Semantics of obviation in Atchan: Disjointness and long-distance obligatory binding*

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Abstract This paper documents and analyzes a contrast between two 3SG pronouns, the proximate and the obviative, in Atchan (Kwa, Côte d'Ivoire). I show that the obviative has a restricted distribution and restricted referential possibilities, both of which can be captured on a treatment of this pronoun as an obligatorily bound element. Specifically, I advance a semantic theory of obligatory binding on which obligatorily-bound items contain presuppositional features, and in particular the Atchan obviative contains a presuppositional difference feature. I show that this analysis captures patterns of apparent anti-subject and anti-topic orientation of the Atchan obviative and suggest that this machinery may be applicable in the analysis of other long-distance obligatorily-bound elements, including logophors, Algonquian-style proximate pronouns, and antilogophors.

Keywords: binding, pronouns, obviation, logophoricity, African languages

1 Introduction

The task of resolving pronominal reference is made easier in systems that have pronominal forms with restricted referential possibilities. Locally-bound anaphors, for instance, have greatly reduced referential possibilities compared to ordinary pronouns. We might refer to the means by which an anaphor's referential possibilities are restricted as *obligatory binding constraint*, which in the case of locally-bound anaphors has been understood both in purely syntactic terms (Chomsky 1981, Charnavel & Sportiche 2016) and in terms of semantic reflexivization (Bach &

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Partee 1980, Pollard & Sag 1992, Reinhart & Reuland 1993, Sauerland 2013, McKillen 2016).

Obligatory binding has also been invoked as a way to understand other items with restricted referential possibilities but different locality conditions. Logophoric pronouns (von Stechow 2003, Pearson 2015), for example, seem to require binding by an attitude verb, though without the syntactic locality requirements shown by ordinary reflexives. Algonquian proximate pronouns, too, have been argued to involve obligatory binding, in this case by a matrix topic (Branigan & Mackenzie 1999, Oxford 2017).

In this paper, I analyze a pronominal contrast in Atchan, a Kwa language of Côte d'Ivoire. Atchan exhibits two 3SG animate pronouns, which I gloss PROX 'proximate' and OBV 'obviative,' with different coreferential possibilities:[1]

(1) a. timote pɔ mɛ́́ wɔ́
T. love PROX cat
'Timothée$_i$ likes 3sg's$_{i/j}$ cat.'

b. timote pɔ nɛ wɔ́
T. love OBV cat
'Timothée$_i$ likes 3sg's$_{j/*i}$ cat.' (20220805_chr_mar)

In (1a), PROX can refer to the subject Timothée or have disjoint reference; OBV, by contrast, must be disjoint from the subject in (1b).

The primary goal of this paper is to argue in support of an approach to the semantics of Atchan OBV based in obligatory binding. I argue that Atchan OBV, like a logophor or an Algonquian proximate, is subject to an obligatory-binding constraint, but with a twist: the semantics of Atchan OBV contains a disjointness feature, with the effect that the referent of OBV is necessarily distinct from its binder. Atchan OBV is in a sense the (near) mirror image of an Algonquian proximate pronoun: both are subject to obligatory binding by an element high in the matrix-clause periphery, but Atchan OBV is forced to be disjoint from that high element while Algonquian proximates are forced to be coconstrued with that high element.

More broadly, I suggest that the view of long-distance obligatory binding that I propose for Atchan has broader relevance for the semantic typology of obligatorily-bound items. In particular, the view that I propose (which relies on a system of distinguished variables) allows us to make progress towards a semantic explanation of the potential long-distance connection between binders and bound elements. Additionally, a broader typology emerges that naturally includes so-called "antil-

1 Throughout this paper, I indicate the availability or unavailability of particular coreferential/binding possibilities via subscripts in the translation. Unless explicitly noted otherwise, my claim is merely that the indicated coindexation or binding possibility is available (or is not, as the case may be). There are almost always additional free possibilities that I set aside.

ogophors" (Hill 1995, Kouadio 1996, Andersen 1999, Ameka 2017), which have received relatively little attention in the theoretical literature (cf. Anand 2006, Simeonova 2020).

This paper proceeds as follows. I provide a descriptive introduction to Atchan's pronominal system in §2. In §3 and §4, I develop and defend two empirical generalizations about Atchan OBV, which I argue has a constrained distribution and, within that distribution, constrained referential possibilities. These sections lay the groundwork for an obligatory-binding analysis, which I develop in §5 and continue in §6, discussing alternate analyses in §7. From there, I discuss possible extensions to cross-linguistic variation in obligatory binding requirements and a resulting typology of such items in §8. The paper concludes with §9.

2 Atchan and its pronouns

2.1 Language and consultant backgrounds

Atchan (also called Ébrié; ISO: ebr; SVO) is a Kwa (Niger-Congo) language spoken by the Tchaman people in villages within and around the city of Abidjan, Côte d'Ivoire. Due to the geographic location of the Tchaman villages within Abidjan, Côte d'Ivoire's economic capital, the Tchaman people have been in long-term sustained contact with French; nearly all Tchaman people, including all of my consultants, are bilingual in Atchan and French (and, often, additional other Ivorian languages).

The novel data discussed in this paper comes from two sources. One source is elicitation with six main Atchan speakers between 2021-2023, in a combination of in-situ and remote work. These speakers live in two villages, Anono and Blockhauss, which are centrally located in the city of Abidjan. All data from elicitation is reported with a code corresponding to the date of the relevant elicitation session and the speaker(s) who participated in that session. Recordings and notes from the Atchan Language Project, including all elicitation files, are archived with the California Language Archive (Doko et al. 2023).

The second source of data discussed in this paper comes from the translation of the New Testament into Atchan (Loba & Biekre 1997). The Tchaman community is primarily Christian, and community groups are currently engaged in translation of the Old Testament into Atchan. At present, the New Testament translation is the only publicly-available large text in Atchan. I have confirmed key portions of the text with my consultants, and I additionally have confirmed that central generalizations from elicitation regarding the distributions of Atchan pronouns are upheld in the text. The text exhibits certain dialect-related differences from the variety of Atchan that my consultants use (e.g., in the forms of the pronouns and orthographical word

	S form	O form	elsewhere
1SG	mɛ̃		
2SG	ɛ	hɛ	
3SG.PROX	ã/ɛ́/ń	-ɛ	mɛ́
3SG.OBV	nɛ/nkɛ		
1PL	lo		
2PL	ɔ́	hɔ́	
3PL	wo		
3INAN	á	∅	ló

Table 1 Personal pronouns in Atchan, adapted and updated from Bôle-Richard (1983).

conventions); those differences are discussed as relevant. New Testament examples are provided with my own literal translations, with reference to the relevant chapter and verse(s).

This paper uses slightly different orthographical conventions for examples from different sources. All examples from elicitation sessions are transcribed in IPA, with H tones indicated with acute accents and L tones unmarked. Examples cited from Dido's (2018a) grammar of Atchan follow Dido's transcriptions, though I have standardized tone marking to only indicate H tones and adapted glossing conventions for uniformity. The New Testament translation uses a different orthography, which roughly aligns with the Practical Orthography for Ivorian Languages (Kokora et al. 1996); these examples are presented with the translation orthography followed by an IPA transcription.

Throughout the paper, glossing follows the Leipzig Glossing Rules, with the following additions: CM class marker prefix, O object, OBV (3SG) obviative, S subject, V.PART verbal particle in a particle-verb construction. In presenting longer examples, I color-code the pronominal forms for ease of reference: OBV forms, their antecedents, and their translations are typeset in red; and PROX in blue.

2.2 Atchan pronouns

Our discussion of Atchan in this paper is centered around its pronouns, so it is imperative that we understand the pronominal inventory of Atchan. In this section, I provide a descriptive overview of the personal pronouns in Atchan; the full inventory of personal pronouns used by my consultants is shown in Table 1. In this paper, we are primarily interested in the two third-person singular animate pronouns, which

I term PROX 'proximate' and OBV 'obviative.'[2] My claim that Atchan has these two distinct third-person singular animate pronouns is a novel descriptive claim; earlier literature (Bôle-Richard 1983, Dido 2018a) conflated the two into a single 3SG pronoun. For this reason, it is worth walking through in detail both (a) the different forms of the two pronouns and (b) the evidence that PROX and OBV are indeed separate pronouns.

First, let us focus our attention on PROX. The form of this pronoun depends on three factors: structural position, aspect, and dialect. First, PROX has distinct subject ([ã]/[ɛ́]/[ń]), object ([-ɛ]), and elsewhere ([mɛ́]) forms.[3] Note that the PROX.O form, [-ɛ], phonologically coalesces with the verb; I supply the underlying form of the verb for every example of PROX.O we see. Second, the form of PROX.S varies based on the clause's aspect. As is areally common among West African languages (Anderson 2011, 2015, 2017, Garvin et al. To appear), Atchan expones aspect distinctions on subject pronouns; [ã] PROX.S is non-perfective, while [ɛ́]/[ń] PROX.S.PFV is perfective. Finally, the distinction between the two PROX.S.PFV forms [ɛ́] and [ń] reflects dialect variation; my consultants use [ɛ́], while the Atchan New Testament and Dido's thesis use [ń].

I claim that Atchan has a second 3SG pronoun, [n(k)ɛ] OBV, whose form does not vary by structural position or aspect. Its form does show dialect-based variation; the consultants that I work with mostly use [nɛ], while the Atchan New Testament uniformly uses [nkɛ] (and, in his thesis, Dido (2018a) writes this form as [ŋkɛ]). This form was previously analyzed as a second object pronoun, in free variation with [-ɛ] (Bôle-Richard 1983 p. 345, Dido 2018a p. 81). However, Dido (2018a,b) notes that [n(k)ɛ] can occur in non-object positions:

(2) a. jajó ɓu sálê [ŋkɛ ɓa ɓá]
Yayo think.PFV COMP OBV FUT come
'Yayo thinks that 3sg will come.' (Dido 2018a:(74c))

b. ńj hɔ̃ [ŋkɛ ɓi] ɓa
PROX.S.PFV take OBV child come
'3sg brought 3sg's child.' (Dido 2018a:(75))

In (2a), [nkɛ] is an (embedded) subject; in (2b), [nkɛ] is a possessor. Neither of these sentences meshes cleanly with an analysis of [nkɛ] as an object form.

2 Bôle-Richard (1983) and Dido (2018a) mention that some speakers contrast two 3PL forms [wo] and [nkɔ̃]. I suspect that, for those speakers, [nkɔ̃] is a plural obviative form. However, none of my consultants use [nkɔ̃], so this paper focuses solely on the singular forms.

3 In the interest of theoretical neutrality, I do not adopt case-based labels in this work; it seems that the distribution of S and O is conditioned more by adjacency with the verb than purely by case. A more thorough investigation of the conditioning of S and O forms must be left to future work.

Instead, I argue that [n(k)ɛ] OBV is a fully-distinct pronoun. The cleanest evidence for the distinctness of PROX and OBV comes from textual data. As will be discussed further in §4.3, the distinction between PROX and OBV is leveraged in texts like the Atchan New Testament translation (Loba & Biekre 1997) for reference tracking. An example such passage, with PROX referring throughout to one individual and OBV to another, is given below:[4]

(3) Erɔde esó Jan. Ńyɛn salé nkɛ li lephan bhwá, nkɛ tɛ créncré, lóhénthé ánbo nkɛ mwámá. Lóka anyé nkɛ bhwe nkɛ tɔ, álri mén thén gbre, lótɛ khén nkɛ bhwɛtó limɛn yé.
ɛrɔde e-só ɟã. ń-jɛ̃ salé nkɛ li lep^{h}ã
Herod PROG-fear John PROX.S.PFV-know COMP OBV COP person
ɓwá, nkɛ tɛ créncré, ló-hɛ́t^{h}é ã-bo nkɛ
righteous OBV COP holy 3INAN-because.of PROX.S-protect OBV
mwámwá. ló-ka ã-jé nkɛ ɓwe nkɛ tɔ, á-lri
good DEF-time PROX.S-hear OBV speech OBV say 3INAN.S-bother
mɛ́̃ t^{h}ɛ́̃ gbre, ló-tɛ k^{h}ɛ́̃ nkɛ ɓwetó limɛ̃ jé.
PROX heart bother DEF-? COMP OBV speech please.PROX.O hear
'Herod$_i$ feared John$_j$. He$_i$ knew that he$_j$ was a righteous person, (that) he$_j$ was holy; because of this, he$_i$ was protecting him$_j$ well. When he$_i$ heard the speech that he$_j$ said, it bothered his$_i$ heart, but his$_j$ speech pleased him$_i$.'
(Mark 6:20)

Throughout this passage, the forms in blue refer to Herod, those in red to John. In this passage, Herod is referred to using forms of PROX ([ã]/[ń] PROX.S/PROX.S.PFV, [-ɛ] PROX.O,[5] and [mɛ́̃] elsewhere PROX), while John is uniformly referred to with OBV (invariant [nkɛ]).

The systematicity of alternations like this one suggests that PROX and OBV are indeed two separate pronouns. If they were one pronoun, and [n(k)ɛ] and other forms freely alternated with one another, it would be hard to explain how these systematic reference-tracking effects could obtain. In the rest of this paper, our focus is on the meanings of Atchan PROX and OBV, and how effects like these reference tracking ones can be derived.

In the next two sections, I discuss the restricted distribution of OBV and the disjoint reference effects that it exhibits. My goal is to argue in support of the following two empirical generalizations about OBV, which I term its *distributional constraint* and its *reference constraint*:

4 In this passage, Herod has conflicting feelings about John. The less literal NIV translation of Mark 6:20 is 'Herod feared John and protected him, knowing him to be a righteous and holy man. When Herod heard John, he was greatly puzzled; yet he liked to listen to him.'

5 In this passage, we see PROX.O in the form [limɛ̃]. The underlying form is /limã-ɛ/ 'please-PROX.O'.

(4) **Distributional constraint on OBV:** Atchan OBV cannot occur as the highest DP in a sentence.

(5) **Reference constraint on OBV:** Atchan OBV cannot be construed as coreferential with/bound by the highest item in the sentence.

The next section, §3, addresses the distributional constraint. Afterwards, §4 focuses on the reference constraint.

3 The distributional constraint

In this section, I argue in support of the constraint in (4): OBV cannot be the highest DP in a sentence. My evidence for this constraint comes from three sources. First, OBV resists occurring in all high positions in the clause (subject, focus, and topic). Second, this is a sentence-wide constraint: this resistance to high positions effectively disappears in embedded clauses. Finally, in the presence of higher left-peripheral DPs, OBV can occur in structurally high positions like subject position.

The relevant high structural positions in Atchan that we will consider in this paper are topic, focus, and subject position. In Atchan, the matrix-clause periphery is structurally complex. Topics linearly precede (and, I assume, c-command) focused elements, which in turn precede subjects:

(6) Mɛn-ɛ, ńdu nɔn mɛn mo mɛn há hɔ́n hɛ́n
mɛ̃-ɛ$_{\text{topic}}$, ń-du$_{\text{focus}}$ nɔ̃ mɛ̃ɛ$_{\text{subject}}$ mo mɛ̃ há hɔ́ hɛ́
1SG-TOP CM-water FOC 1SG take 1SG pour 2PL head
'Me, it's water that I take and pour on your heads.' (Matthew 3:11)

The TOP suffix, also noted in Dido (2018a), overtly marks matrix topics in New Testament translation examples like this one (though my consultants do not use an overt topic marker). The focus construction in Atchan involves the marker *nɔ̃*, which follows the focused element. Atchan is SVO, and subjects occur immediately before the verb or any auxiliaries. In Jarvis (2023), I showed that matrix-clause topics are base-generated in the clausal periphery, while focused items A'-move to the periphery.

As illustrated below, each of these positions is one where OBV is dispreferred in isolation:

(7) ɛ́́/#nɛ c$^{\text{h}}$a ló t$^{\text{h}}$o
PROX.S.PFV/OBV step 3INAN top
'3sg stepped on it.' (20230623_kou_jea)

(8) mɛ́́/#nkɛ nɔ̃ mɛ̃ mpɔ
PROX/OBV FOC 1SG love

'It's 3sg that I like.' (Maxime Dido p.c.)[6]
answer to 'Who do you like?'

(9) elize/ #nɛ$_i$, mɛ̃ nɔ́ mɛ̃ ndɔ mã nɛ$_i$ mɔ́
L/OBV 1SG FOC 1SG help OBV mɔ́
'Lindsay/#3sg$_i$, it's me who helped 3sg$_i$.' (20230628_hre_chr_mar)[7]

In this data, we see that OBV is dispreferred in subject position in (7), dispreferred in focus position in (8), and dispreferred in topic position in (9). The uniformity of this dispreference speaks in favor of a view on which OBV cannot occur as the highest DP in the clause.[8]

A second piece of evidence that supports this generalization is that OBV does not resist *all* subject and focused occurrences. In texts, OBV naturalistically occurs in embedded subject (first instance of [nkɛ] in (10a)) and focus (10b) positions:[9]

(10) a. ńwu salé nkɛ pɛ mímíbhú, ló nkɛ phɔ gɛ jan.
ń-wu salé [nkɛ pɛ mímíɓú, ló nkɛ p^{h}ɔ gɛ ɟã].
PROX.S.PFV-see COMP OBV have faith so OBV body can recover
'He$_i$ saw that he$_j$ had faith, so his$_j$ body could recover.' (Acts 14:9)

b. Lóka wo yɛn salé nkɛ nɔn nkɛ li lephan...
ló-ka wo jɛ̃ salé [nkɛ nɔ̃ nkɛ li lep^{h}ã...]
DEF-time 3PL know COMP OBV FOC OBV COP person
'When they realized that it was he who was the person...' (Acts 3:10)

Instead, OBV resists occurring, specifically, in *matrix-clause* subject and focus position: this is consistent with our generalization, since embedded subject/focus is not the highest position in the sentence.

A final piece of evidence in support of this generalization comes from layering effects. Here, we focus on the Topic > Focus > Subject structural hierarchy illustrated previously in (6). As seen earlier, OBV generally resists occurring in matrix subject and focus positions. However, when subjects and focused items are combined with an overt matrix topic, OBV is exceptionally permitted in these positions:[10]

6 Maxime Dido (p.c.) notes that it's best to use PROX here because "[if OBV is used] the other person seems very confused if the context of communication is not known in advance by the interlocutors."

7 The reader might be surprised by the fact that OBV can evidently resume the matrix-clause topic here. We will return to this in §6.3.

8 The dispreference for OBV in (8) speaks against a view on which OBV has an anti-topic orientation. To fold this data into a putative unified anti-topic constraint, we would need to claim that focused items can be default topics. Given the context of (8), this would be highly surprising—and, under some theories of topic and focus, impossible on conceptual grounds.

9 The kind of topicalization discussed in this section only occurs in matrix clauses.

10 The verb in (11a) is [thr̃ɛ̃mɛ̃], underlyingly /thrãmã-ɛ/ chase-PROX.O. The two verbs in (11b) are [kr̃ɛ̃mɛ̃] (/krãmã-ɛ/ tell-PROX.O) and [pwɛ] (/pɔ-ɛ/ love-PROX.O)

(11) a. Setup (all in Atchan): Q: 'Tell me something about Lindsay. Who chased her?' A: 'It's me who chased.PROX.O.' Q: 'Now, tell me about Katie. Who chased her?'
kati, nɛ nɔ́̃ nɛ tʰrɛ̃mɛ̃
K. OBV FOC OBV chase.PROX.O
'Katie$_i$, it's 3sg$_j$ who chased 3sg$_i$.' (20230803_hre)

b. Setup (all in Atchan): Q: 'Tell me something about Lindsay. What did she hear?' A: 'Lindsay, I told her that I like her.' Q: 'Tell me something about Katie. What did she hear?'
kati, nɛ krɛ̃mɛ̃ lé nɛ pwɛ
K. OBV tell.PROX.O COMP OBV love.PROX.O
'Katie$_i$, 3sg$_j$ told 3sg$_i$ that 3sg$_j$ likes 3sg$_i$.' (20230803_hre)

Here, (11a) involves the combination of a matrix topic and focus; we can see that focused OBV here is deemed acceptable. Similarly, in (11b) OBV is permitted as a (non-focused) subject in the presence of a matrix topic.[11] This again supports our generalization: OBV can exceptionally occur in structurally high positions in the clause when even higher positions are occupied.

4 The reference constraint

In this section, I show that OBV is subject to disjoint reference effects that constrain its referential and binding possibilities. The constraint I argue for is shown in (5), repeated below:

(12) **Reference constraint on OBV:** Atchan OBV cannot be construed as coreferential with/bound by the highest item in the sentence.

Several pieces of evidence support this conclusion. In §4.1, I focus on coreference. I show that OBV exhibits disjoint reference effects from structurally-high items, both locally and non-locally. In §4.2, I show that OBV can be bound by items that are not structurally high. In §4.3, I show that in information-structurally-rich contexts like narrative texts, the contrast between PROX and OBV gives rise to a full reference-tracking system, with OBV not referring to the topic.

4.1 Disjoint reference effects

The goal of this section is to show that OBV exhibits disjoint reference effects, which require it to be disjoint from the highest DP in the sentence, regardless of (a) how

11 Because focus in Atchan involves movement, testing the effect of overt focus on subject OBV is challenging: in addition to the inherent implausibility of such sentences, this configuration gives rise to a crossover configuration.

local the highest DP and OBV are to each other and (b) what information-structural projection the highest DP occupies.

As we saw at the beginning of the paper, the (co)referential possibilities of Atchan OBV are restricted relative to its counterpart PROX. This is shown again below. In out-of-the-blue sentences, OBV cannot corefer with the matrix-clause subject, both when the two occupy the same clause (13b) and when OBV occurs in an embedded clause (14b). By contrast, PROX can optionally corefer with the subject in these examples:

(13) a. timote pɔ mɛ́́ wɔ́
T. love PROX cat
'Timothée$_i$ likes 3sg's$_{i/j}$ cat.

b. timote pɔ nɛ wɔ́
T. love OBV cat
'Timothée$_i$ likes 3sg's$_{j/*i}$ cat.' (20220805_chr_mar)

(14) a. timote ɓu sákɔlé [ã má má]
T. think COMP PROX.S FUT come
'Timothée$_i$ thinks that 3sg$_{i/j}$will come.'

b. timote ɓu sákɔlé [nɛ ɓa ɓá]
T. think COMP OBV FUT come
'Timothée$_i$ thinks that 3sg$_{j/*i}$ will come.' (20220805_yap)

These examples show that, out of the blue, OBV cannot corefer with a matrix subject.

This ban on coreference holds no matter how far apart the matrix subject and OBV are. Most notably, the disjoint reference effect still obtains even when OBV occurs within a syntactic island. In Jarvis (2023), I showed that relative and temporal clauses are islands in Atchan. Nonetheless, the disjoint reference effect still obtains in these domains:

(15) a. kati$_k$ wu [lep^{h}ã k^{h}ɛ́́ nɛ$_{*k}$ pɔ]
K. see person COMP OBV love
'Katie saw the person that 3sg$_{*k}$ loves.' (20230703_kou_jea)

b. kati$_k$ p^{h}i dja [ló ka k^{h}ɛ́́ nɛ$_{*k}$ srɛ]
K. laugh V.PART DEF time COMP OBV stumble
'Katie$_k$ laughed when 3sg$_{*k}$ stumbled.'
(20230703_kou_jea, 20230704_yap)

This data suggests that there is no syntactic Agree relationship established between OBV and the matrix subject (on the assumption that Agree cannot proceed

into islands; cf. Adger & Ramchand 2005 for relevant discussion of Agree with pronouns).[12]

In fact, the disjoint reference effects are more nuanced than a simple ban on subject coreference, in two ways. First, the ban only involves *matrix* subjects, not all subjects; and second, elements occupying information-structural projections similarly restrict OBV's reference.

Regarding the first point, we can note that OBV's coreference allergy specifically relates to matrix-clause positions. Unlike the behavior with matrix subjects, OBV can corefer with embedded subjects. Consider, for instance, this example from the Atchan New Testament:

(16) Julisi li lephan bɛn até Phɔ́lu yí yɔ́n, lóhɛ́nthé ńse nkɛ mɔ́nsi salé nkɛ lo wú nkɛ jɔn...
ɟulisi li lep^{h}ã bɛ̃ a-té phɔ́lu jí jɔ̃́, ló-hɛ́t^{h}é
Julius COP person INDF 3.INAN-do Paul thing good DEF-because.of
ń-se nkɛ mɔ̃́si salé nkɛ lo wú nkɛ ɟɔ̃
PROX.S.PFV-give OBV permission COMP OBV go see OBV friend
'Julius$_i$ was a person who did good things for Paul$_j$, so he$_i$ gave him$_j$ permission for him$_j$ to go see his$_j$ friend...' (Acts 27:3)

In the final embedded clause, OBV corefers with the local, embedded subject. The constraint on the reference of OBV, therefore, rules out not *all* coreference between OBV and a subject, but rather coreference between OBV and the matrix subject.

Regarding the second point, we can first note that OBV resists being interpreted as coreferential with topics:

(17) kati, mɛ̃ mpɔ mɛ́/#nɛ ntráljɛ́
K. 1SG love PROX/OBV clothes
'Katie$_i$, I love 3sg's$_i$ clothes.' (20230624_kou_jea)

Here, we see that OBV resists being construed as referring to Katie. (That is, the disjoint reference effects obtain with a non-subject DP.)

I argue that the constraint on OBV is best viewed as a flexible constraint banning coreference with the highest DP (whatever that is in a given sentence): we should *not* treat OBV as having a unified anti-topic orientation. Evidence that the reference constraint on OBV is not a pure anti-topic constraint comes from sentences with quantified subjects, as shown below:

12 One salient alternative analysis that this data rules out is that of Hestvik (1992), on which anti-subject orientation is derived when the pronoun covertly moves into the binding domain of the subject. Because that account relies on covert movement, it predicts that the disjoint reference effect should only surface if the relevant pronoun could covertly move to be local with the subject.

(18) ɓje brɛ-brɛ e-ɓú sálé nɛ ɲɔ̃
woman one-one think COMP OBV pretty
'Each woman$_i$ thinks 3sg$_{j/*i}$ is pretty.' (20230704_hre)

Here, the matrix subject is a quantified DP with the universal distributive quantifier *brɛbrɛ*. Topics are generally assumed to be necessarily referential, with the consequence that quantified DPs are not possible topics (Polinsky & Potsdam 2001). As a result, if the constraint on OBV merely ruled out coreference with and binding by topics, we might exceptionally predict the binding of OBV by the subject quantifier to be permissible in (18). Instead, the generalization more cleanly captures this data: high DPs, even when they are not topical, cannot bind OBV.

4.2 Binding the obviative

At this point, it is worth being clear that OBV is *not* obligatorily free. (This is relevant, for instance, with regard to Déchaine & Wiltschko's (2002) claim that certain proforms behave as R-expressions subject to Condition C.) In fact, Atchan OBV can corefer with higher items,[13] as long as they are not the highest DP:

(19) a. timote krãmã lízi$_i$ lê nɛ$_i$ ɓi ɲɔ̃
T. tell L. COMP OBV child pretty
'Timothée told Lindsay$_i$ that 3sg's$_i$ child is pretty. (20230629_yap)

b. kati hɔ̃ jipɔ$_i$ se nɛ$_i$ mã
K. take child give OBV mother
'Katie took the child$_i$ and gave (him$_i$) to 3sg's$_i$ mother.' (20230718_hre)

There is clearly not a general ban of coreference between OBV and c-commanding DPs.

Furthermore, OBV can behave as a bound variable. Two pieces of evidence support this conclusion. First, and most obviously, non-subject items can quantificationally bind the obviative:

13 All existing evidence at this point suggests that addressees of *tell* and patients in benefactive constructions in Atchan c-command, respectively, DPs in the clausal complement of *tell* and beneficiaries introduced by *se* 'give.' Regarding *tell*, a Condition C violation obtains between the addressee and R-expressions in the complement clause:

(1) mɛ̃ ŋkrãmã nɛ$_{*i}$ lê kati$_i$ ɲɔ̃
1SG tell OBV COMP K. pretty
'I told 3sg$_{*i}$ that Katie$_i$ is pretty.' (20230706_yap)

This is consistent with standard cross-linguistic analyses of *tell*-type verbs. Analogous Condition C data for benefactives in Atchan is currently unavailable, but standard syntactic analyses of serial verb constructions (SVCs) in West African languages, like that of Collins (1997), suggest that the first object of a serial verb c-commands objects of later verbs in the SVC.

(20) timote krãmã [lep^{h}ã brɛ-brɛ]$_i$ lê nɛ$_i$ ɓi ɲɔ̃
T. tell person one-one COMP OBV child pretty
'Timothée told each woman$_i$ that 3sg's$_i$ child is pretty.'
(20230628_hre_chr_mar)

Here, the obviative is bound by a distributive universal quantifier in (20).

A second, supporting piece of evidence for the bindability of OBV comes from reflexives. Atchan reflexives are built out of pronouns together with a second morpheme [-(m)brɛ̃mbrɛ̃] REFL. While the "default" 3SG reflexive is build out of PROX (21a), OBV also has a corresponding reflexive form (21b):

(21) a. kati pɔ mɛ́-mbrɛ́mbrɛ̃
K. love PROX-REFL
'Katie loves herself.' (20230705_hre)

b. ɛlize e-ɓú sálé nɛ$_j$ pɔ nɛ$_j$-brɛ̃mbrɛ̃
L. PROG-think COMP OBV love OBV-REFL
'Lindsay$_i$ thinks that 3sg$_j$ loves 3sg-self$_j$.' (20230629_hre)

While reflexive meaning is presumably complex, anaphors are obligatorily bound. If OBV were incapable of being bound, we might expect it to have no corresponding reflexive form, contrary to fact.[14]

The sum total of this evidence supports the the version of the reference constraint offered in (12): OBV is capable of coreferring with or being bound by other items in the sentence, as long as its binder is not the highest DP.

4.3 Reference-tracking effects

The full richness of the Atchan pronominal system comes into play in narrative texts. In this section, I show (as briefly mentioned previously) that the difference between PROX and OBV is leveraged in narrative texts as a form of reference tracking. Examining texts and the reference-tracking effects that emerge enables us to corroborate the reference consraint in a new way: we can ask *which referents* in a narrative text are referred to with PROX vs. OBV. What we observe is that OBV is systematically used to refer to less topical entities, consistent with a (somewhat flattened) view of the reference constraint.

First, we can see reference tracking occur: PROX and OBV are often used in a stable way to refer to contrasting referents in a narrative passage. This is illustrated below, in a passage about a child and a spirit:

14 A salient parallel to the Atchan data comes from gendered English reflexives like *herself*. Just like the ordinary gendered pronoun *her*, *herself* presupposes that its referent is female. Analogously, we might expect properties of Atchan OBV to survive in a parallel way in the corresponding reflexive.

(22) Yípɔ lókɔn, nánnánmi bɛn bha mén phɔ, nkɛ chɛ ándénga núk^{h}wé, nkɛ hón-ɛn jika kranmɛn, ló mísé-ndu dɔn mén mén, nkɛ té yí dri phɔ...
jípɔ lókɔ̃, nã́nã́mi bɛ̃ ɓa mɛ́̃ p^{h}ɔ, nkɛ c^{h}ɛ á̋-dɛ́̃ga
child DEM spirit INDF be.at PROX body OBV cause PROX.S-make.noise
núkhwé, nkɛ hɔ̃́-ɛ̃ ɟika krãmɛ̃, ló mísé-ndu dɔ̃ mɛ́̃ mɛ́̃,
scream OBV take-PROX.O shake hard so saliva hit PROX mouth
nkɛ té jí dri p^{h}ɔ
OBV do thing make.suffer body

'That child$_i$, a spirit$_j$ is in his$_i$ body; he$_j$ makes him$_i$ scream; he$_j$ takes him$_i$ and shakes (him$_i$) hard, so that saliva foams at his$_i$ mouth; he$_j$ makes (him$_i$) suffer.' (Luke 9:39)

This passage opens with an overtly-topicalized individual 'that child,' after which a second individual, the spirit that possesses him, is introduced. Throughout the passage, the child is referred to with PROX pronouns, the spirit with OBV. Here, of course, we observe that OBV refers throughout to the non-topicalized individual, in a way that is fully consistent with our distributional and reference constraints. That is, we see evidence that OBV preferentially does not refer to matrix topics in sentences where matrix topics are overtly marked.

We can also observe that the span over which PROX and OBV assignment occurs is smaller than a full text (but, rather, more sentence-level). Specifically, the referents tracked with PROX and OBV can change over the course of a narrative text, in ways that mirror referents' intuitive topicality. In the following passage, for instance, the forms used to refer to the governor change over the course of the passage:

(23) Ńgbankɔ́-phámán ka adi Sezare khúbhé, wo bho hrɔ́ se guvɛnɛ, ló wo hɔn Phɔ́lu se nkɛ. Guvɛnɛ kan hrɔ́, ló ńmi Phɔ́lu, nkɛ gotho si nkɛ chan. Lóka ńyɛn salé nkɛ chan Sisili gotho ɔn...
ń-gbankɔ́-p^{h}á-mã́ ka a-di sezare k^{h}úɓé, wo ɓo hrɔ́ se
CM-horse-ride-PL time 3.PFV-be Caesarea country 3PL take letter give
guvɛnɛ, ló wo hɔ̃ p^{h}ɔ́lu se nkɛ. guvɛnɛ kã hrɔ́, ló
governor so 3PL take Paul give OBV governor read letter so
ń-mi p^{h}ɔ́lu, nkɛ gotho si nkɛ c^{h}ã. ló-ka
PROX.S.PFV-ask Paul OBV country place OBV come.from DEF-time
ń-jɛ̃ salé nkɛ c^{h}ã sisili got^{h}o ɔ̃...
PROX.S.PFV-know COMP OBV come.from Cilicia country TOP
'When the cavalry arrived in Caesarea, they gave the letter to the governor$_i$, and they gave Paul$_j$ to him$_i$. The governor$_i$ read the letter, so he$_i$ asked Paul$_j$ what country he$_j$ came from. When he$_i$ learned that he$_j$ came from Cicilia...'
(Acts 23:33-34)

Here, the governor is initially introduced and referred to using OBV. Later in the passage, he is referred to using PROX (and Paul is referred to with OBV).[15] The switch in pronouns mirrors a change in the intuitive topicality or discourse centrality of the governor: the governor is originally a less-central individual in the discourse (the previous sentence in this passage focused on the cavalry's travels), but he becomes more central over the course of this passage as he decides what to do with Paul. This supports both the spirit of our reference constraint—OBV is used to refer to entities that are not currently topical—and also view on which the (im)possible referents of OBV are calculated on a sentence-by-sentence basis.

Additionally, we can observe that the intuitive function of OBV is to mark disjointness from a subject/topic. Two pieces of evidence support this conclusion. First, when a narrative centers on only one referent, only PROX pronouns are used, as shown in the following passage about Jesus:

(24) ńpha no ábhóbhó bɛn tho ánna Yankan. Lóka ácí gu, mɛ́n míbrɛ ńma lóne...
ń-p^{h}a no áɓóɓó bɛ̃ t^{h}o ā́-na jãkã. ló-ka
PROX.S.PFV-climb go mountain INDF top PROX.S-pray God DEF-time
á-cí gu, mɛ̄́ mí-brɛ ń-ma lóne
CM-day be.night PROX ?-one PROX.S.PFV-be.at there
'He went to the top of a mountain (and) he prayed to God. When it was dark, he alone was there.' (Matthew 14:23)

Here, Jesus is referred to throughout with PROX pronouns. I have found no corresponding passages that center on just one referent and use OBV. That is, OBV is only used when there is contrast between multiple referents. This is consistent with our distributional constraint, which predicts the impossibility of using OBV in passages like this one.

Finally, we note that the translators preferentially use OBV specifically when there are multiple possible third-person referents that can be disambiguated through pronoun choice.[16] This is shown in the near-minimal pair in (25), from consecutive verses in Matthew 2:

(25) a. ló ɛdo yípɔ le mɛ́n man ɔ́nmɔn wá ló Ejiphithi.

15 The reader might note that an instance of *guvɛnɛ* 'governor' occurs between the governor's reference with OBV and his later reference with PROX. It is compelling to think that this use of an R-expression serves to 'reset' the topicality of the governor.

16 Note, however, that OBV can be licensed by speech-act participants:

(1) mɛ̃ mpɔ nɛ wɔ́
1SG love OBV cat
'I love 3sg's cat.' (20230624_kou_jea)

That is, OBV does not require a c-commanding third-person DP. I believe that the pattern in (25) reflects additional pragmatic awareness about the PROX/OBV distinction.

ló ɛ-do jípɔ le mɛ́ mã ɔ́mɔ̃ wá ló ɛɟip^{h}it^{h}i
so 2SG.S-receive child with PROX mother with run go Egypt
'Take the child$_j$ and his$_j$ mother and flee to Egypt.' (Matthew 2:13)

b. ńdo yípɔ le nkɛ man ɔ́nmɔn no Ejiphithi.
ń-do jípɔ le nkɛ mã ɔ́mɔ̃ no ɛɟip^{h}it^{h}i
PROX.S.PFV-receive child with OBV mother with go Egypt
'He$_i$ took the child$_j$ and his$_j$ mother and left for Egypt.' (Matthew 2:14)

The first sentence, (25a), is an imperative; here, there is only one salient 3SG antecedent for the indicated pronoun, and PROX is used to refer to the child. By contrast, (25b) has a different 3SG subject (Joseph, referred to here with PROX). In this sentence, there are two potentially salient referents for the pronoun (either Joseph or the child); here, using OBV to refer to the child resolves this ambiguity, since the subject is a structurally-higher PROX pronoun. These minimally-contrasting sentences cleanly show how the alternation between PROX and OBV can be leveraged: because OBV has restricted referential possibilities, its use can limit ambiguity in sentences like (25b).

5 An obligatory binding analysis

In the previous sections, we arrived at the conclusion that Atchan OBV is subject to a pair of constraints that restrict its distribution and reference. These constraints are repeated below:

(26) **Distributional constraint on OBV:** Atchan OBV cannot occur as the highest DP in a sentence.

(27) **Reference constraint on OBV:** Atchan OBV cannot be construed as coreferential with/bound by the highest item in the sentence.

This pair of constraints is a fundamental pair of constraints that feeds into the analysis of obligatorily-bound items. For instance, claiming that an anaphor is subject to Condition A captures both distributional constraints (e.g., anaphors are ruled out in matrix subject position because there is no higher item to bind them) and reference constraints (e.g., obligatory binding/coreference). This kind of obligatory-binding approach has also been pursued by Koopman & Sportiche (1989) for a pair of pronouns in Abé (Kwa, Côte d'Ivoire) that resemble the Atchan pronouns and may be cognate with them.

With this motivation, in this section I will develop an obligatory-binding-based account of Atchan OBV. In §5.1, I make a syntactic proposal regarding the 'highest DP' position in Atchan (the position where OBV cannot occur). In §5.2, I propose a semantics for OBV. In §5.3, I show that the proposal correctly captures the relevance

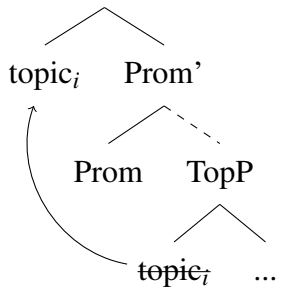
of c-command for binding of OBV. In §5.4, I offer an explanation for why OBV cannot be free.

5.1 Clausal structure and PromP

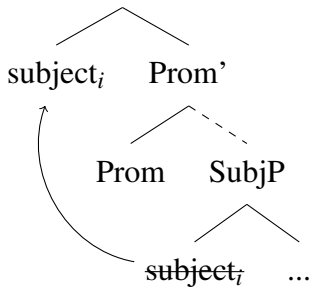
We have seen that Atchan OBV cannot occur as the highest DP in the sentence. One natural way to capture distributional constraints is to assume that obligatorily-bound items are obligatorily bound by a/the position that those bound items cannot occur in. Let us make that analytical move for Atchan (deferring questions of how OBV obtains its reference until the next section). Formally, this means that Atchan OBV must be bound by the highest DP in the clause. For simplicity, it is useful for us (though not strictly necessary) to assume that the highest DP in Atchan occupies a distinct position in the syntax.

We saw in the previous section that Atchan has a Top > Foc > Subj hierarchy in matrix clauses. For analytical simplicity, let us assume a highest head Prom(inence) which occurs above Top, i.e., Prom>> Top > Foc > Subj. Importantly, I assume that Prom is only projected in matrix clauses. Let us assume that the highest DP (from Top/Foc/Subj) string-vacuously moves to Spec,PromP, as schematized below for movement of topics (28a) and subjects (28b):[17]

(28) a.



b.



The upshot of this move is that we have simplified the distributional constraint on OBV yet further: OBV cannot occur as, and therefore (I propose) must be bound by, the DP that occupies Spec,PromP.

In the next section, I turn to the second constraint on OBV, its reference constraint. The next section builds upon this one and posits that the Prom head is, semantically, a special operator that accomplishes the binding of OBV.

17 The reader might worry about locality of movement in this configuration, e.g., Spec-to-Spec Antilocality constraints (Erlewine 2016). The matrix-clause periphery is presumably sufficiently complex (cf. Rizzi 1997) that we can safely assume some additional projection(s) intervening between PromP and TopP.

5.2 A disjointness requirement

We have arrived at what looks like a contradiction: in the previous section, I proposed that OBV is necessarily bound by the item in Spec,PromP, but the reference constraint holds that OBV is obligatorily interpreted as disjoint from the highest item, i.e., the item occupying Spec,PromP.

To resolve this tension, I propose that the denotation of Atchan OBV differs from that of Atchan PROX. Specifically, PROX is in all respects a standard pronoun; I take it to have the semantics in (29) below:

(29) $[\![\text{PROX}_n]\!]^g = g(n)$

I take this to be the semantics of an ordinary, Condition-B-obeying pronoun (cf., e.g., Heim & Kratzer 1998). The particular semantics of this pronoun are not crucial and could be made consistent with other theories of pronominal semantics.

I propose that Atchan OBV has the assertive component of an ordinary pronoun (namely, $g(n)$), but bears an additional presupposition that its referent must be distinct from the most prominent individual in the clause. In analogy with work on pronominal gender features, I propose that OBV can be decomposed into two components: an ordinary pronoun (like PROX) with an additional "difference" feature, which I call DIFF. I propose that DIFF_α adds a disjointness presuppposition between an individual x and a distinguished variable α. The disjointness condition is furthermore inspired by and can be compared to work on the meaning of *different* (Brasoveanu 2011, Hardt & Mikkelsen 2015).[18] Specifically, DIFF has the following meaning:

(30) $[\![\text{DIFF}_\alpha]\!]^g = \lambda x_e : x \neq g(\alpha) \,.\, x$

This type-$\langle e, e\rangle$ presuppositional feature is formally parallel to popular treatments of gender features on pronouns (Heim & Kratzer 1998, Heim 2008, Sauerland 2008). For instance, Heim & Kratzer (1998) offer the following denotation of the feature that occurs on female pronouns like *she*:

(31) $[\![\text{feminine}]\!] = \lambda x_e : x \text{ is female} \,.\, x$ (Heim & Kratzer 1998:244 (10))

Work on gender features standardly assumes that those features either adjoin to the pronominal DP (Heim & Kratzer 1998, Heim 2008) or are hosted in an additional Φ head that takes the pronominal DP as its complement (Sauerland 2008). For now, either of these treatments suffices for DIFF and OBV; these analytical options will be addressed again in §6.

18 Because Atchan OBV can only refer to singular individuals, this simple difference condition suffices for our purposes.

The overall meaning of OBV, composed of PROX and DIFF, is given below. Here, OBV is doubly-subscripted: the first subscripted variable corresponds to PROX, the second to DIFF.

(32) $[\![\text{OBV}_{n\backslash\alpha}]\!]^g = [\![\text{PROX}_n\text{-DIFF}_\alpha]\!]^g = g(n)$ defined if $g(n) \neq g(\alpha)$

This gives us a way out of our binding dilemma, since we have two indices (n and α) that can be bound separately.

I propose that the contribution of the Prom head is to bind the instance of α that occurs in the presupposition of OBV. That is, OBV must be semantically bound (more specifically, α must be bound by the item in Spec,PromP), but the effect of DIFF is that $g(n)$ will always come out as distinct from the referent of the item in Spec,PromP.

The Prom head, on this account, is semantically a variable binder that accomplishes two things. First, since the highest DP undergoes movement to Spec,PromP, Prom must bind the trace of that DP. Second, Prom must also bind the variable α. I define Prom syncategorematically as follows:

(33) $[\![\text{Prom}_{i,\alpha}\ \beta]\!]^g = \lambda x.[\![\beta]\!]^{g[x/i,\, x/\alpha]}$

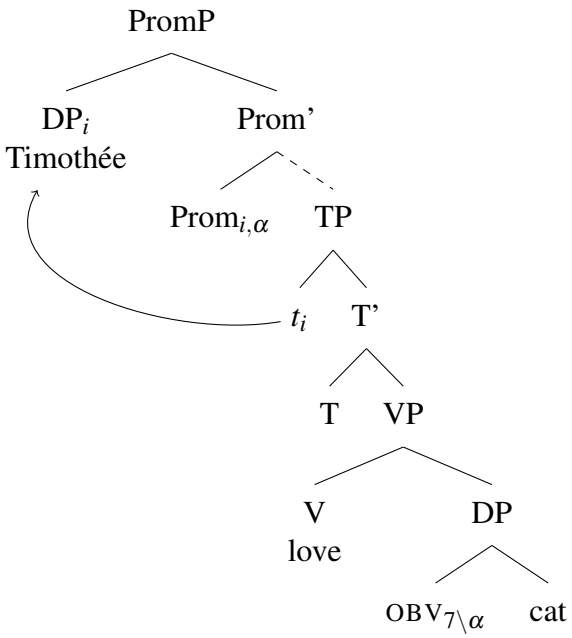
Prom binds a specific set of variables that occur within β; I indicate this particular set of variables as subscripts on the binder, as with Heim's (1982) selection indices. The upshot, then, is that Prom binds every occurrence of α, and additionally binds the trace of whatever has moved to its specifier.

To illustrate the analysis, let us consider a simple example of anti-subject orientation in a simple clause:

(34) timote pɔ nɛ wɔ́
T. love OBV cat
'Timothée$_i$ likes 3sg's$_{j/*i}$ cat.' (20220805_chr_mar)

Here, Timothée is the subject, and no other information-structural marking is present. Therefore, I assume that Timothée moves to Spec,PromP, yielding the syntactic structure shown below (showing only relevant projections):

(35)



From here, the derivation proceeds as follows. Composition within the VP is standard:

(36) $[\![\text{DP}]\!]^g = \iota x[\text{cat}(x) \wedge \text{of}(g(7))(x)]$
defined if $g(7) \neq g(\alpha)$

(37) $[\![\text{VP}]\!]^g = \lambda y.\text{love}(\iota x[\text{cat}(x) \wedge \text{of}(g(7))(x)])(y)$
defined if $g(7) \neq g(\alpha)$

The trace of the moved subject saturates the experiencer position:

(38) $[\![\text{TP}]\!]^g = \text{love}(\iota x[\text{cat}(x) \wedge \text{of}(g(7))(x)])(t_i)$
defined if $g(7) \neq g(\alpha)$

Then, the contribution of Prom is twofold: it abstracts both over the trace of the moved subject, and over the variable α:

(39) $[\![\text{Prom'}]\!]^g = \lambda y.\text{love}(\iota x[\text{cat}(x) \wedge \text{of}(g(7))(x)])(y)$
defined if $g(7) \neq y$

Finally, the moved subject saturates this position:

(40) $[\![\text{PromP}]\!]^g = \text{love}(\iota x[\text{cat}(x) \wedge \text{of}(g(7))(x)])(\text{Tim})$
defined if $g(7) \neq \text{Tim}$

With this, we capture the anti-subject reference constraint in this example: OBV cannot refer to Timothée, the highest DP. This account extends naturally to sentences involving overt topics or foci, in which case OBV must be disjoint from that highest item.

5.2.1 (Null) topics

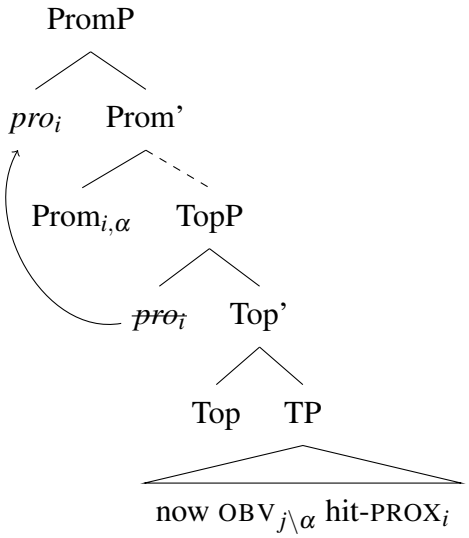
The account that I have developed tightly links prominence to syntactic structure: OBV must be disjoint from the highest DP in the sentence. This approach enables us to capture a variety of generalizations, but we have not yet captured all of the data. In reference-tracking situations, as it turns out, OBV can occur as a subject with no overt higher structure. An example from a story told during elicitation is provided below:[19]

(41) Context: Yesterday, Katie$_i$ did something bad. PROX$_i$ hit Timothée$_j$.
ɛ́nthé nɛ$_j$ chrwɛ$_i$
now OBV hit.PROX.O
'Then, 3sg$_j$ hit 3sg$_i$.' (20230823_hre)

Here, OBV is licensed in matrix-subject position even when no higher DP is visible. This is unexpected: on the account developed to this point, if OBV is the highest DP in the clause, it will move to Spec,PromP and therefore ultimately fail to be bound.

To account for the felicity of examples like (41), I assume that a null topic pronoun referring to Katie can be projected in narrative sentences with continuing topics. That is, the syntactic structure of (41) is actually the following:

(42)



The syntactically-projected null topic thus is the highest DP, which moves to Spec,PromP and from which subject OBV must be disjoint. Assuming that Katie is the continuing topic in this narrative context, this sentence is therefore correctly

19 The verb in (41) is [chwrɛ] 'hit.PROX.O', underlyingly /chrwa-ɛ/ 'hit-PROX.O'.

predicted to be felicitous, since Timothée, the referent of OBV, is not coreferential with the topic.[20]

5.3 Predictions: Teasing apart high positions and c-command

On this view, binding of the distinguished variable α is fundamentally different from ordinary variable binding, in the sense that binding of α necessarily requires c-command. That is, binding of α is accomplished by Prom, making OBV disjoint from the item occupying Spec,PromP. Since we assume that the highest DP undergoes movement to Spec,PromP, on grounds of locality, OBV is always forced to be disjoint from a DP that c-commands it on the surface.

This prediction is borne out when we look at structurally-complex subject DPs. In these sentences, OBV is forced to be disjoint from the overall subject but can corefer with other DPs contained within the subject. For instance, lower OBV in (43a) can refer to Katie:

(43) a. [kati$_k$ mi ɓje]$_i$ e-ɓú sálé nɛ$_{k/*i}$ ɲɔ̃
K. child girl prog-think COMP OBV pretty
'Katie$_k$'s daughter$_i$ thinks 3sg$_{k/*i}$ is pretty.' (20230705_hre_chr_mar)

b. [sɛ kʰɛ́́ kati$_j$ wu]$_i$ ã$_i$ mú kákɔlé nɛ$_{j/*i}$ ɲɔ̃
man COMP K. see PROX.S think COMP OBV pretty
'The man that Katie$_i$ saw thinks that 3sg$_i$ is pretty.' (20230704_yap)

20 The positing of null topics in Atchan might be surprising from an areal perspective. Niger-Congo languages do not generally permit pro-drop (Bisang 2014). However, cross-linguistic evidence suggests that null topics can occur in non-pro-drop languages. For example, German 'topic drop' sentences like (1) allow exceptional matrix-clause declarative verb-initial word order alongside the apparent omission of the topic:

(1) Context: Q: What's up with Sofia?
Hab' ich seit drei Wochen nicht mehr geseh'n.
have 1SG since three weeks not more seen
'I haven't seen (her) in three weeks.' (Fries 1988: (1)-(3))

This phenomenon is standardly analyzed as involving null topic pronouns in German, an otherwise non-pro-drop language (Fries 1988, Trutkowski 2016, a.o.): these accounts posit a preverbal null topic, permitting a reconciliation between the surface word order in (1) and German's well-known V2 syntax.

Similarly in spirit, Charnavel (2019, 2020) proposes a null $pro_{\log}$ in the periphery of certain clauses in French, again invoking distributionally-restricted null pronouns in a non-pro-drop language. More broadly, as David Blunier (p.c.) notes, there is an interesting possible connection between these continuing-topic examples in Atchan and uses of logophoric pronouns when they are licensed in a modal-subordination-like way by attitude reports in a previous sentence (cf. Pearson 2015:(66)). It seems likely that similar machinery is needed to capture these modal-subordination uses of logophors and extended narrative uses of subject OBV.

This is predicted on our account: it is (rigidly) the highest DP, in (43a) Katie's daughter, from which lower OBV must be distinct. In this way, binding of α differs from ordinary quantificational binding, which does not require c-command (Bach & Partee 1980):

(44) [Every boy]$_i$'s mother loves him$_i$.

Here, a quantifier inside the DP can bind a pronoun that the quantified DP does not c-command. This binding is analogous to the coreference observed in (43). This data underscores that binding of α, by contrast, is fundamentally different than binding of ordinary variables: c-command is not required for ordinary binding but is for distinguished-variable binding.

Turning to distribution, we can note also that OBV is dispreferred in subject possessor position. Here, OBV is less frequent than PROX, and consultants report the intuition that additional context is needed to make it felicitous:

(45) mɛ́/ʔ^{ok}nɛ wɔ́ ɲɔ̃
PROX/OBV cat pretty
'3sg's cat is pretty.' (20230625_kou_jea)
kou: sentence with OBV is ok 'if I see someone'

Here, I think we can interpret the comments about particular scenarios permitting OBV as a comment about topicality: OBV can be licensed in this position if something else is topical, but it is not the default. This is a prediction of this account. If the subject is the highest DP and undergoes movement to Spec,PromP (i.e., there is no null topic), a possessor of the subject will pied-pipe alongside the subject. As a consequence, OBV should fail to be licensed in this position if there is no additional context. In this way, we again see the relevance of c-command: since no overt higher DP c-commands the subject possessor, OBV is not licensed without additional context/structure.

5.4 Obligatory binding and distinguished variables

In this analysis, I have proposed that Atchan OBV is subject to an obligatory-binding constraint. Namely, the denotation of OBV contains a particular variable, α, that is semantically bound (i.e., abstracted over) by the high Prom head.

The fundamental question of obligatory binding, of course, is why obligatorily-bound items cannot be free. No part of the account to this point technically rules this out—but ruling this out is crucial, because allowing for free occurrences of α (and, hence, free occurrences of OBV) loses the thread of the empirical constraints that this account is supposed to capture.

I propose that binding of OBV is forced by a constraint on assignments, on which distinguished variables like α cannot obtain their reference from the assignment

function. Formally, this is to say, α differs from the 'standard' indices that we like to abbreviate numerically in that α is guaranteed not to be in the domain of the (matrix) assignment function g:

(46) **Constraint on assignments:** Where g is a variable assignment provided by context, distinguished variables (α, γ, ...) are not in the domain of g.

Formally, then, a tree that contains free α (i.e., free OBV) will be composable, but it will not be in the domain of the assignment function. The Prom head modifies the assignment function, however, so everything lower than Prom is evaluated not with respect to context-provided g but, rather, a modified context with a value for α. In this way, binding—i.e., replacing α in the assignment function with some well-behaved index—facilitates the interpretation of OBV. Binding is, in general, a mechanism that can rein in wayward variable assignments so that the overall sentence ends up in the domain of the assignment function (for classic discussion of this, see Heim & Kratzer 1998:p.117). What I propose is that, in the case of α and OBV, binding is the only way to fit the overall sentence into the domain of the assignment function.

This view of how and why OBV is bound correctly predicts that binding of OBV can be truly long-distance. As shown in (15), repeated below, binding of OBV obtains even into islands:

(47) a. kati$_k$ wu [lep$^{\text{h}}$ã k$^{\text{h}}$ɛ́ nɛ$_{*k}$ pɔ]
K. see person COMP OBV love
'Katie saw the person that 3sg$_{*k}$ loves.' (20230703_kou_jea)

b. kati$_k$ p$^{\text{h}}$i dja [ló ka k$^{\text{h}}$ɛ́ nɛ$_{*k}$ srɛ]
K. laugh V.PART DEF time COMP OBV stumble
'Katie$_k$ laughed when 3sg$_{*k}$ stumbled.'
(20230703_kou_jea, 20230704_yap)

Binding of OBV, on this account, involves abstraction over α in the matrix-clause periphery. No syntactic relationship between OBV and the highest DP is established, allowing for binding of OBV (visible here in disjoint reference effects) to obtain in domains that would normally preclude Agree. The constraint on assignments rules out free OBV at the end of the derivation, as a kind of filter, since the full sentence is presumably required to be in the domain of the assignment function.

6 On presuppositionality and pragmatics

Our discussion of PROX has made it clear that PROX can, but need not, corefer with higher items. This optional coreference was shown in (1), with (1a) repeated below:

(48) timote pɔ mɛ́ wɔ́
T. love PROX cat
'Timothée$_i$ likes 3sg$_{i/j}$ cat.' (20220805_chr_mar)

This optionality is captured by the semantics I have proposed, since any two ordinary pronouns can optionally be coindexed.

However, speakers sometimes pragmatically strengthen PROX, judging coreference to be obligatory:

(49) kati$_i$ pɔ mɛ́$_{i/*j}$ gba
K. love PROX dog
'Katie$_i$ loves 3sg$_{i/*j}$ dog.' (20230628_hre_chr_mar)

On my account, this can be considered an antipresuppositional inference: OBV is specialized for indicating disjoint reference. Accordingly, a speaker who chooses to use PROX might be taken to not intend to communicate disjointness; i.e., that speaker might be taken to intend to communicate coreference.

A consequence of this is that the reference-tracking effects seen in narrative texts are the result of additional pragmatic labor beyond the literal semantics of PROX and OBV: a pragmatically-aware speaker would use PROX and OBV to stably refer to different individuals in a narrative text if that speaker has stable continuing topics in mind and wishes to avoid ambiguity in their utterances. This, I think, is an appealing view of the creative process of translation, especially in settings like Bible translation efforts. In these kinds of settings, generating a clear and maximally unambiguous text is crucial, so that the resulting text can be understood by future readers.

The disambiguation effect is not the only pragmatic effect associated with use of OBV in Atchan. When OBV is used (e.g., by me) in environments where it is not normally licensed, speakers sometimes note additional inferences associated with these uses. Consultants, for instance, have commented that subject OBV means the sentence is about "someone else" or is used when "you don't like [the referent of OBV] and don't want to talk about [that person]." I believe that both of these comments can be captured by the proposed orientation of OBV. The first might be understood as a comment about the anti-topicality of OBV. The second, I believe, also can be understood as reflecting OBV's anti-topicality: by using subject OBV, the speaker forces the referent of OBV not to be topical (via an added null topic).

One important question remains: why does *Maximize Presupposition!* (henceforth *MP*, Heim 1991) not alway force coreference between PROX and the structurally highest item? On this account, OBV has an extra presuppositional component that PROX does not. Since *MP* generally requires that presupposition-carrying items be used instead of other options whenever the relevant presupposition is satisfied, the corresponding logic would suggest that presupposition-bearing OBV must be used whenever its disjointness presupposition is satisfied. The effect would be that

OBV should be the only 3SG pronoun option when that pronoun is disjoint from the highest DP. A consequence is that lower PROX should obligatorily corefer with the highest DP. This is not actually the case, as seen in (48).

Several possible explanations of this fact are possible: (1) we could posit that the disjointness component of OBV is not actually presuppositional, (2) we could posit structural differences between PROX and OBV to make them not compete with one another, (3) we could appeal to other Atchan-specific factors, or (4) we could attempt to generally constrain *MP*. I will consider each in turn, rejecting the first possibility but arguing that the latter three are potentially viable.

6.1 Types of projective content

One option would be to posit that the disjointness condition on OBV is not actually presuppositional. This kind of approach, in a different empirical domain, has been pursued by Mucha (2015) for optional tense markers in Medumba (Grassfields Bantu, Cameroon). Mucha analyzes temporal remoteness markers in Medumba that indicate the temporal distance between speech time and the relevant event time. Because of the optionality of these markers—speakers can always use a temporally-unmarked form even when a marked form would be appropriate—Mucha proposes that the temporal remoteness markers in Medumba are non-presuppositional, specifically to avoid *MP*-related questions.

However, one strength I see to the presuppositional approach I have pursued for Atchan relates to the projective behavior of OBV's disjointness condition.[21] Specifically, the disjointness inference projects in quantificational environments. Consider the following pattern of judgments:

(50) Context: Timothée$_j$ is a contextually-salient man, and Lindsay$_k$ is a contextually-salient woman.
ɓje brɛ-brɛ e-ɓú sálé nɛ ɲɔ̃
woman one-one think COMP OBV pretty
'Every woman$_i$ thinks 3sg$_{j/*i/*k}$ is pretty.' (20230704_hre)

Here, a quantified subject is the highest DP; binding of OBV by the quantifier is ruled out, as is (crucially) mere reference of OBV to a woman. On my account, the ban on both binding by the subject and mere woman-reference is accounted for by positing universal projection of the disjointness requirement.

21 Recently, Bassi et al. (2023), in line with Sauerland (2013), propose an additional diagnostic for presuppositionality: presuppositional features can be ignored in ellipsis. We will return to Bassi et al.'s account of logophoric pronouns in §8. What their approach predicts for Atchan is that the disjointness presupposition of OBV should be (optionally) ignorable in ellipsis. More investigation of strict and sloppy ellipsis in Atchan will enable us to test this prediction.

To make this more concrete, let us return to gender features on English pronouns, which are standardly assumed to be presuppositional in nature (Cooper 1983, Heim & Kratzer 1998, Heim 2008, Sauerland 2008, a.o.). Projection provides classic evidence in support of a presuppositional analysis of these gender features. This projective behavior can be seen, for example, in the infelicity of sentences like the following:

(51) $[$Every man and woman$]_i$ thinks she$_{*i}$ is smart.

Importantly, this sentence cannot mean that *every [man and woman]$_i$ thinks [they$_i$ are smart and they$_i$ are female]*: the gender presupposition projects. Binding of *she* is unavailable here because not every individual in the domain of quantification meets the female presupposition associated with *she*.

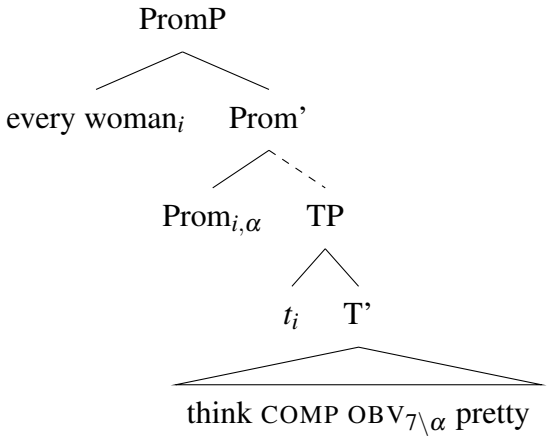
This projection pattern is standardly ascribed to the meaning of *every*. An appropriately-projective denotation of *every*, from Heim (2008), is given in (52):

(52) $\lambda f_{\langle e,t\rangle}.\lambda h_{\langle e,t\rangle} : \underline{\{x : f(x) = 1\} \subseteq \mathrm{dom}(h)}.\{x : f(x) = 1\} \subseteq \{x : h(x) = 1\}$

The presuppositional component requires that all individuals meeting the restriction of the quantifier satisfy meet any presuppositions introduced in the quantifier's scope. For (51), this means that the bound reading of *she* is only permitted if every man and woman meets *she*'s presupposition of being female—a clearly contradictory requirement, assuming non-vacuity of the domain.

Returning to (50), the unavailability of reference to a woman is explained in a similar way. Consider the syntactic tree and corresponding derivation below:

(53)



(54) a. $[\![\mathrm{TP}]\!]^g = t_i$ thinks $g(7)$ is pretty
defined if $g(7) \neq g(\alpha)$

b. $[\![\text{Prom'}]\!]^g = \lambda x.x$ thinks $g(7)$ is pretty
defined if $g(7) \neq x$

c. $[\![\text{PromP}]\!]^g = \forall x[\text{woman}(x) \rightarrow x \text{ thinks } g(7) \text{ is pretty}]$
defined if $\{x : \text{woman}(x)\} \subseteq \text{dom}([\![\text{TP}]\!])$
i.e. defined if $\forall x[\text{woman}(x) \rightarrow g(7) \neq x]$

The resulting definedness condition rules out reference of $g(7)$ to any woman in the domain of quantification.

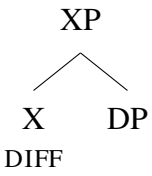
In summary, treating OBV's disjointness inference as projective content correctly captures behavior of the disjointness inference of OBV in quantification. Accordingly, I believe that a presuppositional account is on the right track; I am inclined to pursue a different approach to the *MP* question.[22]

6.2 Structure

A second option would be to claim that PROX and OBV are not *MP* competitors, due to structural differences between the two (Katzir 2007, Fox & Katzir 2011). At this point, I know of no empirical evidence for structural differences between PROX and OBV. However, we could stil reasonably posit that PROX and OBV have syntactic differences, due to the additional DIFF presuppositional component of OBV.

As discussed in §5.2, gender presuppositions are often assumed to be introduced in one of two locations in a pronoun: either they adjoin to the pronominal DP (Heim & Kratzer 1998, Heim 2008), or they are hosted in a ΦP that c-commands DP (Sauerland 2008). In parallel with the latter approach, we could assume that DIFF is hosted in a higher head X above DP:

(55)



On this approach, we could then argue that PROX and OBV do not compete precisely because OBV necessarily contains more syntactic structure (XP and DP) than PROX (just DP). In this way, the analogy between gendered pronouns and Atchan pronouns would break down: gendered pronouns, by hypothesis, *all* contain ΦP, so they do compete with one another.

A different kind of structural approach to this question would be to assume that the high head Prom is only projected in some but not all Atchan sentences. When Prom is projected, it enables the binding of the variable α, thereby enabling the licensing of OBV. If we assume that Prom is only sometimes projected, then OBV

22 Other types of inferences, like conversational implicatures (Potts 2005), could also be possible; my main goal in this paper is not to adjudicate between the projectivity of various types of content.

will only sometimes be licensed. When Prom is not projected, then PROX will be the only licensed pronoun, so no *MP* effects will arise.[23]

6.3 Atchan-specific factors: Change in progress

A third possibility would be to assume some Atchan-specific reason why PROX and OBV do not compete as we might expect. The most salient possible explanation relates to Dido's (2018a) observation that OBV is used less by younger speakers: from this observation, it seems potentially reasonable to assume that a language change is currently in progress in Atchan, in which OBV is being lost.[24] Speakers who are losing OBV might reanalyze [n(k)ɛ] as one object form of the 3SG pronoun; coincidentally, this aligns with early case-based descriptions of Atchan pronouns, like the description of Bôle-Richard (1983).

Concretely, we could assume that a syntactic/semantic change-in-progress can be formalized as two different grammars, which certain speakers can switch between (Santorini 1992, Kroch 1995, Pintzuk 2017, a.o.). Specifically, we would assume that some Atchan speakers (including all of my consultants) can switch back and forth between the following two grammars:

(56) a. Grammar 1: has PROX (with S, O, and elsewhere), has OBV ([n(k)ɛ])
b. Grammar 2: has one pronoun (3SG.S, 3SG.O [n(k)ɛ] or [-ɛ], 3SG elsewhere [mɛ́])

If a speaker were to use Grammar 1, their utterances would be subject to *MP* (so the speaker would use PROX only for coreference); if that speaker were to use Grammar 2, they would only have one 3SG pronoun at their disposal, and so they could use forms like [mɛ́] in non-coreferential situations with no *MP* issue.

One empirical advantage to positing this change-in-progress is that it might help to explain why speakers often are more willing to permit coreference between high DPs and [n(k)ɛ] if the lower [n(k)ɛ] occurs in direct-object position. This was shown, incidentally, in the contrast between (9) and (17), both or which are repeated below with different emphasis:

(57) a. # kati, mɛ̃ mpɔ nɛ ntráljɛ́
K. 1SG love OBV clothes

23 This approach makes the interesting prediction that *MP* effects should vary on a per-sentence level. Specifically, it predicts that if OBV occurs in a given sentence, then in that sentence use of PROX will be subject to *MP* constraints. That is, it predicts it to be impossible for a single sentence to contain *both* OBV and non-coreferential PROX. This prediction must await future testing.

24 As mentioned in Footnote 2, the apparent plural counterpart to OBV, [ŋkɔ̃], has already been lost by many speakers. Of my six consultants, five do not recognize the form [ŋkɔ̃]; the sixth recognizes it only as a form used by older generations. Thus, it seems that the pronominal system of Atchan is generally in flux at present.

Intended: 'Katie$_i$, I love 3sg's$_i$ clothes.' (20230624_kou_jea)

b. elize/ #nɛ$_i$, mɛ̃ nɔ́ mɛ̃ ndɔ mã nɛ$_i$ mɔ́
L/OBV 1SG FOC 1SG help OBV mɔ́
'Lindsay/#3sg$_i$, it's me who helped 3sg$_i$.' (20230628_hre_chr_mar)

This pair of data points reveals multiple facts. First, speakers reject OBV as an overt matrix-clause topic, as shown in (57b). Similarly, they reject OBV as a resumptive element for non-DO items, like the possessor in (57a), but sometimes permit DO resumption of topics by [n(k)ɛ] in (57b). In my data, this exceptional [n(k)ɛ]-resumption happens only when the topic is resumed by a direct-object pronoun. This [n(k)ɛ]-resumption is not explained on the account developed to this point; appealing to a change-in-progress could explain why [n(k)ɛ]-resumption is sometimes exceptionally permitted specifically in direct-object position.

6.4 Discussion, and revisiting *MP*

In this section, I have argued that we *should* treat the disjointness inference on OBV as presuppositional, and I have offered two possible explanations for why PROX and OBV do not compete: structural differences make the two not compete with one another, or changes-in-progress obscure *MP* effects. These two possibilities are not incompatible, and in fact appealing to both at the same time might be conceptually desirable and empirically attractive. We might also consider the slightly more radical position that *MP* is constrained in its application, perhaps on a by-language basis. Hohaus & Bowler (2022), in their discussion of cross-linguistic formal pragmatic research, explicitly note this possibility, and observe a current lack of empirical evidence on *MP* across languages.

More broadly, there is a tension in how and when presuppositions and *MP* are appealed to in the analysis of "optional" phenomena across languages: specifically, projection and competition are often discussed separately. In this paper, I have argued in favor of a presuppositional analysis because of projective behavior, which makes *MP* and competition a necessary side discussion. This contrasts sharply with the literature on optional-tense languages, where projection is largely irrelevant—this literature engages with the presence or absence of competition effects as evidence for or against presuppositional status (Mucha 2015, a.o.). Especially given the range of projective behaviors that have been attributed to different presuppositions in English and other languages (Tonhauser et al. 2018), evidence like the Atchan data might provide further motivation for additional work on the nature of presuppositionality and *MP* across languages. A more thorough investigation of *MP*'s application across languages would require an investigation of multiple domains—e.g., pronouns, aspect, definiteness—where we might expect to see *MP*-like effects.

7 Comparison to alternative analyses

In this section, I discuss two alternative approaches to pronominal syntax and and semantics that have been applied in the analysis of pronominal distinctions that resemble, at least to some degree, those of Atchan; I compare the approach pursued here to these alternate approaches. In §7.1, I discuss the strong/weak pronoun distinction (Cardinaletti & Starke 1999) and in §7.2, I discuss Index-based approaches to demonstrative pronouns (Patel-Grosz & Grosz 2017, a.o.).

7.1 Strong and weak pronouns

A first analytical option would be to appeal to the strong-weak pronominal distinction in Cardinaletti & Starke (1999): on their account, strong pronouns realize more syntactic heads than weak pronouns, from which a range of semantic distinctions is argued to follow. Since PROX.O (and perhaps also PROX.S) forms a single prosodic unit with the verb that it occurs adjacent to, we might be inclined to posit that Atchan PROX is a weak pronoun, and OBV a strong one. However, this analytical option is on the wrong track: a range of properties that Cardinaletti and Starke associated with weak pronouns do not hold of Atchan PROX. For example, Cardinaletti and Starke propose that weak pronouns cannot occur in peripheral positions, cannot be coordinated, and cannot associate with focus-sensitive items like 'only.' Atchan PROX, in its elsewhere form [mɛ́], can do all of these things:[25]

(58) a. mɛ́ nɔ́ ɛ́ ɲɔ̂
PROX FOC PROX.S.PFV be.good
'It's 3sg who's pretty.' (20220221_kou_jea)

b. mɛ̃ ŋwu mɛ́ léka nɛ
1SG see PROX or OBV
'I saw either 3sg$_i$ or 3sg$_j$.' (20220811_yap)

c. mɛ́-mbrɛ mɛ̃ ŋ^{w}u
PROX-one 1SG see.PFV
'I saw only 3sg.' (20230624_kou_jea)

All of this data suggests that (merely) appealing to a strong-weak distinction is insufficient to explain the differences between PROX and OBV.[26]

25 Atchan OBV can also be coordinated (58b); as we have seen, OBV can also occur in (some) peripheral positions.

26 Certainly, more must be said to explain the distribution of PROX, PROX.S, and PROX.O. However, that is not our focus here: the difference between PROX (overall) and OBV is not a weak/strong distinction.

7.2 Demonstrative pronouns instantiating Idx

A second kind of analytical possibility that is especially noteworthy is that OBV might be a demonstrative pronoun. Many researchers have noted that in languages like German, pronouns that are build out of demonstratives exhibit a range of special effects, including coreferential restrictions (Wiltschko 1998, Bosch & Umbach 2006, Hinterwimmer & Bosch 2017, Patel-Grosz & Grosz 2017, Sichel & Wiltschko 2021, a.o.). One approach to the analysis of these demonstrative pronouns, which has gained significant traction in recent years, argues that demonstrative pronouns involve an additional syntactically-projected Index (Idx) head (with the semantics of a referential index). This Idx head is held to introduce a number of restrictions on the use and interpretation of demonstrative pronouns (Patel-Grosz & Grosz 2017, Jenks 2018, Bi & Jenks 2019, a.o.). I do not believe that this approach can cleanly account for all of the behavior of Atchan OBV.

First, a brief note: the form of Atchan OBV is not related to demonstratives. Atchan has a demonstrative, [lókɔ̃], with both adnominal and pronominal uses:

(59) mɛ́ mpɔ [a-wɔ́ lókɔ̃] brɛ [lókɔ̃]
1SG like CM-cat DEM exceed DEM
'I like this cat better than that (one).' (20210905_kou_jea)

In this example, *a-wɔ́ lókɔ̃* 'this cat' shows its adnominal use, and later *lókɔ̃* shows its pronominal use. Canonical demonstrative pronouns are, unsurprisingly, morphologically identical to (or at least built out of) demonstratives, but OBV and [lókɔ̃] are fully morphologically distinct.

Second, an empirical challenge: Idx is argued to presuppose that the pronoun's referent has a linguistic antecedent. This rules out, for example, uses of German demonstrative pronouns with implicit antecedents (like the child implicit in the term *pregnant*):

(60) Wenn ich schwanger werde, werde ich {es/#das} auf jeden Fall behalten.
if I pregnant become will I it/DEM on every case keep
'If I get pregnant, I will definitely keep it (= the baby).'
(Patel-Grosz & Grosz 2017:34a)

By contrast, Atchan OBV can refer to implicit antecedents. The relevant data is shown below:

(61) a. kʰɛ́ ɓje tʰí láɓe, ã mú [mɛ́ ɓi] hɛ́mpe
if woman ripen belly ME.NOM think PROX child thought
'If a woman is pregnant, she thinks about her child.'
b. kʰɛ́ ɓje tʰí láɓe, ã mú [nɛ] hɛ́mpe
if woman ripen belly ME.NOM think OBV thought

hre: “If a woman is pregnant, she thinks about ‘the other person’—maybe it’s her child? maybe her husband?” (20230802_hre)

Here, (61a) is a baseline sentence with no implicit reference; PROX in this sentence is a donkey anaphor referring back to the woman. Our goal is to see whether an obviative pronoun in the same position as [PROX child] can refer to the implicitly-mentioned child. This data is shown in (61b). Unsurprisingly, consultants note that these sentences are highly referent-ambiguous, as the consultant’s comment suggests. The crucial judgment here, however, is that the child is a possible referent of OBV in (61b): it does not seem that explicit prior linguistic reference to the referent of OBV is required.[27]

Finally, it is important to note that both PROX and OBV are restricted in that they can only refer to human or animate entities: reference to inanimate forms requires 3INAN pronouns. For example, in the discourse below, neither PROX nor OBV can refer to an inanimate car:

(62) ɛ̃mp^{h}i mɛ̃ mp^{h}ɛ dobi$_{i}$. mɛ̃ mpɔ { ló / #mɛ́ / #nɛ }$_{i}$ nta.
one.day.away 1SG buy car 1SG love 3INAN PROX OBV tire
‘Yesterday, I bought a car. I like its tires.’ (20230722_kou_jea)

For this reason, Sichel & Wiltschko’s (2021) account of demonstrative pronouns, which crucially relies on the demonstrative pronoun being able to refer to inanimate entities, is inapplicable.

In sum, these empirical differences between German demonstrative pronouns and Atchan OBV suggest that an approach that relies solely on Idx or animacy to derive the restrictions on Atchan OBV is not entirely well-founded. On a more conceptual level, work on demonstrative pronouns that derives their properties solely from Idx often relies on various pragmatic/communicative principles to explain their distribution. For instance, German demonstrative pronouns have an anti-topic orientation (Bosch & Umbach 2006). To capture this orientation, Patel-Grosz & Grosz (2017) appeal to a game-theoretic account by Mayol & Clark (2010), proposing that this orientation falls out of general communicative principles.

However, as we have seen, Atchan OBV does not take on a unified anti-topic orientation. Instead, focused items resist OBV coreference just like topicalized items do. This kind of cross-linguistic microvariation in pronoun orientation, I believe, is not something that should be ascribed to communicative principles that are presumably universal. For this reason, I do not pursue an Idx-based approach to Atchan OBV,

27 Of course, in this data it is difficult to know how much consultants are accommodating these sentences by imagining additional context.

and I have instead pursued an approach in this paper that grounds the distribution and interpretation of OBV more squarely in the semantics.[28]

8 Extensions: Towards a typology of long-distance obligatorily-bound items

In this paper, I have argued that Atchan OBV is an obligatorily-bound item subject to a distinctness presupposition. In this section, I discuss possible extensions the analysis to several other known instances of long-distance obligatorily-bound items in other languages.

On the analysis pursued here, there are two ingredients that factor into the analysis of Atchan OBV as an obligatorily-bound item: first, the meaning contribution of the DIFF feature; and second, the location of the binding operator in the periphery of the matrix clause. In this section, I explore the possibility of parameterizing each of these two dimensions. First, in §8.1, I discuss variation in feature meaning and propose that languages might make use of either DIFF (difference) or analogous EQUIV (equivalence) features. Second, in §8.2 and §8.3, I discuss variation in binder location and propose that not all languages involve binding at a high Prom head. I argue that this parameterization gives rise to a meaningful typology of obligatorily-bound items, summarized in Table 2.

	DIFF feature	EQUIV feature
Matrix-peripheral binder	Atchan OBV	Algonquian PROX
Attitude-complement binder	Antilogophor	Logophor

Table 2 Typology of long-distance obligatorily-bound items.

8.1 Feature meaning: Atchan and Algonquian obviation systems

First, let us discuss the effect of parameterizing the meaning contribution of the special type-$\langle e, e\rangle$ feature in a pronoun's meaning. Atchan OBV, I have proposed, contains a special feature DIFF, whose denotation is repeated below:

28 Nonetheless, there is a formal parallel between my account and the Idx-based account of Royer (2022) in that both propose an additional type-$\langle e, e\rangle$ feature that 'ordinary' pronouns lack. It is also worthy of note that not all approaches to demonstrative pronouns rely on Idx; for instance, Hinterwimmer & Bosch (2016, 2017) propose that German demonstrative pronouns have what they call an 'anti-perspectival-center' orientation. The account of Atchan advanced here has strong conceptual parallels to Hinterwimmer and Bosch's account, though I tie the Atchan obviative's orientation more tightly to syntactic structure.

(63) a. $[\![\text{DIFF}_\alpha]\!] = \lambda x_e : x \neq g(\alpha) \,.\, x$
b. $[\![\text{OBV}_{n\backslash\alpha}]\!]^g = g(n)\text{-}[\![\text{DIFF}_\alpha]\!]^g = g(n)$ defined if $g(n) \neq g(\alpha)$

The most natural modification of this feature would be to replace the disjointness condition with an equivalence one, resulting in the following feature that I call EQUIV:

(64) a. $[\![\text{EQUIV}_\alpha]\!] = \lambda x_e : x = g(\alpha) \,.\, x$
b. $g(n)\text{-}[\![\text{EQUIV}_\alpha]\!]^g = g(n)$ defined if $g(n) = g(\alpha)$

If some language made use of the pronoun whose meaning is given in (64b), what would we expect to see? By (inverse) analogy to Atchan, we would expect to see a system in which every instance of that pronoun must be coreferential with/bound by the structurally highest DP in the sentence. In fact, this kind of pronoun appears to be attested, in Algonquian proximate pronouns.

In Algonquian-style obviation systems, distinct morphology tracks different referents in a sentence or discourse (Bloomfield 1946, Rhodes 1990, Aissen 1997, Thomason 2003, a.m.o.). The overall generalization in this kind of system is that only one Algonquian PROX-marked referent is permitted per derivation: the most prominent third-person referent in a sentence is referred to with proximate morphology, and all other third-person referents have obviative morphology (Brittain 2001). Based on this generalization, Branigan & Mackenzie (1999) and Oxford (2017) pursue obligatory-binding approaches to Algonquian proximates: these authors propose that Algonquian proximate forms are necessarily bound by the topic (and, consequently, all proximate forms in a sentence must corefer). This is exactly what we would expect if Atchan proximates had the meaning given in (64b).[29]

On this view, both the Atchan and Algonquian systems leverage one "ordinary" pronoun that alternates with another pronoun bearing a special presuppositional feature. However, since the Atchan system involves DIFF and the Algonquian EQUIV, the two systems diverge in the details. A brief comparison of the two types of systems is summarized in Table 3 and discussed below.

First, as discussed above, Algonquian obviation systems permit only one proximate referent per sentence. By contrast, as shown below, Atchan permits more than one proximate referent per sentence:

(65) kati c$^{\text{h}}$rwa timote. ɛ́nté ɛ́ ncú si mɛ́ ɟɛtɛ̃ sido
K. hit T. now PROX.S.PFV again steal PROX money V.PART
'Katie$_i$ hit Timothée$_j$. Then, 3sg$_i$ stole 3sg$_j$ money!' (20230721_hre)

29 Oxford suggests that *all* Algonquian sentences have a topic in Spec,CP. If topics are obligatory in Algonquian but not in Atchan, this would help explain the uniform topical orientation in Algonquian in comparison to the more dynamic orientation in Atchan.

	Atchan system	Algonquian system
# of non-coref. PROX per sentence	$\geq$ 1 permitted	only 1 permitted
# of non-coref. OBV per sentence	$\geq$ 1 permitted	$\geq$ 1 permitted
R-expression PROX/OBV distinctions?	no	yes
Speech-act participants in calculation?	yes	no?

Table 3 Comparison of Atchan and Algonquian obviation systems.

As discussed early, our analysis of Atchan PROX allows for multiple non-coreferential proximates in a single sentence, though more must be said to deal with *Maximize Presupposition!*-related concerns. By contrast, the restriction to only one Algonquian proximate referent per sentence follows straightforwardly from the presence of the EQUIV feature.

Next, Atchan permits multiple non-coreferential instances of OBV in a single sentence:

(66) kati krãmã nɛ lé nɛ di ɓát^{h}ó
K. tell OBV COMP OBV arrive house
'Katie told 3sg$_i$ that 3sg$_j$ arrived at home.'
context: after Lindsay$_j$ returned to the US from Côte d'Ivoire, Katie told Timothée$_i$ that she$_j$ had arrived (20220718_hre)

While each Atchan OBV must be distinct from the highest DP, there is no requirement that two Atchan OBV pronouns corefer.[30]

A similar fact obtains in Algonquian obviation systems, where multiple obviatives can occur in the same sentence:

(67) Tepit owaapamaan otayihshiniin.
Tepit-∅ o-waapam-aa-n o-tayihsh-ini-an
David-PROX.SG 3-see-DIR-OBV 3-dog-OBV.POSS-OBV
'David.PROX$_i$ sees his.OBV$_j$ dog.OBV$_k$' (=someone else's dog)
(Oji-Cree, Oxford 2017:(14b))

Here, obviative morphology occurs both on the dog and the possessor; the dog and its possessor are not interpreted as coreferential. The explanation of this pattern differs somewhat from the explanation of the Atchan one: in Algonquian, all instances of PROX must corefer with the topic, so OBV is the only option for *any* nominal that is disjoint from the topic.

30 The fact that multiple non-coferential Atchan OBV pronouns can co-occur precludes an alternative analysis of Atchan on which an Algonquian-style system is fully "flipped on its head", i.e., an alternative on which Atchan OBV must be distinct from a particular less-salient individual.

More work, both empirical and theoretical, is warranted here, to capture additional differences between Atchan- and Algonquian-type obviation systems. For instance, the Atchan system only involves contrasting marking of pronouns, while Algonquian obviation systems involve analogous marking of lexical DPs. To this effect, Oxford (2017) posits additional syntactic differences between Algonquian proximates and obviatives that might help explain these contrasting forms. We might also, for instance, appeal to cross-linguistic differences in where the EQUIV feature can (or must) attach. Additionally, in Atchan speech act participants are able to bind and license lower obviative pronouns. By contrast, Algonquian obviatives are generally only used when a single sentence contains as least two distinct *third-person* referents (Thomason 2003, Little & Moroney 2016, a.o.): speech act participants do not ordinarily participate in this system. Capturing these cross-linguistic differences may, for instance, require additional constraints on the degree to which speech-act participants can be topicalized in Algonquian, or on what can bind α in Algonquian; further exploration of these topics must be left to future work.

8.2 Binder location: Algonquian obviation systems and logophoricity

In both kinds of obviation system that we have looked at—Atchan-type and Algonquian-type—the binding operator must be located high in the matrix-clause periphery. This enables, for example, matrix-clause subject OBV in the presence of a distinct topic. Of course, not all obligatorily-bound items are subject to the same distributional constraint as Atchan OBV. In this section, we turn to consider logophoric pronouns, which (roughly) are only permitted in attitude complements, in which case they obligatorily refer to the attitude holder (Clements 1974). That is, the reference constraint on Algonquian proximates and logophoric pronouns is the same, one of identity, while the distributional constraint differs.

We can situate logophoric pronouns in our typology if we assume that an Ewe logophor has the same semantics as an Algonquian proximate, but that Ewe makes use of a different binding head. Specifically, a binding head Log in languages like Ewe could occur in the periphery of attitude complements, where it binds the distinguished variable α. Adopting a centered semantics for attitude reports (Lewis 1979, Chierchia 1990) yields the result that the α position will ultimately be saturated by the attitude holder (i.e., unlike with Prom, Log does not trigger movement to its specifier). This is consistent with traditional views of how and where logophoric pronouns are bound (cf. the initial sketch in Pearson 2015), though we do not need to appeal to syntactic feature valuation in explaining the distribution of logophoric pronouns.

Note that a treatment of logophoricity would require the existence of multiple distinguished variables (i.e., more than just α) in the system. The empirical moti-

vation for this comes from the fact that in logophoric systems, multiple specialized pronouns can occur in the same domain with distinct interpretations (Clements 1975, Pearson 2015). Relevant data on the Ewe logophor is shown below:

(68) Marie be [Kofi xɔse [be yè$_1$ na yè$_2$ cadeau]].
Mary say Kofi believe COMPL LOG give LOG gift
(i) 'Mary said that Kofi believed that she gave him a gift.'
(ii) 'Mary said that Kofi believed that he gave her a gift.'
(Pearson 2015:(47))

To obtain disjoint reference of the two logophors in the system advanced here, we must build the two logophors to include different distinguished variables (say, α and γ) as below:

(69) $[\![\text{yè}_1]\!] = [\![\text{PROX}_m\text{-EQUIV}_\alpha]\!] = g(m)$ defined if $g(m) = g(\alpha)$

(70) $[\![\text{yè}_2]\!] = [\![\text{PROX}_n\text{-EQUIV}_\gamma]\!] = g(n)$ defined if $g(n) = g(\gamma)$

The two distinguished variables are needed because there are necessarily two different distinguished-variable binders in this sentence, one at each attitude complement. Each distinguished-variable binder exhaustively binds all instances of that distinguished variable in its complement. To capture the possibility of non-local logophor binding, is necessary that the lower binder (in the complement of 'believe') *not* bind both logophors in this sentence. The two different readings of (68), then, reflect the two different possibilities for which binder is where (i.e., whether it is α or γ that is bound in the complement of 'believe').[31]

This conception of the logophoric identity feature as presuppositional dovetails nicely with recent proposals on the nature of logophoricity. Recently, Bassi et al. (2023) argue for a presuppositional view of the logophoric feature based on evidence from ellipsis. They show that the Ewe logophor (which, in the varieties of Ewe they discuss, can only be read *de se*) supports strict readings in addition to the expected sloppy ones. Bassi et al. argue that this data is best captured by proposing that logophoric pronouns consist of a variable together with a presuppositional feature. Similarly, Blunier (2022) argues for a view on which logophors bear a presuppositional feature. The system that I have suggested here is similar in spirit to both of these proposals.

8.3 Completing the typology: antilogophoricity

In this section, we have so far explored the impact of two manipulations on pronominal meaning. On one hand, we saw that different obviation systems make use of

31 This complication only arises in attitude reports, not in obviation systems. In the analysis of obviation systems pursued here, there is only one binding head per sentence. As a result, the derivation only converges if at most one distinguished variable is used.

either DIFF or EQUIV presuppositional features, both with the binding operator high in the matrix-clause periphery. On the other hand, we focused specifically on EQUIV-involving pronouns to explore the impact of binding operators at different points in the structure. In this section, I focus on the last possible pairing, of a DIFF-involving pronoun with an attitude-complement binder. This kind of pronoun appears to be attested as a so-called 'antilogophoric' pronoun, which has been reported in the descriptive literature on several African languages (Hill 1995, Kouadio 1996, Andersen 1999, Ameka 2017).

The pair of DIFF and an attitude-complement binder should yield a pronoun that (a) occurs only in attitude complements and (b) is interpreted as obligatorily disjoint from the attitude holder. This is exactly what has been reported for antilogophoric pronouns. For instance, in Mabaan (Nilo-Saharan, South Sudan), an ordinary 3SG pronoun *ʔɛ́kɛ̀* alternates with an antilogophoric pronoun *ʔɛ̂kn̪tá* (Andersen 1999).[32] The ordinary pronoun is the pronoun that occurs outside attitude complements:

(71) ʔɛ́kɛ̀ ʔɛ́kɛ̀ jûuɑrnɛ́
3SG 3SG see:CF:PA:3SG:3
'He$_i$ saw him$_j$.' (Andersen 1999:504 (9))

Note that, as is clear from (71), two 3SG pronouns need not be interpreted as coreferential.

In attitude complements, the ordinary pronoun can[33] corefer with the attitude holder (72a), while the antilogophoric pronoun cannot (72b):

(72) a. ʔɛ́kɛ̀ gɔ́kè ʔàgē ʔɛ́kɛ̀ kâŋɟɛ́
3SG say:AP:3 INIT 3SG swim:FUT:INDIR:3SG
'He$_i$ says that he$_i$ will swim.'

b. ʔɛ́kɛ̀ gɔ́kè ʔàgē ʔɛ̂kn̪tá kâŋn̪dɔ́
3SG say:AP:3 INIT ANTILOG swim:FUT:INDIR:ANTILOG
'He$_i$ says that he$_j$ will swim.' (Andersen 1999:508 (19ab))

Crucially, this is in a sense the inverse of a logophoric system: the specialized (antilogophoric) pronoun takes obligatory disjoint reference with the attitude holder. This kind of system, I suggest, completes our typology: antilogophoric pronouns involve a DIFF presupposition, but an attitude-complement binder.

To close, I note that the phenomenon of antilogophoricity has been scantly addressed in the theoretical literature (outside brief mentions in Anand 2006 and

32 The glossing of all Mabaan examples follows Andersen, though I gloss as ANTILOG the antilogophoric pronoun. Glosses in these examples include AP antipassive, CF centrifugal, FUT future, INDIR indirect mode, INIT initiator of reported speech, and PA past tense.

33 Due to what appear to be pragmatic strengthening effects, ordinary pronouns in languages like Mabaan are discussed as necessarily coreferring with the attitude holder.

Simeonova 2020). The discussion in this section prompts many interesting questions about antilogophoric pronouns, like whether coreference between the attitude holder and the antilogophor is permitted on a non-*de se* reading. These questions are not addressed in the existing descriptive work on antilogophoric pronouns and must remain open for now.

9 Conclusion

This paper has explored the pronominal system of Atchan as a case study in obligatory binding. The main contribution has been to propose that long-distance obligatory binding requirements are enforced in the semantics: I have proposed that such obligatorily-bound elements have components in their semantics that are only in the domain of the assignment function when bound. I have additionally suggested that, in at least the case of Atchan OBV, obligatory disjointness can be productively viewed as a manifestation of obligatory binding.

The view of obligatorily-bound pronouns that I have advanced here relies on two components: the kind of identity relationship involved, and the location at which the item is bound. Parameterizing these two dimensions, I suggested, allows for a meaningful way to view different kinds of obligatorily-bound items attested across various languages.

In a wider perspective, this paper contributes to a broader program that seeks to do away with primitive syntactic licensing requirements. The view of obligatorily-bound pronouns that I have argued for shifts the responsibility for licensing of obligatorily-bound elements from the syntax to the semantics (i.e., the obligatoriness of binding is grounded in certain pronouns' meaning). In some sense this explanatory shift parallels approaches taken in other domains: for example, recent approaches to weak negative polarity item licensing like those based on domain widening (Kadmon & Landman 1993, Krifka 1995, Chierchia 2013, a.m.o.) contrast with early, purely syntactic views (e.g., Klima 1964). It remains to be seen how syntactic and semantic factors might share the burden of explaining licensing phenomena in other domains.

References

Adger, David & Gillian Ramchand. 2005. Merge and move: *Wh*-dependencies revisited. *Linguistic Inquiry* 36(2). 161–193.

Aissen, Judith. 1997. On the syntax of obviation. *Language* 73(4). 705–769.

Ameka, Felix K. 2017. Logophoricity. In Alexandra Aikhenvald & R. M. W. Dixon (eds.), *The Cambridge handbook of linguistic typology*, chap. 16, 513–537. Cambridge University Press.

Anand, Pranav. 2006. *De* de se: MIT dissertation.

Andersen, Torben. 1999. Anti-logophoricity and indirect mode in Mabaan. In *Studies in language*, vol. 23 3, 499–530. John Benjamins.

Anderson, Gregory D.S. 2011. Auxiliary verb constructions in the languages of Africa. *Studies in African Linguistics* 40(1-2). 1–409.

Anderson, Gregory D.S. 2015. STAMP morphs in Central Sudanic languages. *Nilo-Saharan: Models and Descriptions* 28. 151–167.

Anderson, Gregory D.S. 2017. STAMP morphs in the Macro-Sudan Belt. In Doris Payne, Sara Pacchiarotti & Mokaya Bosire (eds.), *Diversity in African languages: Selected papers from the 46th Annual Conference on African Languages*, vol. 1 Contemporary African Linguistics, 513–539. Language Science Press.

Bach, Emmon & Barbara H. Partee. 1980. Anaphora and semantic structure. In Jody Kreiman & Almerindo E. Ojeda (eds.), *Papers from the parasesion on pronouns and anaphora*, 1–28. Chicago Illinois: University of Chicago.

Bassi, Itai, Imke Driemel, Abigail Anne Bimpeh & Silvia Silleresi. 2023. *De se* dependencies without binding: Evidence from strict readings of logophoric pronouns. Manuscript.

Bi, Agnes & Peter Jenks. 2019. Pronouns, null arguments, and ellipsis in mandarin chinese. In M. Teresa Espinal (ed.), *Proceedings from sinn und bedeutung 23*, vol. 1, 127–142. Universitat Autònoma de Barcelona, Bellaterra (Cerdanyola del Vallès).

Bisang, Walter. 2014. On the strength of morphological paradigms: A historical account of radical pro-drop. In Martine Robbeets & Walter Bisang (eds.), *Paradigm change: In the Transeurasian languages and beyond*, vol. 161 Studies in Language Companion Series, chap. 2, 23–60. John Benjamins.

Bloomfield, Leonard. 1946. Algonquian. In Harry Hojier (ed.), *Linguistic structures of Native America*, 85–129. Viking Fund Publications in Anthropology.

Blunier, David. 2022. Antipresuppositions, logophors and shifted indexicality. In Marco Denago, Tom Roberts, Giorgio Sbardolini & Marieke Shouwstra (eds.), *Proceedings of the 23rd amsterdam colloquium*, vol. 1, 45–54.

Bôle-Richard, Rémy. 1983. L'ébrié. In Georges Hérault (ed.), *Atlas des langues Kwa de Cote d'Ivoire*, 307–357. Institut de Linguistique Apliquée (ILA); Agence de Coopération Culturelle et Technique (ACCT).

Bosch, Peter & Carla Umbach. 2006. Reference determination for demonstrative pronouns. In *Proceedings of the conference on intersentential pronominal reference in child and adult language*, 39–51.

Branigan, Phil & Marguerite Mackenzie. 1999. Binding relations and the nature of 'pro' in Innu-aimun. In Tamanji Pius, Masako Hirotani & Nancy Hall (eds.), *North east linguistics society*, 459–474. University of Delaware: GLSA.

Brasoveanu, Adrian. 2011. Sentence-internal *different* as quantifier-internal anaphora. *Linguistics and Philosophy* 34. 93–168.

Brittain, Julie. 2001. Obviation and coreference relations in Cree-Montagnais-Naskapi. *Linguistica Atlantica* 23. 69–91.

Cardinaletti, Anna & Michal Starke. 1999. A typology of structural deficiency: a case study of three classes of pronouns. In Henk van Riemsdijk (ed.), *Clitics in the languages of Europe*, 145–233. Berlin: Mouton de Gruyter.

Charnavel, Isabelle. 2019. *Locality and logophoricity: A theory of exempt anaphora* Oxford Studies in Comparative Syntax. Oxford University Press.

Charnavel, Isabelle. 2020. Logophoricity and locality: A view from French anaphors. *Linguistic Inquiry* 51(4). 671–723.

Charnavel, Isabelle & Dominique Sportiche. 2016. Anaphor binding: What French inanimate anaphors show. *Linguistic Inquiry* 47(1). 35–87.

Chierchia, Gennaro. 1990. Anaphora and attitudes de se. In R. Bartsch, J. van Benthem & P. van Emde Boas (eds.), *Semantics and contextual expression*, 1–32. Dordrecht: Foris.

Chierchia, Gennaro. 2013. *Logic in grammar* Oxford Studies in Semantics and Pragmatics. Oxford.

Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht: Foris Publications. https://doi.org/10.1515/9783110884166.

Clements, George N. 1974. The logophoric pronoun in Ewe: Its role in discourse. *Journal of West African Languages* 10. 141–177.

Clements, George N. 1975. Analogical reanalysis in syntax: the case of Ewe Tree-Grafting. *Linguistic Inquiry* 6(1). 3–51.

Collins, Chris. 1997. Argument sharing in serial verb constructions. *Linguistic Inquiry* 28(3). 461–497.

Cooper, Robin. 1983. *Quantification and syntactic theory*. D. Riedel.

Déchaine, Rose-Marie & Martina Wiltschko. 2002. Decomposing pronouns. *Linguistic Inquiry* 33(3). 409–442.

Dido, Yao Maxime. 2018a. *Description grammaticale de l'Ébrié ou Cámánncân*: Université Félix Houphouët Boigny dissertation.

Dido, Yao Maxime. 2018b. Les pronoms mɛn, ɛ, an et nkɛ de lébrie: Morphophonologie et fonctions syntaxiques. *Cahiers Ivoiriens de Recherche Linguistique* 43. 37–48.

Doko, Jeanne, Léocadie Guebeapo, Evelyne Koutouan, Rebecca Jarvis, Julianne Kapner, Katherine Russell & Timothée Kouadio. 2023. Materials of the Atchan Language Project, 2021-16, California Language Archive, Survey of California and Other Indian Languages, University of California, Berkeley. Http://dx.doi.org/doi:10.7297/X29P30NW.

Erlewine, Michael Yoshitaka. 2016. Anti-locality and optimality in Kaqchikel agent focus. *Natural Language and Linguistic Theory* 34(2). 429–479.

Fox, Danny & Roni Katzir. 2011. on the characterization of alternatives. *Natural Language Semantics* 19(1). 87–107.

Fries, Norbert. 1988. Über das Null-Topik im Deutschen. *Sprache und Pragmatik* 3. 19–49.

Garvin, Karee, Anna Macknick, Katherine Russell & Hannah Sande. To appear. A typology of stamp morphs in West Africa. In Tom Guldemann & Jakob Lesage (eds.), *Between niger-congo and macro-sudan belt: Diedrich westermann's legacy on west-central african linguistic history*, Language Sciences Press.

Hardt, Daniel & Line Mikkelsen. 2015. Same but different. *Linguistics and Philosophy* 38. 289–314.

Heim, Irene. 1982. *The semantics of definite and indefinite Noun Phrases*: University of Massachusetts, Amherst dissertation.

Heim, Irene. 1991. Artikel und Definitheit. In Arnim von Stechow & Dieter Wunderlich (eds.), *Semantik: Ein internationales Handbuch der zeitgenassischen Forschung*, 487–535. Berlin: de Gruyter.

Heim, Irene. 2008. Features on bound pronouns. In Daniel Harbour, David Adger & Susana Béjar (eds.), *Phi theory*, 35–56. Oxford: Oxford University Press.

Heim, Irene & Angelika Kratzer. 1998. *Semantics in generative grammar*. Malden, MA: Blackwell.

Hestvik, Arild. 1992. LF movement of pronouns and antisubject orientation. *Linguistic Inquiry* 23(4). 557–595.

Hill, Harriet. 1995. Pronouns and reported speech in Adioukrou. *Journal of West African Languages* 25. 87–106.

Hinterwimmer, Stefan & Peter Bosch. 2016. Demonstrative pronouns and perspective. In Patrick Georg Grosz & Pritty Patel-Grosz (eds.), *The impact of pronominal form on interpretation*, vol. 125 Studies in Generative Grammar, 189–220. De Gruyter.

Hinterwimmer, Stefan & Peter Bosch. 2017. Demonstrative pronouns and propositional attitudes. In Pritty Patel-Grosz, Patrick Georg Grosz & Sarah Zobel (eds.), *Pronouns in embedded contexts at the syntax-semantics interface*, vol. 99 Studies in Linguistics and Philosophy, 105–144. Springer.

Hohaus, Vera & Margit Bowler. 2022. Cross-linguistic formal pragmatics. In Yoichi Miyamoto, Masatoshi Koizumi, Hajime Ono, Kazuko Yatsushiro & Uli Sauerland (eds.), *Key concepts in experimental pragmatics*, chap. 6, 120–159. Kaitakusha.

Jarvis, Rebecca. 2023. Raising and head-external relatives in Atchan. Manuscript.

Jenks, Peter. 2018. Articulated definiteness without articles. *Linguistic Inquiry* 49(3). 501–536.

Kadmon, Nirit & Fred Landman. 1993. Any. *Linguistics and Philosophy* 16(4). 353–422.

Katzir, Roni. 2007. Structurally-defined alternatives. *Linguistics and Philosophy* 30(6). 669–690.

Klima, Edward S. 1964. Negation in English. In Jerry A. Fodor & Jerrold J. Katz (eds.), *The structure of language: Readings in the philosophy of language*, 246–323. Prentice Hall.

Kokora, Pascal Dago, Jacques Rongier, Inge Egner & Margrit Bolli. 1996. *Une orthographe pratique des langues ivoiriennes*. Institut de Linguistique Apliquée (ILA) and Association SIL en Côte d'Ivoire.

Koopman, Hilda & Dominique Sportiche. 1989. Pronouns, logical variables, and logophoricity in Abe. *Linguistic Inquiry* 20(4). 555–588.

Kouadio, N'Guessan Jérémie. 1996. *Description systematique de l'Attie de Memni (langue Kwa de Côte d'Ivoire*. Grénoble: Université Stendhal dissertation.

Krifka, Manfred. 1995. The semantics and pragmatics of polarity items. *Linguistic Analysis* 25. 209–257.

Kroch, Anthony. 1995. Morphosyntactic variation. In K. Beals (ed.), *Papers from the 30th regional meeting of the chicago linguistics society: Parasession on variation and linguistic theory*, vol. 30 2, 180–201. Chicago Linguistics Society.

Lewis, David K. 1979. Scorekeeping in a language game. In U. Egle R. Bauerle & A. von Stechow (eds.), *Semantics from different points of view*, Springer.

Little, Carol-Rose & Mary Moroney. 2016. Modeling obviation in Algonquian. In Thuy Bui & Rudmila-Rodica Ivan (eds.), *Proceedings of the ninth conference on the semantics of under-represented languages in the Americas*, 71–86.

Loba, Michel & Jonas Biekre (eds.). 1997. *ábhwetó abha mepó: wo saha cámán ncan men*. Abidjan: Alliance Biblique de Côte d'Ivoire.

Mayol, Laia & Robin Clark. 2010. Pronouns in Catalan: Games of partial information and the use of linguistic resources. *Journal of Pragmatics* 42. 781–799.

McKillen, Alanah. 2016. *On the interpretation of reflexive pronouns*. Montreal: McGill University dissertation.

Mucha, Anne. 2015. *Temporal interpretation and cross-linguistic variation*: University of Potsdam dissertation.

Oxford, Will. 2017. Proximate DP, obviative KP: Balancing the morphosyntax and pragmatics of obviation. In Andrew Monti (ed.), *Proceedings of the 2017 annual conference of the Canadian Linguistic Assocciation*, .

Patel-Grosz, Pritty & Patrick Grosz. 2017. Revisiting pronominal typology. *Linguistic Inquiry* 48(2). 259–297.

Pearson, Hazel. 2015. The interpretation of the logophoric pronoun in Ewe. *Natural Language Semantics* 23. 77–118. https://doi.org/10.1007/s11050-015-9112-1.

Pintzuk, Susan. 2017. Variationist approaches to syntactic change. In Brian D. Joseph & Richard D. Janda (eds.), *The handbook of historical linguistics*, 509–528. Wiley Blackwell.

Polinsky, Maria & Eric Potsdam. 2001. Long-distance agreement and topic in Tsez. *Natural Language and Linguistic Theory* 19(3). 583–646.

Pollard, Carl & Ivan A. Sag. 1992. Anaphors in English and the scope of binding theory. *Linguistic Inquiry* 23(2). 261–304.

Potts, Christopher. 2005. *The logic of conventional implicatures*. Oxford: Oxford University Press.

Reinhart, Tanya & Eric Reuland. 1993. Reflexivity. *Linguistic Inquiry* 24(4). 657–720.

Rhodes, Richard A. 1990. Obviation, inversion, and topic rank in Ojibwa. In David J. Costa (ed.), *Proceedings of BLS 16, special session on general topics in American Indian linguistics*, 101–115. Linguistic Society of America.

Rizzi, Luigi. 1997. The fine structure of the left periphery. In Liliane Haegeman (ed.), *Elements of grammar*, 281–337. Dordrecht: Kluwer Academic.

Royer, Justin. 2022. Decomposing definiteness: Evidence from Chuj. *Canadian Journal of Linguistics* 67(3). 383–418. https://doi.org/10.1017/cnj.2022.23.

Santorini, Beatrice. 1992. Variation and change in Yiddish subordinate clause word order. *Natural Language and Linguistic Theory* 10(4). 595–640.

Sauerland, Uli. 2008. On the semantic markedness of Phi-features. In Daniel Harbour, David Adger & Susana Béjar (eds.), *Phi theory*, 57–82. Oxford: Oxford University Press.

Sauerland, Uli. 2013. Presuppositions and the alternative tier. In Todd Snider (ed.), *Proceedings of SALT 23*, 156–173. Ithaca, NY: CLC Publications.

Sichel, Ivy & Martina Wiltschko. 2021. The logic of Person markedness: Evidence from pronominal competition. *Language* 97(1). 42–71.

Simeonova, Vesela Tihomirova. 2020. *The syntax and semantics of light attitudes*: University of Ottowa dissertation.

von Stechow, Arnim. 2003. Feature deletion under semantic binding: Feature deletion under semantic binding: Tense, person, and mood under verbal quantifiers. In Makoto Kadowaki & Shigeto Kawahara (eds.), *Proceedings of NELS 33*, vol. 1, 379–404. GLSA.

Thomason, Lucy. 2003. *The proximate and obviative contrast in Meskwaki*: University of Texas at Austin dissertation.

Tonhauser, Judith, David I. Beaver & Judith Degen. 2018. How projective is projective content? gradience in projectivity and at-issueness. *Journal of Semantics* 35(3). 495–542. https://doi.org/https://doi.org/10.1093/jos/ffy007.

Trutkowski, Ewa. 2016. *Topic drop and null subjects in German*, vol. 6 Linguistics & Philosophy. De Gruyter. https://doi.org/10.1515/9783110446173.

Wiltschko, Martina. 1998. On the syntax and semantics of (relative) pronouns and determiners. *The Journal of Comparative Germanic Linguistics* 2(2). 143–181.

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