107)

In contrast, examples (26) and (27) require *À̀N* subject pronouns (there are no *À̀N* nonsubject pronouns).

(26) Imperative:

’**À̀m** làà kaalí!
you.À̀N go town.to

‘Go to town!’

(Bohnhoff, 2010, 98)

(27) Temporal/locative/conditional subordinate clause:

Tòw/sè’èy/ya ’**à̀m** làà kaalí téé...
if/when/where **you.À̀N** go town.to DEM

‘If/when/where you go to town...’

(Bohnhoff, 1986, 108)

Mí and *À̀N* subject forms appear in the environments listed in Table 3: *À̀N* pronouns are required as the subject of imperatives and many types of subordinate clauses, while *Mí* pronouns appear elsewhere. Beyond these tendencies, there does not seem to be any unifying synchronic generalization governing the environments in which either form appears; clauses requiring *À̀N* subjects must simply be marked as such in the synchronic grammar.

The set of clauses requiring *À̀N* subjects do not share properties of subordination, tense, mood, morphological marking, grammatical role, or binding relations involv-

ing the subject of the clause. First, the distinction between *Mí*-clauses and $\dot{\Lambda}\dot{N}$ -clauses cannot be defined in terms of subordination: though the $\dot{\Lambda}\dot{N}$ -clause is often a subordinate clause, the $\dot{\Lambda}\dot{N}$ form is required as the main clause subject in imperatives, as shown in example (26). Second, there are no special tense, mood, or morphological attributes which distinguish $\dot{\Lambda}\dot{N}$ from *Mí* clauses. Third, the *Mí*/ $\dot{\Lambda}\dot{N}$ distinction does not correspond to the argument/adjunct distinction: both *Mí* and $\dot{\Lambda}\dot{N}$ can be subjects of complement clauses (indirect quotations for *Mí*, indirect orders for $\dot{\Lambda}\dot{N}$) as well as adjunct clauses (for example, comparison clauses and manner adjuncts for *Mí*, relative clauses and causal adjuncts for $\dot{\Lambda}\dot{N}$).

Fourth, the choice between *Mí* and $\dot{\Lambda}\dot{N}$ forms does not depend on binding relations with other elements in the sentence. Both *Mí* and $\dot{\Lambda}\dot{N}$ are antilogophoric, and may not be bound by the logophoric antecedent within the logophoric domain. In nonlogophoric domains, $\dot{\Lambda}\dot{N}$ forms may appear with or without a binder in the same sentence, and with or without a binder in the immediately higher clause. In (28), the subject of the relative clause is an $\dot{\Lambda}\dot{N}$ pronoun, and there is no other phrase coreferent with it in the sentence:

- (28) *Mó nùj sí [béég [àu dō-m-mu-lí máa]] sú'ú.*
 You find DECL.PERF grave_i **they**. $\dot{\Lambda}\dot{N}$ bury-you-there_i-in DEM DECL.PERF
 'You've already found the grave where they will bury you.'
 (Bohnhoff, 2010, 284)

The grammatical structure of example (28) is shown in (29):

- (29)
$$\left[\begin{array}{ll} \text{PRED} & \text{find} \\ \text{SUBJ} & \text{you} \\ \text{OBJ} & \left[\begin{array}{ll} \text{PRED} & \text{grave} \\ \text{ADJ} & \left\{ \left[\begin{array}{ll} \text{PRED} & \text{bury} \\ \text{SUBJ} & \dot{\Lambda}\dot{N} \\ \text{OBJ} & \text{you} \end{array} \right] \right\} \end{array} \right] \end{array} \right]$$

In (30), the $\dot{\Lambda}\dot{N}$ form appears as the subject of an adjunct clause within the clausal complement of the main verb *say*. In this example, $\dot{\Lambda}\dot{N}$ does not have a binder in the immediately higher clause, though it is coreferent with an argument in the main clause:

- (30) *Nà'á Ø 'qd bà'á [[sè'èy bà 'à fíí ya babbí téé]*
 Mother_i (she_i) tells Father_j time that **he**. $\dot{\Lambda}\dot{N}$ _j returns comes field.from then]
bà bíí dōd dubbì].
 that she_i cook yam.CM
 'Mother_i tells Father_j that when he_j returns from the field, she_i will cook the yams.'
 (corrected version of Bohnhoff, 1986, 122)

Example (31) is structurally similar to (30), but the coreference relations are different. The $\dot{\Lambda}\dot{N}$ subject of the most embedded verb, *return*, corefers with the $\dot{\Lambda}\dot{N}$ subject of *cook* in the immediately higher clause as well as with a nonsubject in the main clause:

- (31) Nà'á Ø 'òd bà'á [[sè'èy bà 'à fíí ya babbí téé]
 Mother_i (she_i) tells Father_j time that **he**.ÀÑ_j returns comes field.from then]
 bà 'à dòò dabbí].
 that he.ÀÑ_j cook yam.CM
 'Mother_i tells Father_j that when he_j returns from the field, he_j should cook the
 yams.' (corrected version of Bohnhoff, 1986, 122)

The grammatical structure of examples (30) and (31) is shown in (32):

- (32)
$$\left[\begin{array}{l} \text{PRED} \text{ say} \\ \text{SUBJ} \text{ mother}_i \\ \text{OBJ} \text{ father}_j \\ \text{COMP} \left[\begin{array}{l} \text{PRED} \text{ cook} \\ \text{SUBJ} [(30) \text{BI}_i / (31) \text{ÀÑ}_j] \\ \text{OBJ} \text{ yams} \\ \text{ADJ} \left\{ \left[\begin{array}{l} \text{PRED} \text{ return} \\ \text{SUBJ} \text{ ÀÑ}_j \end{array} \right] \right\} \end{array} \right] \end{array} \right]$$

In examples (30) and (31), the ÀÑ pronoun precedes the subject of the immediately higher clause, and may but need not be bound by it. The same is true if the order is reversed: in examples (33) and (34), the ÀÑ pronoun follows the subject of the immediately higher clause, and coreference is allowed but not required. Coreference with the immediately higher subject obtains in example (33), in which the ÀÑ pronoun is the subject of a relative clause. In contrast, in example (34) the ÀÑ pronoun is the subject of a subordinate desiderative clause, and does not corefer with the subject of the main clause.

- (33) Bậậặặặặ Ø gàan [hẹn [à kón né]].
 Rabbit_i he.MÍ_i knows.NEG thing **he**.ÀÑ_i does.NEG CM.NEG
 'Rabbit doesn't know what to do.' (Bohnhoff, 2010, 285)
- (34) Nà'á Ø híí [bà'á à gbó bi sá].
 Mother_i she.MÍ_i want father_j **he**.ÀÑ_j hit her.BI_i not
 'Mother_i wants father_j not to hit her_i.' (Bohnhoff, 2010, 102)

Thus, ÀÑ can appear with no binder, or with a binder in the same sentence, which may but need not be in the immediately higher clause.

The MÍ/ÀÑ distinction might be thought of as similar to a specialised casemarking requirement for ÀÑ subjects of a certain class of clauses. This is reminiscent of the requirement for genitive subjects of nominalised subordinate clauses in some languages; Givón (2009) provides the following examples of this pattern from Ute (Numic, Uto-Aztecan):

(35) Finite main clause:

ta'wach yoghovuch-i pakha-qa-'u.
man.SUBJ coyote-OBJ kill-PERF-he/him

'The man killed the coyote.'

(36) Subordinate clause:

mamach pucucugwa-puga [ta'wach-i yoghovuch-i pakha-puga-na-y].
woman.SUBJ know-REM man-GEN coyote-OBJ kill-REM-NOM-OBJ

'The woman knew that the man (had) killed the coyote.'

(Ute; Givón, 2009, 89)

However, this explanation does not extend to Yąg Dii, since there is no morphological evidence that ȚȚ-clauses are nominalized, or that ȚȚ pronouns are genitive: the Yąg Dii possessive pronoun paradigm is distinct from the subject MÍ and ȚȚ paradigms, as shown in Table 2.

4 BI pronouns

According to what Bohnhoff (1986, 112) calls the *reference condition*, BI pronouns appear at any depth of embedding within a restricted set of subordinate clauses, the grammaticised logophoric domain or BI domain, labelled S2 in Section 1. Within the BI domain, BI pronouns must be bound by the 'logophoric antecedent', the grammatical subject of the clause immediately containing the BI domain; if noncoreference with the logophoric antecedent is intended, the corresponding MÍ or ȚȚ pronoun is used instead.

Table 4 presents the unmarked, nonfuture, and future forms of the logophoric BI series, and provides a comparison of nonlogophoric MÍ and logophoric BI non-auxiliary forms. The MÍ, ȚȚ, and BI pronouns can all appear as subjects in the BI domain, and MÍ and BI pronouns can appear as nonsubjects. See Bohnhoff (1986, 2010) for the complete paradigm for the BI series, including emphatic forms.

Within the BI domain S2, the BI pronoun is used when coreference with the logophoric antecedent is intended; when noncoreference is intended, the nonlogophoric MÍ or ȚȚ forms must be used. In (37), the BI domain is the subordinate clause *they go to town*, and the antecedent of BI is the subject of the matrix verb *want*:

(37) Vȥ hȥȥ [bi làà kaalȥ].
they.MÍ_i want **they**.BI_i go town.to

'They want to go to town.' (corrected version of Bohnhoff, 1986, 113)

In example (38), coreference between the matrix and complement subject is not intended, and the BI pronoun cannot be used. Since the subordinate clause is an indirect order, which is an ȚȚ-type clause, the ȚȚ pronoun is used:

Table 4 Mí and BI pronominal forms (Bohnhoff, 1986, 2010).

BI verbal auxiliaries:

	unmarked BI	nonfuture BI	future BI
1SG	bi	biñ	bín
1INCL.DU		bañ	bán
2SG		biñ	bín
3SG			vóñ
1EXCL.PL			bán...ví
1INCL.PL			bín
2PL			
3PL			

Mí and BI full pronoun and affix (non-auxiliary) forms:

	Mí emphatic, non-kinship poss	BI emphatic, non-kinship poss	Mí obj	BI obj	Mí kinship poss	BI kinship poss
1SG	míí		-n/mí		-n	
1INCL.DU	bàà		ba		bà	
2SG	móó	biì	-m/mó	bi	-m	bi
3SG	wóó		-wu		-gà	
1EXCL.PL	vóó		vó		vó	
1INCL.PL	bàà ví		ba ví		bà ví	
2PL	víí	víí/biì	ví	bi	ví	
3PL	vóó	vóó/biì	vu		vu/-y	bi/vu

- (38) Vu híí ['ùu làà kaalí].
 they.Mí_i want **they**.ÀÑ_{*i,j} go town.to
 ‘They want others to go to town.’

(Bohnhoff, 1986, 114)

Thus, in a BI domain, use of a nonlogophoric pronoun produces an antilogophoric effect: here, the ÀÑ pronoun may not corefer with the logophoric antecedent. The antilogophoric effect holds only within the BI domain, and only relative to the BI antecedent; the ÀÑ pronoun may in general be used in a subordinate clause to corefer with the immediately higher subject, as long as noncoference with the logophoric antecedent is maintained. The antilogophoric effect is shown in example (31), whose grammatical structure is shown in (32).

The BI domain is triggered by clauses of various types: indirect quotations, indirect orders, subordinate desiderative clauses, affirmative purpose clauses, and causal adjuncts introduced by *ka* or *bà*. Some of these are typical domains associated with logophoricity, but in fact a purely semantic or pragmatic characterisation of binding requirements for BI is not possible. Culy (1997) discusses the extension of logophoric marking from standard logophoric complements to adjuncts such as purpose clauses and causal clauses, and proposes that this is the result of grammaticisation of an original logophoric system (see also Hyman and Comrie 1981); this seems to be the case for Yag Dii. Thus, as with ÀÑ-clauses, the BI domain must be syntactically marked

as such, and cannot be defined in purely semantic terms. We discuss morphosyntactic commonalities in different types of BI domains below.

There are several pieces of evidence that Yag Dii exhibits grammaticised logophoricity, and that neither the BI domain nor the antecedent of BI can be defined in purely semantic terms. First, the antecedent of a true logophoric pronoun is the individual “whose speech, thoughts, feelings, or general state of consciousness are reported” (Clements 1975; see also Sells 1987): the antecedent is identified through semantic and pragmatic means, not syntactically. In Yag Dii, however, the antecedent of a BI pronoun must be a subject, and nonsubject antecedents are not permitted. This is also the case in other partially grammaticised logophoric systems, including Icelandic (Sells, 1987; Bresnan, 2001).

Second, Schlenker (2003) observes that “a logophoric element should not be allowed to denote the speaker of the actual speech act”, meaning that there should be no first person forms of true logophoric pronouns. As seen in Table 4, however, BI pronouns instantiate the full pronominal paradigm, including first person forms.

Third, typical logophoric domains encode reported speech, thought, or perception, but the BI domain includes additional types of subordinate clauses such as purpose clauses or causal constructions (see Culy, 1997, for discussion of similar patterns in other grammaticised logophoric systems). Indeed, not all causal constructions trigger a BI domain, but only those that are marked by particular complementizers: causal constructions introduced by *ka/bà* constitute a BI domain (example 42), while causal constructions with *moo*, as in example (39), do not:

(39) Cause with *moo*:

Vu yaa bi mà”q lùù ’ú, [moo vu ’q bà
 they.MÍ_i come, they.BI_i grab.him_j leave CM, because they.MÍ_i say that.he_j
 yəŋgè].
 crazy.CM

‘They_i came to take him_j away, because they_i said that he_j’s crazy.’
 (Bohnhoff, 1986, 115-116)

The MÍ pronoun is used as the subject of the subordinate clause *because they said that he’s crazy* because this is neither a BI domain nor a $\hat{A}\hat{N}$ -clause: only causal constructions with *ka/bà* allow BI or $\hat{A}\hat{N}$ pronouns, not causal constructions with *moo*.

There is an interesting overlap between the BI domain and clauses that require $\hat{A}\hat{N}$ subjects. As shown by the contrast between examples (37) and (38), certain clauses require $\hat{A}\hat{N}$ subjects and also constitute a BI domain: in subject position of such clauses, the BI pronoun is used for coreference with the matrix subject, while the antilogophoric properties of the $\hat{A}\hat{N}$ pronoun require noncoreference. The different clause types are summarized in Table 5.

Bohnhoff provides example (40) to show that the BI pronoun must be bound by the *closest* eligible binder. The verbs *say* and *tell* both introduce a BI domain, since their complements are indirect quotations. However, example (40) is not ambiguous;

Table 5 Inventory of clauses requiring $\dot{\Lambda}\dot{N}$ subjects and clauses constituting a BI domain

requires $\dot{\Lambda}\dot{N}$ subject, does not trigger BI domain:	temporal/locative/conditional clause, relative clause, concessive clause
requires $\dot{\Lambda}\dot{N}$ subject, triggers BI domain:	indirect order, purpose clause, subordinate desiderative, causal adjunct introduced by <i>ka</i> or <i>bà</i>
requires Mí subject, triggers BI domain:	indirect quotation

the antecedent of the BI pronoun must be Moses, the closest eligible BI antecedent, and not Mother:⁸

- (40) Nà'á Ø 'qđ bà'á [Múúsà bà Ø 'qđ [bà **biñ** híj láàlí
Mother_i (she_i) tells Father Moses_j that (he_j) says that **he**.BI_{j,*i} wants to.go
kaalí]].
town.to
'Mother_i tells Father that Moses_j says that *she_i/he_j wants to go to town.'
(Bohnhoff, 1986, 118)

In example (41), the first person feature of the closest logophoric antecedent does not match the third person feature of the BI pronoun, and the result is ungrammaticality:

- (41) *Nà'á Ø 'qđ bà'á [bà mí 'qđ [bà **biñ** híj láàlí kaalí]].
Mother_i (she_i) tells Father that I say that **she**.BI_i wants to.go town.to
'Mother_i tells Father that I say that she_i wants to go to town.'
(L. Bohnhoff, p.c.)

Unlike the $\dot{\Lambda}\dot{N}$ pronoun, whose appearance is restricted to subject position, the BI pronoun may appear as a subject, object, or possessor within the BI domain. In example (42), the object of the subordinate verb *refuses* is a BI pronoun whose antecedent is the subject of the matrix verb *attack*:

- (42) Yqđb vñ kó 'à'á [bà háj **bi**
ancestor.spirits_i they.Mí_i attack grandmother_j because.she_j refuses **them**.BI_i
nannè].
food
'Ancestor spirits_i, they_i attack grandmother_j because she_j refuses them_i food.'
(Bohnhoff, 1986, 115)

In example (43), both the subordinate subject and the possessor of the object are BI pronouns:

- (43) Vñ híj [**bi** mbàà kan yúú **bì** nu].
they.Mí_i want **they**.BI_i sit with head **their**.BI_i CM

⁸ Example (40) also shows that the clause containing the logophoric domain, S1 in Section 1, can itself be embedded.

‘They_i want to sit with their_i head.’ (= ‘They want to be independent.’)
(Bohnhoff, 1986, 116)

Morphosyntactically, the BI domain is usually marked either by the subordinator/complementiser *bà* or by the presence of a particular lexical predicate in the immediately higher clause; Culy (1997) discusses the importance of marking by particular complementisers in defining the logophoric domain in many languages. Subordinate affirmative purpose clauses seem to constitute an exception to this generalisation, since they do not contain special marking to indicate the BI domain, and need not appear with a particular predicate in the immediately higher clause; these may be positionally encoded.

(44) Subordinate purpose clause:

Bà’á Ø nə’əy hághá [**bi** hò púggì].
Father_i (he_i) bends down **he**.BI_i sees animal.CM

‘Father bends down to see the animal.’
(corrected version of Bohnhoff, 1986, 114)

Example (37) contains a subordinate desiderative clause, signalled by the presence of the verb ‘want’ in the matrix clause. Example (42) contains a causal adjunct with the subordinator/complementiser *bà*. Indirect quotations are also introduced by *bà*:

(45) Indirect quotation:

Bà’á Ø ’ò [bà **bín** làà kòddí].
Father_i (he_i) says that **he**.BI_i go forest.to

‘Father_i says that he_i will go to the forest.’
(corrected version of Bohnhoff, 1986, 114)

In fact, indirect discourse may consist of a number of clauses, as in (46):

(46) ... vñ ɔd Yésù: “Bà’á, í nii vóó Ø ba’ vó ya, moo òò
they say.to Jesus: Sir, the.one elder_i our (he_i) send us come, so we
ɔd ví biñ mään bà vín dón kíi bìllí ní.
say.to you that.he.BI_i is.worthy that you enter house his.BI_i.in NEG.

Moo wòò nɔ mà, biñ yaan kan fòó bìi ní yè nɔ.
for that CM then that.he.BI_i come.NEG with body his.BI_i NEG here CM

Àmáa bà ì ọ moo yɔɔ dágá sɪ’, nán bìi yè bàn zàè ọ.
but that you say word cheek one only man his.BI_i this that.he heals CM

Moo bì ám, bà biñ kid í nii bìi vñ tóggá, bà biñ
for he.BI_i too that he.BI_i hear.to the.one elder his.BI_i PL ear.CM that he.BI_i
dì kan sòzè bìi bà kuu kid bì tóg máa vñ ám.
is.there with soldier his.BI_i that they hear him.BI_i ear this PL too

Bà ìi ɔd dágá: ‘Àm làà ú’ tée, bàn làà.
that if.he.ìi say.to one: You go CM if, that.he go

Bà ìì ọd tóó: ‘Àm yaa ń’ téé, bàn yaa.
that if.he.ìì say.to another: You come CM if, that.he come

Bà ìì ọd nán ba’ad bìì: ‘Àm kó hẹ̀n yẹ̀ nọ́ téé, bàn kó ń.’
that if.he.ìì say.to man work his.BI: You do thing this CM then that.he do CM

‘...they say to Jesus: “Sir, our elder_i has sent us to you, to say to you that he_i isn’t worthy for you to enter his_i house. That’s why he_i hasn’t come here himself_i. But even if you simply say a single word, his_i worker will be healed. For he_i too (says) that he_i takes orders from his_i superiors; that he_i has his_i soldiers that take orders from him_i, too. That if he_i says to one: ‘Go!’, then he will go. That if he_i says to another: ‘Come!’, he will come. That if he_i says to his_i worker, ‘Do this!’, he will do it.”’

(L. Bohnhoff, p.c., translation of Luke 7:6b-8)

Each clause in these multi-clause indirect discourse segments is marked with the subordinator/complementiser *bà*, thus conforming to the syntactic criteria defining a BI domain, and contains a BI pronoun that is coreferent with the logophoric antecedent ‘our elder’. Bresnan (2001) provides an extensive discussion of binding of logophoric pronouns and partially or completely grammaticised logophoric systems in Icelandic, Ewe, Latin, and other languages, noting that even in languages with grammaticised logophoricity, logophoric pronouns can often appear in extended indirect discourse, as in the Yág Dii example (46). Following Bohnhoff (2010, 209), we analyse these examples as subordination to an unpronounced main clause predicate, with only the subordinate BI domain realised. An alternative analysis might treat these in terms of a morphologically marked main-clause BI domain interpreted as indirect discourse (see Dimmendaal 2001 for more discussion). For uniformity, and in the absence of evidence that the conditions governing these multi-clause examples are different from the other examples, we assume that subordination is involved, with an unpronounced main-clause predicate. In either case, with the presence of the complementizer *bà*, the syntactic criteria defining the BI domain are met in these cases as well, even in the absence of an explicit main clause predicate.

5 Subordinate clause logophoric pronouns: ìì

Our primary interest is a fourth series of pronouns which we label ìì, shown in Table 6 and characterised above as the “exclusively long-distance” series. Like the BI series, ìì pronouns cannot be used deictically: they appear in the BI domain and must corefer with the logophoric antecedent. In some contexts, in fact, either the BI or the ìì pronoun may appear: “Initial concessive and cause clauses for many speakers simply retain the BI forms, although some examples of ìì may also be heard” (Bohnhoff, 1986, 121). However, ìì pronouns are unlike BI pronouns in that they must appear as the subject of an embedded clause (S3) within the logophoric domain (S2), and must corefer with the logophoric antecedent (the subject of S1), at least two clauses distant. Further, as shown in examples (8) and (10), the ìì pronoun neither requires nor disallows a coreferential pronoun in the intervening clause in the BI domain; ìì ignores

Table 6 Subject pronouns of all four pronoun types (Bohnhoff, 1986, 2010).

	Mí	ÀÑ	Ìì	FAR PAST MARKER ka + ìì	BI
1.SG	-ń/mí		’àn	kǎń	bi
1INCL.DU	-a/ba	ba	’àa	kaa	
2.SG	-ń/mó	’ǫm	’ìì	kii	
3.SG	Ø	’à			
1EXCL.PL	vó		’oo	kóó	
1INCL.PL	ba...ví		’àa...ví	kaa...ví	
2PL	ví	’ì	’ìì	kii	
3PL	vù	’ùu			

potential binders in *S*₂, requiring the subject of *S*₁ as its binder. It is, then, an exceptionally long-distance anaphor, whose binding conditions seem to be exclusively nonlocal.

Besides sharing binding properties with BI, the ÌÌ series is also similar in distribution and, in some cases, in morphological shape to the ÀÑ series; indeed, Bohnhoff (1986, 123) states that “in the same way that ÀÑ subjects are used instead of MÍ subjects in certain clauses, so ÌÌ subjects occur instead of BI subjects in (some of) those same grammatical contexts”. Both ÌÌ and ÀÑ pronouns are used only in subject position of certain subordinate clauses within the BI domain; there are no ÌÌ object or possessive pronouns. The subordinate environments in which the ÀÑ series must appear were given in Table 3 and are repeated here:

- (47) Subordinate clauses with $\dot{\text{A}}\dot{\text{N}}$ subjects: indirect order, temporal/locative/conditional adjunct, concessive clause, affirmative purpose clause, causal adjunct introduced by *ka* or *bà*, relative clause, desiderative clause (Bohnhoff, 2010, 89)

A very similar list of subordinate clauses require *ì* subjects within the logophoric domain: *ì* pronouns are attested as the subject of an indirect order (example 16), in temporal/locative/conditional adjunct clauses (examples 10 and 48), concessive clauses (example 8), affirmative purpose clauses, causal adjuncts, and relative clauses (example 2).

- (48) s₁[Ø 'ò s₂ s₃[sè'èy bà 'ii là fíí ya babbí téé]
 (she)_i says time that **she**.ì_i goes returns comes field.from when,
 bà bín dèè gbòkìì].
 that she.BI_i.FUT cook pigeon
 's₁[She_i said that s₂[s₃[when **she**.ì_i returned from the field], she.BI_i would cook
 the pigeon]].'
 (Bohnhoff, 1986, 121)

Given this, it is tempting to analyse $\bar{i}$ as just the logophoric version of $\bar{a}$: $\bar{i}$ pronouns appear in subject position of (most) $\bar{a}$ clauses, just like $\bar{a}$ pronouns, and are bound by the logophoric antecedent, just like BI pronouns. This seems to give the correct result in many cases. However, examination of cases of overlap between the $\bar{a}$ and BI domains, shown in Table 5, reveals problems with this proposal. The

complement of the verb *want* is an indirect order: indirect orders require $\dot{\text{A}}\dot{\text{N}}$ subjects, and are also a BI domain. $\dot{\text{A}}\dot{\text{N}}$ pronouns (ex. 49a) as well as logophoric BI pronouns (ex. 49b) appear in this domain. If $\dot{\text{I}}\dot{\text{I}}$ were simply required to appear in a $\dot{\text{A}}\dot{\text{N}}$ clause and to be bound by the logophoric antecedent, we would expect the $\dot{\text{I}}\dot{\text{I}}$ pronoun and not the BI pronoun in this environment. This is not possible, however, as shown by the ungrammaticality of (49c). In contrast, if the logophoric antecedent is sufficiently far away, the $\dot{\text{I}}\dot{\text{I}}$ pronoun is acceptable as the subject of a purpose clause, as shown in (49d).

(49) a. $\dot{\text{A}}\dot{\text{N}}$:

Vu híí ['ùu làà kaalí].
they.MÍ_i want **they**. $\dot{\text{A}}\dot{\text{N}}$ _j go town.to

'They_i want that **they**_j go to town.' (Bohnhoff, 1986, 114)

b. BI:

Vu híí [bi làà kaalí].
they.MÍ_i want **they**.BI_i go town.to

'They_i want that **they**_i go to town.' (corrected version of Bohnhoff, 1986, 113)

c. $\dot{\text{I}}\dot{\text{I}}$, logophoric antecedent too close:

*Vu híí ['ìì làà kaalí].
they.MÍ_i want **they**. $\dot{\text{I}}\dot{\text{I}}$ _i go town.to

('They_i want that **they**_i go to town.') (L. Bohnhoff, p.c.)

d. $\dot{\text{I}}\dot{\text{I}}$, logophoric antecedent sufficiently distant:

Gbanàà vu vì [waa pèè [bà híí [ìì pú-gu ẹná?]]]
Chief they_i ask child_j recall that.she_j want **he**. $\dot{\text{I}}\dot{\text{I}}$ _i give-her_j what.Q

'The chief_i asks that child_j what she_j wants that **he**. $\dot{\text{I}}\dot{\text{I}}$ _i give her_j?'
(L. Bohnhoff, p.c.)

The $\dot{\text{I}}\dot{\text{I}}$ pronoun is similarly unacceptable in examples (50c) and (51c), where $\dot{\text{I}}\dot{\text{I}}$ is in a BI domain and is the subject of an $\dot{\text{A}}\dot{\text{N}}$ clause, since there is no antecedent for $\dot{\text{I}}\dot{\text{I}}$ that is sufficiently far away in these cases:

(50) a. $\dot{\text{A}}\dot{\text{N}}$:

Nà'á Ø ɔd bà'á [bà à dɔ̀ɔ̀ dɔ̀bbi].
Mother_i (she_i) tells Father_j that **he**. $\dot{\text{A}}\dot{\text{N}}$ _j cook yam.CM

‘Mother_i tells Father_j that **he**_j will cook the yams.’ (L. Bohnhoff, p.c.)

b. BI:

Nà'á Ø ɔd bà'á [bà **bín** dɔ̀ɔ̀ dɔ̀bbi].
Mother_i (she_i) tells Father_j that **she**.BI_i cook yam.CM

‘Mother_i tells Father_j that **she**_i will cook the yams.’ (L. Bohnhoff, p.c.)

c. $\dot{\text{I}}$, logophoric antecedent too close:

*Nà'á Ø ɔd bà'á [bà **ì** dɔ̀ɔ̀ dɔ̀bbi].
Mother_i (she_i) tells Father_j that **she**. $\dot{\text{I}}$ _i cook yam.CM

(‘Mother_i tells Father_j that **she**_i will cook the yams.’) (L. Bohnhoff, p.c.)

(51) a. $\dot{\text{A}}\dot{\text{N}}$:

Bàbàqam Ø sɔ̀ kɔ̀ɔ̀ ... moo kɛ́ɛ̀ bì [bà à gàgan
Rabbit_i (he_i) skins skin for wife_j his.BI_i that **she**. $\dot{\text{A}}\dot{\text{N}}$ _j carry-together
waa wɛ́-lí].
child it-in

‘Rabbit skins out the hide for his wife_j...so that **she**_j can carry her child in it.’
(Bohnhoff, 2010, 121)

b. BI:

Bà'á Ø nɔ̀'əy hághá [**bí** hò púggɛ́].
Father_i (he_i) bends down **he**.BI_i sees animal.CM

‘Father_i bends down so that **he**_i sees the animal.’
(corrected version of Bohnhoff, 1986, 114)

c. $\dot{\text{I}}$, logophoric antecedent too close:

*Bà'á Ø nɔ̀'əy hághá [**'ì** hò púggɛ́].
Father_i (he_i) bends down **he**. $\dot{\text{I}}$ _i sees animal.CM

(‘Father_i bends down so that **he**_i sees the animal.’) (L. Bohnhoff, p.c.)

These examples cannot be accounted for in terms of a noncoreference requirement between the $\dot{\text{I}}$ pronoun and the next subject up, since, as shown in examples (10) and (48), coreference between $\dot{\text{I}}$ and the next subject up is in fact possible.

It is also not possible to get around this problem by claiming that a clause must be either a logophoric BI clause or a nonlogophoric $\dot{\text{A}}\dot{\text{N}}$ clause, but not both at once. This would lead to the prediction that BI and $\dot{\text{A}}\dot{\text{N}}$ pronouns cannot appear in the same clause, but this prediction is incorrect: example (52) shows that BI and $\dot{\text{A}}\dot{\text{N}}$ pronouns can appear in the same clause.

- (52) Bàbààm Ø vì [moo 'è̀n pẹ̀n vùn tid waa bìì gbọ mammé
 Rabbit_i (he_i) asks for what first they.MÍ_j hold child his.BI_i leave water.in
 máalá?] ['í yẹ máa, bà vùn sóó 'ú] [bà 'àà sòò
 Q? this here focus that they.MÍ_j fake CM, that **they**.À̀N_j look.for
 waa bìì pú **bi** dòg 'yà'q yè nò].
 child **his**.BI_i give **him**.BI_i go.up now here CM
 'Rabbit_i asks why they_j (Boar) held his_i child and let it fall in the water? (He
 says) that they_j faked it, that **they**.À̀N_j must look for **his**.BI_i child and give it to
him.BI_i now!' (Bohnhoff, 1986, 118-119)

In sum, ìì is an exclusively long-distance anaphor, and its antecedent must appear at least two clauses away.

6 Summary: Distributions of the Yag Dii pronouns

The following generalisations govern the distribution of the four types of Yag Dii pronouns:

- (53) MÍ: can bear any grammatical function, except for subject of À̀N clause; antilogophoric in BI domain
 À̀N: must appear as subject of À̀N clause; antilogophoric in BI domain
 BI: appears only in BI domain; can bear any grammatical function (except for some subordinate subject positions within BI domain); coreferent with logophoric antecedent
 ìì: appears only as subordinate subject within logophoric domain; coreferent with logophoric antecedent

The status of the parenthesised portion of the condition on BI reflects the uncertainty discussed at the beginning of the previous section: in at least some clauses within the BI domain, either BI or ìì can appear, but it is not clear whether the BI and ìì pronouns are in free variation in all À̀N-type clauses in the BI domain.

7 Binding in Lexical Functional Grammar

7.1 Background assumptions

Lexical Functional Grammar (LFG) assumes that different aspects of the structure of sentences of natural language are represented by different formal structures which are related to one another by principles of correspondence. The constituent structure or *c-structure* represents word order, phrasal grouping, and phrasal dominance relations, and the functional structure or *f-structure* represents grammatical functions and relations such as control.

In the foregoing, we have presented abbreviated functional structures as an aid to understanding the syntactic relation between a pronoun and its antecedent. We have used the f-structure to depict these syntactic relations because it is this structure

that is of crucial importance in the statement of binding relations (Dalrymple, 1993; Bresnan, 2001; Asudeh, 2004, 2012). LFG’s binding theory assumes that binding relations are properly stated in terms of functional relations such as subject and object, relations that are native to f-structure. Pronouns may require a subject as binder, for example, or may allow a binder bearing any grammatical function, so long as the structural superiority relation between a pronoun and its antecedent is met. Crosslinguistically, the domain in which a pronoun must be bound or free is also defined in terms of f-structural concepts, specifically predicate, subject, and tense. These three concepts each correspond to some syntactically or semantically “complete” entity: a saturated proposition involving a predicate and its arguments, a predication involving some property and a subject, and a temporally anchored proposition, respectively (Dalrymple, 1993). We will see that binding in Yąg Dii requires reference to an additional feature defining the logophoric domain.

Another central tenet of LFG’s binding theory is that binding requirements are specified lexically rather than on a universal or language-by-language basis. This is clear in the analysis of languages with more than one reflexive, such as Norwegian or Marathi (Dalrymple, 1993): if a language has more than one reflexive, each obeying a different set of binding constraints, it is not possible to state binding constraints for reflexives for the language as a whole. As we have seen, the logophoric and nonlogophoric pronouns in Yąg Dii obey different constraints on where they can appear and where they must be bound, and so it is necessary to specify binding constraints lexically, and associate the appropriate constraints with each type of pronoun.

7.2 Binding in LFG

LFG provides a precise formal vocabulary for the statement of universally available binding requirements. According to LFG’s binding theory, binding requirements are stated in terms of binding equations like the schematic equation shown in (54), where $\uparrow$ is the f-structure of the pronoun, $\uparrow_\sigma$ is the semantic structure corresponding to $\uparrow$, and $(\uparrow_\sigma \text{ ANT})$ refers to the antecedent of the pronoun. According to the equation in (54), the antecedent must be found within the binding domain ($\text{GF}^* \text{ GF}_{\text{pro}} \uparrow$), and the antecedent bears the grammatical function GF_{ant} within this domain:⁹

(54) General form of binding equations:

$$(\uparrow_\sigma \text{ ANT}) = ((\text{GF}^* \quad \text{GF}_{\text{pro}} \quad \uparrow) \quad \text{GF}_{\text{ant}})_\sigma$$

DELIMITS	GRAMMATICAL	GRAMMATICAL
BINDING	FUNCTION OF	FUNCTION OF
DOMAIN	PRONOUN	ANTECEDENT

The f-structural relation between the antecedent and the pronoun is shown in (55):

$$(55) \left[\begin{array}{cc} \text{GF}_{\text{ant}} & [\text{ANTECEDENT}] \\ \dots \text{GF}^* \dots & \text{GF}_{\text{pro}} [\text{PRONOUN}] \end{array} \right]$$

⁹ The symbol GF is an abbreviation defined as a disjunction over members of the set of grammatical functions (SUBJ, OBJ, COMP, ...): that is, it is any grammatical function. The superscript asterisk (GF*) is the Kleene star, which allows zero or more occurrences of GF.

The outermost f-structure in (55) is the binding domain, within which both the pronoun and its binder must appear. The general form of the binding equation in (54) derives the requirement for the antecedent to command the pronoun: the antecedent must appear at the end of the singleton path GF_{ant} , while the pronoun appears embedded within the binding domain, at the end of a possibly longer path.

Binding equations for particular pronouns are further specialised to encode binding domains delimited by the attributes PRED (which marks the domain of a predicate and its arguments), SUBJ (which marks a domain of predication involving a subject), and TENSE (which marks the domain of a temporally anchored proposition). This is accomplished by the use of *off-path constraints*, which encode constraints on f-structures which may contain the pronoun and its binder. For example, the binding equation in (56) uses the off-path constraint $\neg(\rightarrow TENSE)$ to require the pronoun to find its antecedent in the minimal finite domain containing the pronoun; the off-path constraint has a limiting effect on the pronoun's search for an antecedent, preventing the path through the binding domain from passing through an f-structure with the attribute TENSE:

(56) Bound in minimal finite domain:

$$(\uparrow_{\sigma} ANT) = ((\quad GF^* \quad GF_{pro} \uparrow) \quad GF_{ant})_{\sigma} \\ \neg(\rightarrow TENSE)$$

Binding equations for all types of pronouns are specified as in (54), with a singleton path GF_{ant} within the binding domain determining the antecedent of the pronoun, and a path of length one or more to the pronoun. As such, LFG's binding constraints conform to the Locality Condition for anaphoric binding ("binding constraints ... always refer to local elements, never exclusively to nonlocal ones": Dalrymple 1993). Since the binding domain is defined in terms of a path of **one or more** grammatical functions ($GF^* GF_{pro}$), local elements are always included in consideration as potential antecedents. Of course, some local elements may be ineligible as antecedents for particular pronouns because of additional requirements associated with the pronoun: for instance, particular pronouns may require the antecedent to be not only a local element, but also a subject. We will see examples of this below, where the attribute LOG is important in determining antecedenthood for BI and iI pronouns. Importantly, LFG's binding theory disallows the specification of a longer path which ignores local elements and requires the antecedent to appear at least two clauses away; encoding such a requirement would require specification of a path of length **two or more**, and this is not allowed.

8 The BI requirement

In order to constrain the distribution of the four types of Yag Dii pronouns, we introduce an additional binding feature which is relevant for logophoric binding. We propose that the BI domain is marked LOG +, and we add the LOG feature to the inventory of features that are universally available to constrain the binding domain. Such a feature is necessary in the analysis of logophoric binding not only in Yag

Dii, but in other languages with grammaticised logophoricity as well: it is directly related to the $\pm\text{LOG}$ binding feature proposed by Bresnan (2001) in her discussion of logophoric binding, and is compatible with Strahan's (2009; 2011) discussion of f-structural marking of the 'perspective holder' in logophoric binding, though it differs formally from Strahan's proposal in that it does not impose the problematic requirement for the logophoric antecedent to control the search for any pronouns that it might be required to bind. It is also similar to the LOGOPHORIC feature proposed by Asudeh (2009), which appears on all structures within the entire logophoric domain, though under Asudeh's analysis, unlike the current proposal, it is difficult to capture the requirement for BI pronouns to be bound by the *closest* logophoric antecedent. In a different analytical tradition, it is similar in spirit to the null logophoric operator which binds logophoric pronouns in Adesola's (2006) analysis of Yoruba (Niger-Congo) (see also Koopman and Sportiche 1989) though it differs in that the LOG feature is not itself the binder of the pronoun: it merely marks the matrix clause of the logophoric domain in which the logophoric pronoun must appear.

In Yag Dii, the presence of the LOG feature is enforced by the predicate or construction which defines the logophoric domain (the main clause predicate whose complement is an indirect quotation, subordinate desiderative, or indirect order; the *ka* or *ba* marking on causal adjuncts; or the phrase structure rule marking a subordinate clause as a purpose clause). In (57), GF_{log} is an abbreviation which stands for any of the grammatical functions that the logophoric domain may bear: often, this will be COMP , the grammatical function of sentential complements. Clauses constituting a logophoric domain $S2$ appear as the value of GF_{log} , and are marked as $\text{LOG} +$:

$$(57) \quad S1: \begin{bmatrix} \text{SUBJ} & [\text{logophoric antecedent}] \\ \text{GF}_{\text{log}} & S2: \begin{bmatrix} \text{LOG} & + \\ & \dots \text{BI} \dots \end{bmatrix} \end{bmatrix}$$

We can now state the requirements associated with the BI pronouns by reference to the feature LOG :

(58) Binding constraints for BI:

$$(\uparrow_{\sigma} \text{ANTECEDENT}) = ((\underset{1}{\text{GF}_{\text{log}}} \quad \underset{2}{\text{GF}^*} \quad \uparrow) \quad \underset{3}{\text{SUBJ}})_{\sigma}$$

$$\begin{matrix} (\rightarrow \text{LOG}) & \neg(\rightarrow \text{LOG}) & \\ 1 & 2 & 3 \end{matrix}$$

The form of the logophoric binding equation is different from the nonlogophoric binding equation given in (54), because in this case it is important to identify the logophoric domain (the f-structure marked with the LOG feature). In (58), the logophoric domain is the f-structure value of the GF_{log} feature, and the logophoric pronoun must appear within that domain. The numbers under each element of the binding equation cross-reference the position in which the following constraints are imposed:

1. Logophoric domain: the logophoric domain must be marked as such. Formally, the value of the attribute GF_{log} , labelled $S2$ in (57), must be marked with the LOG attribute.

2. Logophoric domain: the BI pronoun may be embedded at an arbitrary depth within the logophoric domain, but it must be bound by the closest logophoric binder: see the discussion of examples (40–41) for evidence that the smallest BI domain must be chosen). Formally, the path through the binding domain to the BI pronoun may not pass through another clause with LOG marking.
3. Subjecthood of antecedent: the ANTECEDENT of the pronoun is the SUBJ of S1, the clause containing the logophoric domain.

This combination of constraints encodes the binding requirements for the BI pronoun; importantly, it adheres to the generalisation that binding requirements are specified purely locally, and does not require a path of length two or more.

9 The $\dot{\text{A}}\dot{\text{N}}$ requirement

The $\dot{\text{A}}\dot{\text{N}}$ series of pronouns must appear as the subject of the clause types listed in Table 3. As we have noted, this is not a binding requirement, but a requirement constraining the form of the subject pronoun for the relevant types of clauses. There seems to be no independent syntactic criterion by which $\dot{\text{A}}\dot{\text{N}}$ clauses can be identified: $\dot{\text{A}}\dot{\text{N}}$ clauses must simply be marked as such. We accomplish this by marking the subject of $\dot{\text{A}}\dot{\text{N}}$ clauses with AN +.

$$(59) \left[\text{SUBJ} \left[\text{AN} \ + \right] \right]$$

$\dot{\text{A}}\dot{\text{N}}$ pronouns are marked with an existential constraint requiring the presence of the AN feature, as shown in (60), while MÍ pronouns are incompatible with that feature.

(60) Constraint on $\dot{\text{A}}\dot{\text{N}}$ forms, requiring the presence of the AN feature:

$$(\uparrow \text{AN})$$

10 Constraints on $\dot{\text{I}}$

By appealing to the AN and BI features which we have already introduced, we can capture the commonalities in binding requirements between $\dot{\text{A}}\dot{\text{N}}$ and $\dot{\text{I}}$, and between BI and $\dot{\text{I}}$, by requiring $\dot{\text{I}}$ to obey the $\dot{\text{A}}\dot{\text{N}}$ requirements as well as the BI requirements. In (61), we associate $\dot{\text{I}}$ pronouns with the same existential constraint requiring the AN features as for the $\dot{\text{A}}\dot{\text{N}}$ pronouns (line 1 in 61), and the same binding equation as for the BI pronouns (line 2 in 61). Simply combining the two constraints, as in (61), is almost but not quite sufficient to encode the binding constraints which are relevant for $\dot{\text{I}}$:

(61) Binding constraints for $\dot{\text{I}}$ (incomplete):

$$(\uparrow \text{AN})$$

$$(\uparrow_{\sigma} \text{ANTECEDENT}) = ((\text{GF}_{\text{log}} \quad \text{GF}^* \quad \uparrow) \text{SUBJ})_{\sigma} \\ (\rightarrow \text{LOG}) \quad \neg(\rightarrow \text{LOG})$$

This combination of constraints correctly allows $\dot{\text{I}}$ to appear in arbitrarily deeply embedded $\dot{\text{A}}\dot{\text{N}}$ -clauses within the logophoric domain S2, but also incorrectly allows it in nonembedded clauses in S2 (recall our discussion of examples 49–51 above).

To disallow $\dot{\text{I}}$ as the subject of S2, we must impose an additional requirement preventing the $\dot{\text{I}}$ pronoun from appearing in the highest clause within the logophoric domain: this is the clause that bears LOG + marking. In other words, $\dot{\text{I}}$ cannot appear in a LOG-marked clause. The final version of the binding constraints for $\dot{\text{I}}$ are given in (62):

(62) Binding constraints for $\dot{\text{I}}$, final version:

$$\begin{aligned}
 &(\uparrow \text{ AN}) \\
 &(\uparrow_{\sigma} \text{ ANTECEDENT}) = ((\text{ GF}_{\text{log}} \quad \text{ GF}^* \quad \uparrow) \text{ SUBJ})_{\sigma} \\
 &\quad (\rightarrow \text{ LOG}) \quad \neg(\rightarrow \text{ LOG}) \\
 &\neg((\text{ SUBJ } \uparrow) \text{ LOG})
 \end{aligned}$$

As in (61), the first two lines of (62) duplicate the requirements for $\dot{\text{A}}\dot{\text{N}}$ ($\dot{\text{I}}$ must appear as the subject of an $\dot{\text{A}}\dot{\text{N}}$ -type clause) and for BI ($\dot{\text{I}}$ must be bound within the logophoric domain, and by the logophoric antecedent. The third line is new, and unique to $\dot{\text{I}}$: $\dot{\text{I}}$ may not appear as the subject of a LOG-marked clause.

On this analysis, the nonlocal nature of $\dot{\text{I}}$'s binding requirements is captured by means of the same feature that governs the distribution of BI, and in keeping with the general form of LFG's binding equations. The binding requirements for $\dot{\text{I}}$ are surprising and complicated: $\dot{\text{I}}$ must appear embedded at an arbitrary depth in a domain marked with the LOG feature (the second line of (62)) but may not appear as the subject of the highest clause in the logophoric domain, the clause marked with the LOG feature (the third line of (62)). Thus, it may only appear in embedded subject position within the logophoric domain. It is not the long-distance nature of the binding requirements associated with $\dot{\text{I}}$ that makes it an unusual anaphor, but the seemingly contradictory requirements that it must obey: it both requires LOG-marking in an expanded domain (line 2), and disallows it in a local domain (line 3). We do not encode binding constraints on $\dot{\text{I}}$ by means of a path requiring a distance of two or more clauses between a pronoun and its antecedent, because this would require non-local specification of binding requirements, and this is not allowed by LFG's binding theory. Our analysis achieves a local specification of constraints on an apparently exclusively nonlocal relation.

11 Conclusion

Yag Dii presents a complicated picture for theories of anaphoric binding. The distributions of the MÍ, $\dot{\text{A}}\dot{\text{N}}$, and BI pronouns are not unexpected, given standard locality constraints on LFG's binding equations and the ability to mark domains with information about their syntactic properties. We have proposed that the distribution of the $\dot{\text{I}}$ pronoun can be stated in local terms by reference to a LOG feature, which is independently motivated for Yag Dii's BI pronouns as well as for logophoric pronouns

more generally. Our analysis achieves a purely local specification of the binding requirements for $\bar{i}$, preserving the generalisation that grammars do not impose nonlocal grammatical constraints, and predicts the nonexistence of other possibilities – for example, a hypothetical anaphor that must appear at least three clauses removed from its antecedent.

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