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Unraveling Balinese Binding

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This paper discusses the logophoric properties of Balinese anaphors. This paper first presents evidence showing that the Balinese complex anaphor may be interpreted logophorically even in the presence of a syntactic coargument. This leads to a novel solution of the “Balinese Bind paradox.” This proposal is better able to account for the interpretive constraints observed in raising constructions than previous proposals. In addition to this analysis, this paper discusses the implications of the properties of the Balinese simplex anaphor, which cannot be interpreted logophorically; only its complex counterpart can. This presents a pattern opposite to the one reported and predicted by the literature.

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1 Introduction

Wechsler (1999) attempts to provide an argument against GB and Minimalist approaches to syntax based on the so-called “Balinese Bind,” which concerns the binding of complex reflexives in Balinese, an Austronesian language.¹ Wechsler observes that promotion of an argument to subject position does not create new antecedents for binding in simple transitive constructions; within a GB/Minimalist framework, this suggests that the landing site for Balinese subjects, which I identify as Spec,TP, comprises an A'-position.² However, in raising constructions, the raised subject does appear to be a potential antecedent for binding, suggesting that Spec,TP is in fact an A-position, leading to a potential paradox.

The problem is illustrated as follows. Like many Austronesian languages, Balinese exhibits two transitive voice markings: Agentive Voice (AV), in which the external argument is promoted to what appears to be a subject (SVO word order), and Objective Voice (OV), in which the internal argument is promoted (OVS word order).³ AV is marked with a phonologically conditioned nasal prefix, as in (1a), while the OV is morphologically unmarked, as in (1b):

- (1) a. Tiang ngatap biu
 1 AV.cut banana
 'I cut a banana.'
- b. Biu gatap tiang
 banana OV.cut 1
 'I cut a banana.'

In AV, a complex reflexive that is coreferent with its coargument must be post-verbal; it cannot be pre-verbal, as seen in (2a)–(2b). In OV, the reflexive must instead appear pre-verbally; it

¹ Previous works, such as Wechsler (1999) and Levin (2014), have not noted that this issue is unique to complex reflexives; Balinese also has simplex reflexives, as discussed in section 4, but these cannot occur in the constructions which Wechsler alleges are problematic to Minimalist approaches. It should also be noted that Balinese has many different anaphors depending on registers. For simplicity, in this paper, I will illustrate only with the reflexives made up of the low register, simplex reflexive *awak*.

² This assumption reflects the standard within the Minimalist Program and is shared by Levin (2014), whose account for the Balinese Bind is discussed in section 3. Note, however, that nothing hinges on whether Balinese subjects raise to Spec,TP or some other projection. As long as subjects land in the same position in AV, OV, and raising constructions, I am faced with the apparent paradox detailed below. As Wechsler & Arka (1998) point out, there is ample evidence from raising, relativization, extraposition, quantifier float and control that the subject moves to Spec,TP (under a Minimalist account) in OV constructions, just as in AV.

³ For further discussion, the reader is referred to Wechsler & Lee (1996), Wechsler & Arka (1998), Udayana (2013) and Levin (2014).

cannot be post-verbal, as shown in (2c)–(2d). For Minimalism, this suggests that Spec,TP is not an A-position in Balinese, such that binding conditions must be satisfied before movement:⁴

- (2) a. Ayu_i nyimpit awak-ne_i
 Ayu AV.pinch self-POSS.3
 ‘Ayu_i pinched herself_i.’
- b. *Awak-ne_i nyimpit Ayu_i
 self-POSS.3 AV.pinch Ayu
 (Lit.) ‘She_i pinched Ayu_i.’
- c. Awak-ne_i jimpit Ayu_i
 self-POSS.3 OV.pinch Ayu
 (Lit.) ‘She_i pinched Ayu_i.’
- d. *Ayu_i jimpit awak-ne_i
 Ayu OV.pinch self-POSS.3
 ‘Ayu_i pinched herself_i.’

However, in raising constructions with the verb *ngenah* ‘seem’ (which does not undergo the AV/OV alternation) the raised subject appears able to bind an anaphor within an optional experiencer-PP adjoined to the matrix clause, as in (3). In such constructions, which I will henceforth refer to as Balinese Bind constructions, it thus appears that Spec,TP is an A-position after all, such that raising to Spec,TP does create new possibilities for anaphoric binding:

- (3) Ayu_i ngenah sig awak-ne_i jelek sajan.
 Ayu seem to self-POSS.3 bad very
 ‘Ayu_i seemed to herself_i to be very ugly.’

Comparing simple transitive cases with raising constructions, it looks as though Spec,TP is both an A- and A’-position in Balinese. According to Wechsler (1999), this seeming contradiction poses a serious problem for proponents of a GB/Minimalist approach to binding. On the other hand, Wechsler claims that the distribution of Balinese anaphors can be accounted for straightforwardly within HPSG, concluding that the latter framework is therefore empirically superior.⁵

⁴ There have been different analyses of *-ne* in the literature. For simplicity, I follow Haiduck’s (2014) analysis of *-ne* as a third person possessive suffix, who argues against decomposing *-ne* further. An anonymous reviewer notes that the complex anaphor *awakne* is a simplification of *awak ia-ne* ‘his/her body,’ done in order to encode possession. The pronoun can be replaced in situ by a question word, ex. *bapak nyen-ne* ‘whose father’. The correct analysis of *ne* does not matter for the purposes of this paper, however.

⁵ In particular, under the assumption that binding relations are determined within the argument structure (ARG-S) associated with the lexical description of a predicate, Wechsler argues that licensing of the reflexive in (3) follows from inclusion of the raised NP within the ARG-S of *ngenah*, where it a-commands the experiencer-PP. I refer the reader to Wechsler’s paper for illustration of the ARG-S assumed for *ngenah* ‘seem’ along with further details regarding the assumptions of the HPSG approach to binding.

My primary goal is to present and discuss the implications of the properties of Balinese anaphora. Based on a wealth of novel data, I show that the complex anaphor *awakne* seen above can receive a logophoric interpretation in the absence of an overt local binder, the possibility of which previous work on the Balinese Bind does not explore. I believe the fact that *awakne* must be interpreted logophorically in (3) to be the key to unraveling the Balinese Bind. I motivate an account of the Balinese Bind that incorporates the insights of Charnavel’s (2020) theory of logophoricity, building on Udayana (2013), who was the first to note *awakne*’s logophoric properties.⁶

I provide one illustrative unacceptable example of logophoricity at play in (4) below, indicating that *awakne* must be obligatorily read *de se* in this construction.

- (4) *Non-de se context:* Ayu is very drunk at a weekend party at her friend’s house. She sees a portrait of herself that her friend has hanging up, and calls the woman in the portrait ugly, though she does not realize that she is the woman in the photo.
- #Ayu ngenah sig awak-ne jelek sajan.
 Ayu seem to self-POSS.3 bad very
 ‘Ayu seemed to herself to be very ugly.’

Furthermore, I make the novel observation that Balinese anaphora contradict a long-standing generalization in the literature that if a language has both simplex and complex anaphors, then the complex anaphor cannot receive a long-distance interpretation; this generalization is stated most clearly by Haspelmath (2008). I show that Balinese anaphors behave the opposite way: simplex anaphors must be interpreted locally while complex anaphors may have logophoric, long-distance antecedents in any syntactic context.

This paper is structured as follows. Section 2 presents tests from Charnavel (2020) to establish that *awakne* can be logophorically licensed, and extends them to the Balinese Bind construction. Based on these findings, I argue that *awakne* is obligatorily logophoric in this context. Section 3 presents a formal account of the Balinese Bind, and Section 4 discusses further implications of the data, including the aforementioned generalization. Section 5 concludes.

2 The Data

I introduce the reader to Charnavel’s (2020) framework of logophoricity in 2.1, which gives us various empirical tests to determine the presence of a perspectival center. Extending these tests to Balinese, in 2.2, I establish that *awakne* may optionally be interpreted logophorically. In 2.3, I

⁶ The data that is presented in this paper was primarily obtained via a mixture of in person and Zoom elicitation sessions from a single native speaker of Balinese. This data was supplemented with additional data via discussion with a Balinese linguist, I Nyoman Udayana.

turn my attention to the Balinese Bind construction, and I make the argument that the reflexive in that context must be anteceded by a perspectival center.

2.1 Background on empirical tests for logophoricity

It has long been noted in the literature that there are contexts in which anaphors are clearly subject to Chomsky's (1986) Condition A, according to which anaphors must be bound within their local domain.⁷ Such a context is illustrated in (5) with an example from Charnavel and Sportiche (2016:37(2)), who refer to well-behaved anaphors as in (5a) as plain anaphors:

- (5) a. [The moon]_i spins on itself.
b. *[The moon]_i influences [people sensitive to itself]_i.

On the other hand, it has likewise been observed—by Ross (1970), Kuno (1972), Bouchard (1985), Lebeaux (1985), Pollard & Sag (1992) and Reinhart & Reuland (1993) among many others—that there are circumstances in which anaphors appear to not be subject to Condition A. For example, *himself* can be bound by *David*, though under any definition of locality, *David* is the farthest possible antecedent for the anaphor in (6):

- (6) David_i said to Mary that nobody would believe linguists like himself_i.

Seemingly exceptional anaphors such as *himself* in (6) are referred to as exempt anaphors (cf. Pollard & Sag (1992), Charnavel & Sportiche (2016), Charnavel (2020). Charnavel (2020) provides a phase-based account of why, in so many languages, plain and exempt anaphors are phonetically identical despite apparent differences in their licensing conditions.

She argues that, contrary to appearances, plain and exempt anaphors are one and the same: though lacking an overt local antecedent, exempt anaphors are locally bound by a phonetically null logophoric pronoun, pro_{log} , that is identified with the individual whose perspective is adopted by the speaker. Hence, even seemingly exceptional anaphors satisfy Condition A, albeit covertly.

In support of this proposal, Charnavel observes that exempt reflexives are necessarily animate.⁸ For example, notice that (5b) improves significantly if *the moon* is replaced with an animate subject in (7a). A similar contrast is observed in (7b) and (7c), where I see that *the newspaper* cannot antecede a reflexive in the embedded clause despite being a source of information:

⁷ Different authors have different ideas of what this local domain is. Under some versions of a Chomskyan analysis, it was the domain containing the anaphor and a subject distinct from that anaphor. I follow Charnavel & Sportiche (2016) in assuming that it is the Spell-Out domain of a phase head, as this formulation is based on the behavior of inanimate anaphora and thus avoids the confound of logophoric licensing.

⁸ Minkoff (2004) also discusses the role of animacy, though he refers to it as consciousness instead, defining a novel Principle E to account for the distribution of such logophoric anaphors.

- (7) a. Trump_i influences [people sensitive to himself_i].
 b. Caitlin learned from John_i that there was a story about himself_i on TV.
 c. *Caitlin learned from [the newspaper]_i that there was a story about itself_i on TV.

The effect of animacy is explained under Charnavel’s hypothesis: because only animate individuals are potential perspectival centers, only animate reflexives can be bound by pro_{log}. Crucially, though animacy is a necessary condition for logophoric binding, it is not sufficient. Charnavel (2020) makes two empirical generalizations:

- (8) a. An exempt anaphor must be anteceded by an attitude holder or an empathy locus. This is its logophoric antecedent.
 b. The constituent containing an exempt anaphor has to express the first-personal perspective of its antecedent. This is its logophoric domain.

Further details of this hypothesis will be provided in section 3.1. Important for the present is Charnavel’s taxonomy for exemption (i.e., logophoric binding), given in **Table 1** below:

Logophoric antecedent	Logophoric domain	Tests
Attitude holder	<i>De se</i> attitude	First-person morphology Anti-attitudinal epithets Double orientation
Empathy locus	First-personal perception	Emphatic ‘his dear’

Table 1: Taxonomy for exemption.

I now present some illustrative examples—from Charnavel & Zlogar (2015)—of some tests from **Table 1** applied to English, beginning with tests targeting logophoric binding by an attitude holder. Consider example (9), in which the reflexive *himself* is neither local to nor c-commanded by its (overt) antecedent, *John*, but is acceptable.

- (9) According to John, the article was written by Anne and himself. Kuno (1987), p. 121

The first, known as the epithet test, is inspired by Dubinsky & Hamilton’s (1998) observation that epithets—for instance, *the idiot*—cannot corefer with the perspectival center associated with the context in which the epithet occurs. This is because epithets must reflect an attitude of the speaker, and not the attitude holder. Charnavel and Zlogar demonstrate that epithets may be used to detect antecedence by an attitude holder, defining the epithet test as follows:

- (10) **Epithet test:** Replace the exempt anaphor with a co-referring epithet and check whether the sentence becomes unacceptable.

As (11) shows, substitution of the reflexive in (9) with a co-referring epithet renders the sentence unacceptable. This is because the antecedent of the reflexive, *John*, is an attitude holder, and the clause containing the reflexive expresses *John's* de se attitude towards the writing of the article.

(11) *According to John, the article was written by Ann and the idiot.

The result of the epithet test is corroborated by another test proposed by Charnavel and Zlogar, the double orientation test, which they define as in (12):

(12) **Double Orientation Test:** Replace the exempt anaphor with an evaluative expression and check whether it can be evaluated by both the speaker and the antecedent.

This test derives from the fact that an evaluative expression—for example, *a good woman*—can be evaluated from the perspective of an attitude holder rather than the speaker if it occurs within an attitudinal context associated with that attitude holder. Charnavel and Zlogar apply this test to the sentence in (9) as shown in (13), noting that the author may be great in the eyes of either the speaker or the attitude holder, *John*.

(13) According to John, the article was written by Anne and a great author.

In addition to the epithet and double-orientation tests, antecedence by an attitude holder can also be diagnosed by determining whether the anaphor must be read de se. Obligatory de se interpretations have often been cited as a property of logophors by Huang & Liu (2001), Anand (2006), Charnavel & Zlogar (2015) and Charnavel (2020), among others. Charnavel & Zlogar (2015) show with the example in (14) that the anaphor in (9) becomes unacceptable in a context that does not support a de se reading:

(14) John is looking at a research article that he co-wrote with Ann many years ago, but does not recognize it as one of his own papers. Instead, he falsely assumes that Ann's co-author is a colleague of his who happens to have the same name as him.

#According to John_i, the article was written by Ann and himself_i.

Attitude holders are only one sort of perspectival center identified by Charnavel (2020) as a potential antecedent for seemingly exempt anaphora; as stated in the generalization in (8), empathy loci may likewise license exemption in some languages. First, to see why attitude holders are not sufficient, note that the following sentence from Charnavel & Zlogar (2015) in (15a) passes the epithet test in (15b), indicating that *his* in (15a) is not an attitude holder:

- (15) a. His_i computer screen-saver features a picture of himself_i kissing a fish.
b. His_i computer screen-saver features a picture of [the idiot]_i kissing a fish.

The idea of an empathy locus was first presented by Kuno (1987) based on data from Japanese, who defines it as follows:

- (16) **Empathy Locus:** the event participant that the speaker identifies with or empathizes with (in other words, takes the mental perspective of).

As Charnavel & Zlogar (2015) note, this is a technical definition which is not to be confused with informal notions such as ‘pity’ or ‘sympathy.’ Kuno noted that empathy loci may be present with non-attitude verbs such as *yaru* and *kureru*, meaning ‘give.’ According to Kuno, these verbs encode different points of view from each other: in the case of *yaru*, the giving event is from the perspective of the subject, while in the case of *kureru* the event is from the perspective of the receiver. According to Kuno, this explains the distribution of *yaru* and *kureru* in (17a)–(17b) below:

- (17) a. Boku-ga Hanako-ni okane-o [*kure-ru/ya-ru]
 I-NOM Hanako-DAT money-ACC give-PREC
 ‘I give money to Hanako.’
- b. Taroo-ga boku-ni okane-o [kure-ru/*ya-ru]
 Taroo-NOM me-DAT money-ACC give-PRES
 ‘Taroo gives me money.’

Let us turn back to reflexives. Reflexives anteceded by empathy loci occur in the absence of intensional operators and, as demonstrated by Charnavel & Zlogar (2015), behave differently than attitudinal anaphors with respect to the epithet and double orientation tests. Consider the English contrast in (18)–(19) from Charnavel & Zlogar (2015).

- (18) Anonymous posts about herself on the internet hurt Lucy’s feelings.
- (19) *Anonymous posts about herself on the internet hurt Lucy’s popularity.

The presence of the psychological expression *Lucy’s feelings* in (18) allows the speaker to have empathy for *Lucy*, whereas this is not possible with a non-psychological expression such as (19). As a result, *Lucy* can be an antecedent for the anaphor in (18) but not (19).

We find that the reflexive in (18) may be replaced with a co-referring epithet. Hence, *Lucy* does not appear to refer to an attitude holder in (18).

- (20) Anonymous posts about the idiot hurt her feelings.

Nevertheless, *Lucy’s* first-personal perspective is adopted by the speaker in uttering (18). This is revealed by Charnavel & Zlogar’s *beloved* test, defined as in (21a) and deployed in (21b). (21c) is once again ruled out because *Lucy’s popularity* is a non-psychological expression:⁹

⁹ I refer the reader to Charnavel & Zlogar (2015) and Charnavel (2020) for further details regarding motivation for the *beloved* test.

- (21) a. **Beloved Test:** Replace the exempt anaphor by *his/her beloved NP* and check whether the sentence is acceptable (under a non-ironic reading).
 b. Anonymous posts about her beloved son on the internet hurt Lucy’s feelings.
 c. *Anonymous posts about her beloved son on the internet hurt Lucy’s popularity.

In the sections that follow, I apply these tests to Balinese, in order to determine whether Balinese complex reflexives may likewise be exempt if and only if they take a logophoric antecedent and, if so, which sorts of logophoric antecedents are relevant to Balinese.

2.2 Balinese complex anaphors as potentially logophoric

I show that *awakne* can be anteceded by either an overtly local antecedent, whether animate or inanimate, or by the perspectival center of the sentence—the availability of which depends on discourse and syntactico-semantic factors, as detailed in Charnavel (2020) (cf. Anand (2006)). These findings lay the groundwork for section 2.3, in which I argue that reflexive experiencers are bound not by the raised subject in raising constructions but, rather, are necessarily anteceded by a perspectival center.

As is common of anaphors in many languages, all anaphors in Balinese are derived from words meaning *body*.¹⁰ I focus on the reflexives derived from the low register *awak*. Following Haiduck (2014), I take for granted that the third person complex anaphor is made of the possessive suffix *-ne* and the simplex anaphor. Unspecified for number, *awakne* can have either singular or plural antecedents.

I begin by establishing that *awakne* exhibits both plain and exempt behavior, just like English *herself*. As shown in (22a)–(22d), *awakne* is compatible with both animate and inanimate antecedents when Condition A is overtly satisfied, i.e., when it is bound locally by an overt DP:

- (22) a. Injil ngrujuk awak-ne
 Bible AV.reference self-POSS.3
 ‘The Bible references itself.’
 b. Yesus ngrujuk awak-ne
 Jesus AV.reference self-POSS.3
 ‘Jesus references himself.’
 c. Ayu demen ajak foto-n awak-ne.
 Ayu happy with photo-LNK self-POSS.3
 ‘Ayu likes a picture of herself.’
 d. Buku-ne misi foto-n awak-ne.
 Book-DEF contain photo-LNK self-POSS.3
 ‘The book contains a picture of itself.’

¹⁰ See Faltz (1985) for the typology of anaphora.

As shown in (23b), *awakne* can also appear in the absence of an overt local binder. Crucially, as captured in the contrast between (23a) and (23b), this is possible only if the antecedent of *awakne* is animate. Inanimate *awakne* must have an overt local binder, even in a position that permits exemption, consistent with what we observed in English above.

- (23) a. *Injil_i nglalahin anak sane kenyih teken awak-ne_i
 Bible AV.influence person REL sensitive to self-POSS.3
 ‘The Bible_i influences people who are sensitive to itself_i.’
- b. Yesus_i nglalahin anak sane kenyih teken awak-ne_i
 Jesus AV.influence person REL sensitive to self-POSS.3
 ‘Jesus_i influences people who are sensitive to himself_i.’

Hence, controlling for animacy as in Charnavel & Sportiche (2016) and Charnavel (2020), we find that Balinese *awakne* is plain when its antecedent is inanimate but can be exempt when its antecedent is animate. Crucially, it is not the case that animacy is a sufficient condition for apparent exemption. In (24), we find that animate *awakne* requires a perspectival center:

- (24) [Bapan Ayu]_i sing nemen-in awak-ne_{i,*j,*k}
 Father Ayu NEG AV.like-APPL self-POSS.3
 ‘Ayu_j’s father_i does not like himself_{i,*j,*k}.’

As predicted under Charnavel’s hypothesis, we observe that *awakne* can optionally have a long-distance antecedent when it can be construed as a perspectival center, as in (23b). As observed already by Udayana (2013), apparent exemption is also permitted for animate *awakne* when it appears in an attitudinal context created by an intensional verb such as *ngaden* ‘think’:¹¹

- (25) Nyoman_i ngaden Ayu_j nanjung awak-ne_{i,j}
 Nyoman think Ayu AV.kick self-POSS.3
 ‘Nyoman_i thinks Ayu_j kicked him/herself_{i,j}.’

Charnavel (2020) observes that while split antecedents are not licensed for plain anaphors, both are possible with exempt anaphors. we find that *awakne* can take a split antecedent in logophoric contexts, as predicted:¹²

¹¹ Note that *awakne* is the internal argument of a syntactic predicate; this fact runs counter to the predictions of the predicate-based binding theories put forth by Pollard & Sag (1992) and Reinhart & Reuland (1993).

¹² Charnavel (2020) also predicts partial antecedents to be available for exempt anaphors. In Balinese, the partial reading requires the adverb *ajak makejang* ‘with all’ in (i), otherwise it is ungrammatical. It is possible that this is due to reasons independent of binding, for instance disambiguation, as *awakne ajak makejang* is more specified:

(i) Ayu_i ngorahang [awak-ne ajak makejang]_{i+} lakar malaib
 Ayu AV.say self-POSS.3 with all will run
 ‘Ayu_i said that they_{i+} will run.’

- (26) Ayu_i ngorahin Nyoman_j awak-ne_{i+j} lakar malaib
 Ayu AV.told Nyoman self-POSS.3 will run
 ‘Ayu_i told Nyoman_j that they_{i+j} will run.’

Long-distance interpretations of *awakne* are unavailable if the intended antecedent is not construed as the perspectival center associated with the domain in which the reflexive occurs. Consider the contrast in binding possibilities shown in (27a) and (27b). In (27a), we find that *awakne* can be anteceded by the subject of *ngorahin* ‘tell,’ whereas antecedence by the indirect object is dispreferred. Conversely, in (27b) we see that antecedence by the subject of *ningeh uli* ‘hear from’ is dispreferred. This is because the source of information is the object *Arta* and not the subject *Nyoman*. Antecedence by *Ayu* is fully acceptable (Udayana (2013)):

- (27) a. Nyoman_i ngorahin Arta_j Ayu_k nanjung awak-ne_{i,*j,k}
 Nyoman AV.tell Arta Ayu AV.kick self-POSS.3
 ‘Nyoman_i told Arta_j that Ayu_k kicked him/herself_{i,*j,k}.’
 b. Nyoman_i ningeh uli Arta_j Ayu_k nanjung awak-ne
 Nyoman AV.hear from Arta Ayu AV.kick self-POSS.3_{i,j,k}
 ‘Nyoman_i heard from Arta_j that Ayu_k kicked him/herself_{i,j,k}.’

The pattern that emerges from the examples in (27a)–(27b) are consistent with the long-standing observation that sources of information are more likely perspectival centers than recipients of information (Sells (1987), Udayana (2013), i.a.). When the source of information is not expressed, as in (28), antecedence by the recipient becomes possible:¹³

- (28) Ia_i ningeh cang_j gedeg teken awak-ne_{i/*j}
 3 AV.hear 1 angry with self-POSS.3
 ‘(S)he heard that I was angry with him/her.’ (Udayana 2013: p.199)

What sorts of antecedents can license logophoric binding? Consider again the example in (25). Uttered in a context in which Ayu is very drunk and has unknowingly kicked herself, coreference between *awakne* and *Ayu* is nevertheless perfectly acceptable, revealing that *awakne* need not be read de se if bound by an overt local antecedent.

- (29) Ayu is very drunk, and she accidentally kicked herself thinking it was someone else.
 Nyoman_i ngaden Ayu_j nanjung awak-ne_j
 Nyoman think Ayu AV.kick self-POSS.3
 ‘Nyoman_i thinks Ayu_j kicked herself.’

¹³ *Awakne* is not subject to the blocking effect, unlike with *ziji* in Chinese (see Giblin (2016)).

But we find that *awakne* must be read *de se* if its antecedent is not overtly local, for instance when anteceded by *Nyoman* in (25). This is made apparent by the unacceptability of coreference between *awakne* and *Nyoman* when (25) is paired with a non-*de se* context as in (30):

- (30) Nyoman heard that Ayu accidentally kicked someone who had fallen asleep at a party. While he thinks this is true, he doesn't realize that he was the one who had fallen asleep.

#Nyoman_i ngaden Ayu_j nanjung awak-ne_i
 Nyoman think Ayu AV.kick self-POSS.3
 'Nyoman_i thinks Ayu_j kicked himself.'

The *de se* requirement is also observed of *awakne* in (31)–(32a), in which the reflexive appears as the subject of the clausal complement of *ngorahang* 'say':¹⁴

- (31) Ayu sees a picture of herself, and is pleased by how beautiful she is.

Ayu_i ngorahang awak-ne_i (ngenah) jegeg sajan.
 Ayu AV.say self-POSS.3 (seem) beautiful very
 'Ayu_i said that she_i looks very beautiful.'

(31) is infelicitous in a context like (32a)'s, according to which Ayu does not realize that she is the girl in the photo who she thinks is beautiful:

- (32) Ayu sees a picture taken at a party. She remarks that one of the girls in the photo looks very beautiful, but she doesn't realize that she is the girl in the photo.

a. #Ayu_i ngorahang awak-ne_i (ngenah) jegeg sajan.
 Ayu AV.say self-POSS.3 (seem) beautiful very
 'Ayu_i said that she_i looks very beautiful.'

The *de se* requirement for long-distance antecedence in (25)–(32a) suggests that the antecedent is in both cases an attitude holder, and that the reflexive falls in a *de se* attitudinal domain.

This conclusion is further supported by application of the tests for antecedence by an attitude holder summarized in **Table 1**. Applying the double orientation test to the Balinese example in (32a), we find that the evaluative expression in (33a) can indeed be evaluated by the antecedent rather than the speaker. This is made apparent in the acceptability of a continuation that expresses a contradictory opinion on the part of the speaker, as in (33b).

- (33) a. Ayu ngorah-ang anak sane masolah becik jegeg sajan...
 Ayu AV.said-APPL person REL behave good beautiful very
 'Ayu said that a good person is very beautiful...'

¹⁴ The possibility of subject reflexives is consistent with the absence of verbal agreement in Balinese: under Rizzi's (1990) anaphor agreement effect, according to which the unacceptability of anaphoric subjects in languages like English follows from the incompatibility of anaphoric elements with syntactic positions construed with agreement, anaphoric subjects are predicted to be possible in languages that lack subject agreement (cf. Woolford (1999)).

- b. ...nanging tiang ngerasa anak-e ento tusing masolah becik.
 ...but 1 feel person-DEF DEM NEG behave good
 ‘...but I think that person isn’t good.’

Likewise extending the epithet test to Balinese by building upon (31), we observe that substitution of *awakne* with a coreferent epithet is impossible:

- (34) *Ayu_i ngorahang [idiot-e ento]_i (ngenah) jelek sajan.
 Ayu AV.say idiot-DEF DEM (seem) ugly very
 ‘Ayu_i said that the idiot_i looks very ugly.’

I thus conclude that attitude holders can antecede logophoric reflexives in Balinese.¹⁵

It is worth observing also that, just as in English (cf. (7c)) and French (Charnavel (2020)), sourcehood is not sufficient to license apparent exemption from Condition A (pace Sells (1987)). In particular, inanimate sources such as *surat kabar* ‘newspaper’ cannot antecede overtly non-local reflexives, as shown in (35).

- (35) Nyoman_i ningeh uli [surat kabar]_j Ayu_k nanjung awak-ne
 Nyoman AV.hear from document news Ayu AV.kick self-POSS.3
 ‘Nyoman_i heard from [the newspaper]_j that Ayu_k kicked him/herself_{i,*j,k}.’

I now discuss the possibility of empathy loci licensing apparent exemption from Condition A in Balinese. Consider the examples in (36a) and (36b):

- (36) a. Komen sane jelek indik awak-ne_i ring Instagrame ngae Ayu_i sebet.
 comment REL mean about self-POSS.3 on Instagram AV.make Ayu sad
 ‘Mean comments about herself on Instagram made Ayu sad.’
 b. Indik Nyoman_i nyimpit awak-ne_{i,j} ngae Ayu_j gedeg
 that Nyoman AV.pinch self-POSS.3 AV.make Ayu mad
 ‘That Nyoman_i pinched himself_i/herself_j annoyed Ayu_j.’

¹⁵ I have seen some variation between my native speaker consultants in their acceptance of the first-person morphology tests. According to Charnavel (2020), the speaker is always a salient attitude holder and, hence, that first-person anaphors like *myself* can always lack an overt local binder. For I Nyoman Udayana and I Wayan Arka (p.c.), it is very awkward for the first-person anaphor, *awak cange*, to be mentioned “out of the blue,” as in (i). But (i) and similar examples were fully acceptable for another consultant:

- (i) %Ayu ngenah sig awak cang-e jelek sajan.
 Ayu seem to self 1-DEF bad very
 ‘Ayu seems to myself to be very ugly.’

An anonymous reviewer suggests that the first-person test is not prohibited, but merely avoided, because a first person report might be seen as one speaking highly of themselves, and therefore may be seen as impolite. Neutral expressions which cannot be taken as impolite are fully acceptable according to the reviewer.

Here again we find *awakne* in the absence of an overt local binder; in fact, the reflexive in both cases lacks a c-commanding antecedent entirely. But like English *herself*, *awakne* does not fall within the scope of an overt intensional expression in (36a) or (36b). Moreover, Charnavel (2020) argues from English and French data that the subjects of psych-verbs and equivalent psychological constructions do not express the attitude of their object. Is *awakne* therefore anteceded by an empathy locus rather than attitude holder in these examples?

Applying the tests introduced above, we find that *awakne* actually does appear to be anteceded by an attitude holder. Illustrating with (37), we find that substitution of *awakne* with a co-referential epithet is not possible:

- (37) *Indik Nyoman nyimpit [idiot-e ento], ngae Ayu, gedeg
 that Nyoman AV.pinch idiot-DEF DEM AV.make Ayu mad
 ‘That Nyoman pinched [the idiot], annoyed Ayu.’

An evaluative expression in the same context can be evaluated from the perspective of Ayu rather than the speaker, as shown by the compatibility of (38a) with the continuation in (38b):

- (38) a. Indik Nyoman nyimpit anak masolah becik ngae Ayu gedeg...
 that Nyoman AV.pinch person behave good AV.make Ayu mad
 ‘That Nyoman pinched a good person made Ayu mad...’
 b. ...nanging tiang ngerasa ia tusing masolah becik
 but 1 feel 3 NEG behave good
 ‘...but I think (s)he is not a good person.’

These findings suggest that Balinese contrasts with English and French in that individuals may be identified as attitude holders even without intensional expressions. They also leave open the question of whether antecedence by an empathy locus is ever possible for exempt anaphors in Balinese. I leave further investigation of both points for future research.

Finally, there appear to be cases in which *awakne* behaves as a pronoun. For at least one of the native speakers I have consulted, *awakne* does have the appearance of a pronoun in certain contexts, namely when its referent is previously established as the topic of conversation:¹⁶

¹⁶ Note that these sentences, in addition to (26), have subject anaphors. This follows from Rizzi (1990)’s Anaphor Agreement Effect:

(i) *Anaphor Agreement Effect*

Anaphors do not occur in syntactic positions construed with agreement.

Based on this, we would expect that in languages without verbal agreement, anaphors may be allowed in the subject position of an embedded clause. Consistent with this prediction, Balinese has no verbal agreement and allows *awakne* in the subject position, unlike English which does not.

- (39) Tiang ngingeh kabar indik Nyoman_i ... awak-ne_i demen ajak Ayu
 1 AV.hear news about Nyoman ... self-POSS.3 like with Ayu
 ‘I heard something about Nyoman_i ... he_i likes Ayu.’

Note in this case that the referent of *awakne*, *Nyoman*, is not likely the source of the information that follows. In fact, as we see in (40), matrix subject *awakne* cannot refer to an established source if a disjoint individual is established as topic:

- (40) Arta_i ngorahin tiang kabar indik Nyoman_k ... awak-ne_{*i/k} demen ajak Ayu
 Arta AV.tell 1 news about Nyoman ... self-POSS.3 like with Ayu
 ‘Arta_i told me something about Nyoman_k ... he_{*i/k} likes Ayu’

It seems that a separate licensing mechanism for *awakne* may be available in Balinese in addition to logophoricity, for instance binding by a null topic. Additional data is needed to adjudicate between these options.

2.3 The Balinese Bind Construction

Having established the distributive properties of *awakne*, I would now like to look at the Balinese Bind construction, repeated in (41).¹⁷

- (41) Ayu_i ngenah sig awak-ne_i jelek sajan.
 Ayu seem to self-POSS.3 bad very
 ‘Ayu_i seemed to herself_i to be very ugly.’

I have shown that *awakne* does not always require an overt local binder, in particular when it is anteceded by a perspectival center. This observation alone is sufficient to weaken Wechsler’s claim that Balinese Bind constructions present a paradox for GB/Minimalism, as it is possible for *awakne* to appear in such constructions without being bound by the raised subject. This

¹⁷ In the Balinese Bind construction, a pronoun cannot refer to the matrix subject, as in (i):

- (i) *Ayu_i ngenah sig ia-(ne)_i jelek sajan.
 Ayu seem to 3-(POSS.3) bad very
 ‘Ayu_i seemed to her_i to be very ugly.’

Although (i) might seem puzzling at first glance, because one might expect a pronoun to be substitutable in this context, this hinges on the licensing conditions of Balinese pronouns, which I am not able to discuss in this paper. It appears that Condition B in Balinese is not merely just a mirror image of Condition A, and determining what it could be would go outside of my scope. Similarly, an anonymous reviewer points out that Condition C violations can arise:

- (ii) *Ia_i ngenah sig ia-(ne)_i/Ayu_i jelek sajan.
 3 seem to 3-(POSS.3)/Ayu bad very
 ‘(S)he_i seemed to her_i/Ayu_i to be very ugly.’

is exemplified in (42), in which *awakne* is anteceded by the overtly non-local attitude holder *Nyoman*.

- (42) Nyoman_i ngenah Ayu_j ngenah sig awak-ne_{i/j} jelek sajan
 Nyoman think Ayu seem to self-POSS.3 bad very
 ‘Nyoman_i thinks Ayu_j seemed to himself_i/herself_j to be very ugly.’

However, in this section I make a stronger claim. I argue that when *awakne* is an experiencer in a raising construction, it is never a plain anaphor bound by the raised subject. Rather, it is always logophoric. I begin by observing that the reflexive experiencer is available even in the absence of raising. Indeed, as shown in (43), this is exactly what we find: given the context and questions in (43a) and (43b), one can answer with (43c).

- (43) Context: Arta took a photo of Ayu and Nyoman. Ayu doesn’t like the way she looks in the photo, so she hid the photo in the closet.
 a. What does Ayu think of the photo?
 b. Why did Ayu hide the photo?
 c. Ngenah sig awak-ne ia jelek sajan.
 Seem to self-POSS.3 3 bad very
 (lit.) ‘It seems to herself that she is very ugly.’

Moving on, although I will introduce the properties of the simplex anaphor *awak* in further detail in section 4.1, I will show that it can never be interpreted logophorically. I therefore predict that it cannot be present as an experiencer in this construction. This prediction is borne out:

- (44) *Ayu_i ngenah sig awak_i jelek sajan.
 Ayu seem to self bad very
 (lit.) ‘Ayu_i seemed to herself_i to be very ugly.’

Another piece of evidence is that the reflexive experiencer must be read *de se*. Consider for example the unacceptability of (41) when paired with the context in (45).

- (45) Ayu is very drunk at a weekend party at her friend’s house. She sees a portrait of herself that her friend has hanging up, and calls the woman in the portrait ugly, though she does not realize that she is the woman in the photo.
 #Ayu ngenah sig awak-ne jelek sajan.
 Ayu seem to self-POSS.3 bad very
 ‘Ayu seemed to herself to be very ugly.’

Crucially, the unacceptability of (45) does not arise from the incompatibility of the proper name with the perspective of the experiencer. This is made apparent in (46a)–(46b), which demonstrates that both *de dicto* (46a) and *de re* (46b) interpretations are available for the raised subject; in the latter case, Ayu does not recognize Nyoman as the person who strikes her as

unattractive in the photo—just as she does not recognize herself in the context in (45)—and yet the DP *Nyoman* is still felicitous.

- (46) Ayu is looking through photos from a party last weekend. In one photo she recognizes Nyoman, who she thinks is very handsome. In another is someone she doesn't recognize, but who seems to be unattractive. In fact, the person in the other photo was also Nyoman!
- a. Nyoman ngenah sig Ayu ganteng sajan.
Nyoman seem to Ayu handsome very
'Nyoman seems to Ayu to be very handsome.'
- b. Nyoman ngenah sig Ayu jelek sajan.
Nyoman seem to Ayu bad very
'Nyoman seems to Ayu to be very ugly.'

I therefore conclude that (45) is ruled out because the reflexive must receive a *de se* reading: it cannot be used in a context in which the referent does not recognize herself. Recall from section 2.1 that *de se* readings are obligatory only for exempt anaphors. If *awakne* could be locally bound by the subject in Spec,TP, then we would expect the *de se* interpretation to be optional, in which case (45) would be acceptable, contrary to fact. Hence, the *de se* requirement observed in Balinese Bind constructions reveals that *awakne* must be exempt in this context: licensed by antecedence by a perspectival center rather than overt local binding.

This conclusion is supported by the double orientation test. As mentioned previously, evaluative expressions that fall within an attitudinal domain can be evaluated by either the speaker or by the attitude holder; in all other contexts, only evaluation by the speaker is available. Consider a context in which Ayu thinks that a certain individual who holds a negative opinion of her appearance is a good person, whereas the speaker considers this same individual to be a bad person. Both (47a) and (47b) can be felicitously uttered:

- (47) a. Ayu ngenah sig anak bagus ento jelek sajan
Ayu seem to person good DEM bad very
'Ayu seems to a good man to be very ugly.'
- b. Ayu ngenah sig anak jelek ento jelek sajan
Ayu seem to person bad DEM bad very
'Ayu seems to a bad man to be very ugly.'

The final piece of evidence is the epithet test, which I predict to be unacceptable, and it is:

- (48) *Ayu_i ngenah sig [idiot-e ento]_i jelek sajan.
Ayu seem to idiot-DEF DEM bad very
'Ayu_i seemed to the idiot_i to be very ugly.'

I conclude that reflexive experiencers in Balinese Bind constructions are necessarily co-referent with a perspectival center, in particular an attitude holder. It may be surprising to find binding by an attitude holder in this context, since the experiencer-PP does not fall within the scope of an overt intensional operator. I provide a tentative discussion of this puzzle in section 3.4.

3 Untangling the Balinese Bind

After having provided the empirical basis for the solution, I now focus on its theoretical aspects. Section 3.1 introduces the theoretical formulation of Charnavel’s account of logophoric binding. 3.2 provides a theoretical account of the Balinese Bind: appealing to covert logophoric binding allows me to sidestep the issue of whether Spec,TP is an A- or A’-position. 3.3 discusses Levin’s (2014) solution to the paradox, concluding that his account does not predict the interpretative constraints on *awakne*. 3.4 compares and contrasts with reflexive experiencers in English.

3.1 Background Assumptions

As noted above, Charnavel (2020) argues that it is not coincidental for plain and exempt anaphors to be identical in all the languages that she discusses. For her, plain and exempt anaphors are one and the same: they both must have local antecedents, and the various properties of exempt anaphors—namely, their availability to take partial, split, and long-distance antecedents—are an illusion. The appearance of exemption rather arises from optional binding by a covert logophoric pronoun that syntactically realizes the perspectival center associated with the content of the domain containing the anaphor. She thus adopts the formulation of Condition A given in (49).

(49) **Phase-based formulation of Condition A:**

An anaphor must be bound within its smallest Spell-Out domain.

According to Charnavel, every Spell-Out domain optionally contains a logophoric projection on top, LogP, headed by a perspectival operator OP_{LOG} . This operator licenses a covert logophoric pronoun, pro_{log} , as its specifier and requires that its complement, schematized as P in (50a), is compatible with the first-personal perspective of the referent of pro_{log} , as captured in the denotation in (50b). The intuition behind this is that each phase can be specified as being presented from the perspective of a certain individual:

- (50) a. $[_{LogP} pro_{log-i} OP_{LOG} [_p \dots \text{logophor}_i \dots]]$
 b. $[[OP_{LOG}]] = \lambda P. \lambda x: P \text{ from } x\text{'s first-personal perspective}$

I schematize the difference between plain and exempt anaphors below, where Ph^0 refers to a phase head, and XP is the Spell-Out domain of Ph^0 in (51b), and LogP is the Spell-Out domain in (51a). This is to illustrate the very similar syntactic structure between the two, where the only difference between an exempt and plain anaphor is the binder: the former is covertly locally

bound by a perspectival center while the latter is still locally bound, but not by pro_{log} . It should be noted that, like other forms of pronouns, including covert pro , pro_{log} does not require a local binder.

- (51) a. **Exempt anaphor:** [_{PhP} Ph⁰ [_{LogP} pro_{log-i} OP_{LOG} [_{XP} ... exempt anaphor_i ...]]]
 b. **Plain anaphor:** [_{PhP} Ph⁰ [_{XP} ... DP_i ... plain anaphor_i ...]]

Before we turn to the Balinese Bind, it is important to first account for the distribution of reflexives in simple transitive sentences. Recall from section 1 data which is repeated in (52a)–(52d) below: complex reflexives like *awakne* must be post-verbal in AV, but pre-verbal in OV:

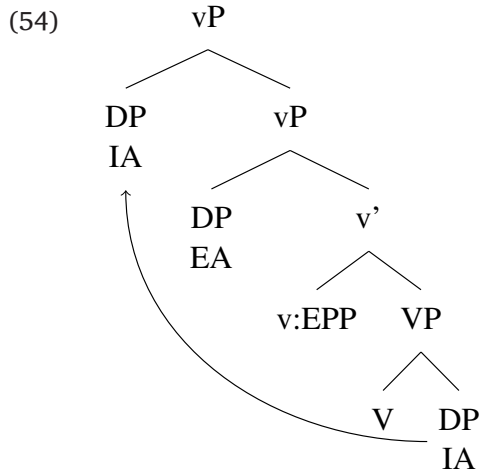
- (52) a. Ayu_i nyimpit awak-ne_i
 Ayu AV.pinch self-POSS.3
 ‘Ayu_i pinched herself.’
 b. *Awak-ne_i nyimpit Ayu_i
 self-POSS.3 AV.pinch Ayu
 (Lit.) ‘She_i pinched Ayu_i.’
 c. Awak-ne_i jimpit Ayu_i
 self-POSS.3 OV.pinch Ayu
 (Lit.) ‘She_i pinched Ayu_i.’
 d. *Ayu_i jimpit awak-ne_i
 3 OV.pinch self-POSS.3
 ‘Ayu_i pinched herself.’

Following Charnavel & Sportiche (2016) and Charnavel (2020), I assume that reflexives must be bound within the minimal Spell-out domain containing them. To account for the binding pattern in (52a)–(52d), I adopt a variant of Levin’s (2014) account of the Austronesian voice alternation, which itself is based on Aldridge (2008).

Levin and Aldridge adopt Baker’s (1988) Uniformity of Theta-Assignment Hypothesis (UTAH), according to which external arguments (EA) are always generated as the specifier of the verb, such as Spec,vP, while internal arguments (IA) are always generated as its complement. The sentences (53a)–(53b) below have the same syntactic structure at one point in the derivation:

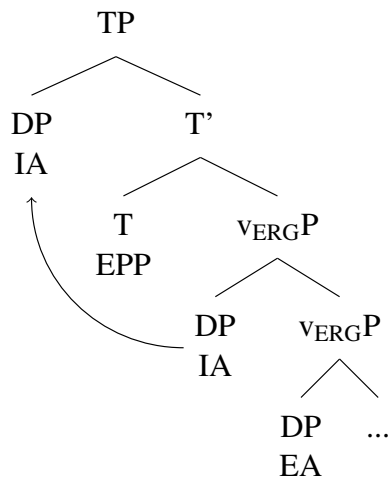
- (53) a. Tiang ngatap biu
 1 AV.cut banana
 ‘I cut a banana.’
 b. Biu gatap tiang
 banana OV.cut 1
 ‘I cut a banana.’

Both voices also have in common an additional movement step of the IA to Spec,vP above the EA, as illustrated in the tree (54) below. For Levin, this movement is driven by an EPP feature on v.

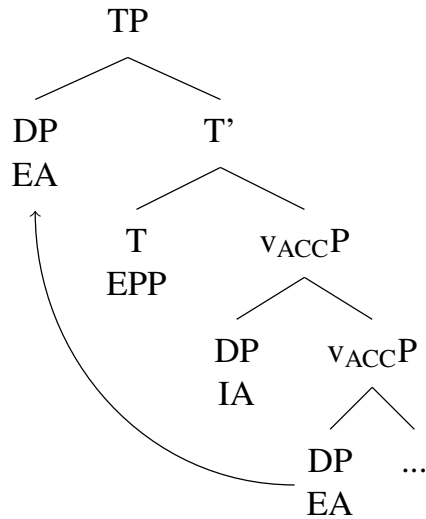


The difference between the two voices is Case assignment. AV clauses are argued to be similar to English, in that v^0 in AV assigns accusative case to the IA (v_{ACC}). But v^0 in OV (v_{ERG}) does not assign ergative case to either the IA or EA. This means that the IA in OV will remain an Active goal in the sense of Chomsky (2001) and hence available for probing by higher functional heads, such that the IA is able to move to Spec,TP. Levin, following Baker (1985), assumes that the post-verbal EA incorporates to avoid the Case Filter. By contrast, when accusative case is assigned to the IA in AV, it is rendered Inactive for further probing by higher functional heads, and only the EA may move to Spec,TP. This is illustrated in the trees (55)–(56) below:

(55) OV derivation



(56) AV derivation



I now move on to the raising construction.¹⁸

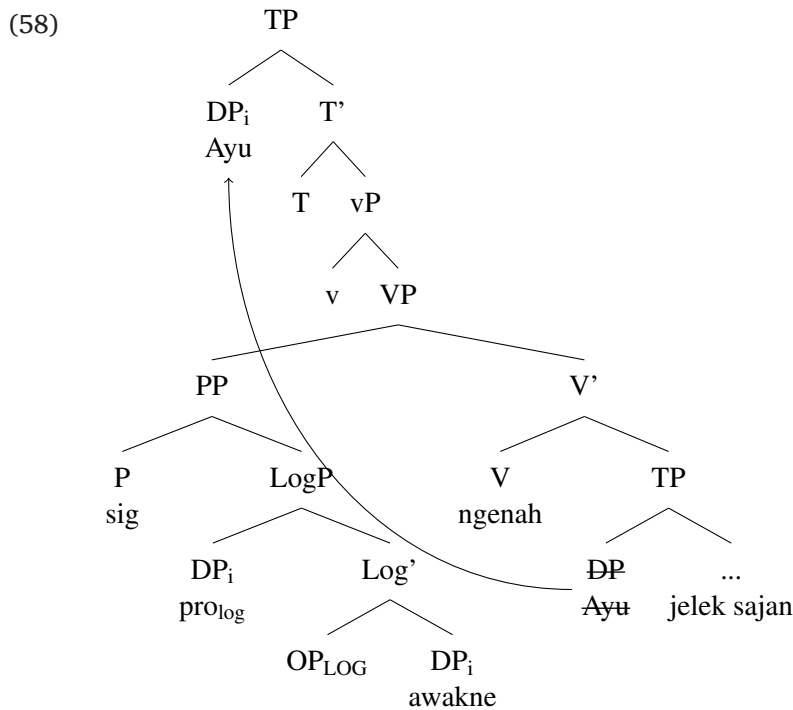
3.2 The Solution

Recall the Balinese Bind construction, repeated in (57) below:

(57) Ayu_i ngenah sig awak-ne_i jelek sajan.
 Ayu seem to self-POSS.3 bad very
 ‘Ayu_i seemed to herself_i to be very ugly.’

We have two choices regarding the position of the logophoric projection and the perspectival center, given that there are two Spell-Out domains under *Ayu*. The first possibility is the Spell-Out domain of P, which is DP. This is in light of Citko’s (2014) claim that PPs—with or without subjects—may also comprise phases. Though the phasehood of P may be less certain, this is the choice that I will make, represented in (58) below.

¹⁸ There is an independent problem to Charnavel & Sportiche’s (2016) framework that is worth mentioning. Notice that in a sentence such as *Ayu nyimpit awakne* ‘Ayu pinched herself,’ if one assumes both that *Ayu* is Merged to Spec,vP and that vP is a phase edge, then the subject *Ayu* never c-commands the reflexive within the minimal Spell-Out domain containing the latter. This would have the unfortunate consequence that anaphors can never be bound in such simple sentences, incorrectly predicting the ungrammaticality of (52a). This issue is not unique to Balinese: it arises in any case it is assumed that the EA is Merged in the phase edge. Charnavel & Sportiche (2016) provide several arguments for a rethinking of the “vP edge”: they propose that the agent of vP is first Merged inside the Spell-Out domain, then attracted to Spec,vP as v⁰ probes for the nearest DP, which is the Agent.



The second possibility is to place the logophoric projection on top of the Spell-Out domain of *v*, which is VP. This possibility is schematized in below:

(59) $[_{TP} Ayu_i \dots [_{VP} [_{LogP} pro_{log-i} OP_{LOG} [_{VP} [_{PP} sig awakne_i] [_{V'} ngenah [_{TP} t_i jelek sajan]]]]]]]$

This is problematic. Recall that I am agnostic as to whether Spec,TP in Balinese is an A- or A'-position. If it is an A'-position, then as an anonymous reviewer has pointed out, this would lead to a strong crossover violation. In order to overcome this problem, one would have to stipulate certain conditions of invisibility to Charnavel's perspectival center, which would be stipulatory. By contrast, (58) does not instantiate even a weak crossover structure, so it is preferable.

Ultimately, however, I would like to note that my solution of the Balinese Bind paradox does not hinge on the technical machinery of Charnavel's proposal. The key point I am making is simply that the empirical observation of the logophoricity of *awakne* is the key to unraveling the paradox. *Awakne* is obligatorily interpreted logophorically in the Balinese Bind construction. As an anonymous reviewer has suggested, a solution in which *awakne* receives a value from a sufficiently discourse-prominent element due to its logophoric properties would also be sufficient. I have only taken for granted Charnavel's framework in this paper is because it is the most well-developed in the generative literature thus far. As long as my empirical observation is made, I believe that the paradox can be straightforwardly untangled in GB or Minimalist frameworks.

In short, I propose that the licensing of reflexive experiencers in the Balinese Bind construction arises not from binding by the raised subject but, rather, by a null logophoric pronominal located within the Spell-Out of PP. These constructions do not contradict the observation that binding from Spec,TP is otherwise not possible. Let us now look at previous solutions.

3.3 Previous GB/Minimalist solutions to the Balinese Bind

Within the GB/Minimalist framework, a *prima facie* solution to the paradigm presented in (52a)–(52d) is to posit that only θ -roles are relevant for binding. Notice that in the paradigm presented in (52a)–(52d) above, the receiver of the Agent θ -role is always the binder of the reflexive, and the reflexive itself is the Theme. Indeed, another solution of the Balinese Bind could be to posit an account in which reflexive binding in Balinese is based on θ -roles. This is precisely what Travis (1998; 2012) suggests: A-positions which assign θ -roles allow binding whereas ones which do not assign θ -roles do not allow binding.

Levin (2014) points out an empirical argument against this idea, however. Spec,TP in both voices appears to be an A-position—at least in control constructions. Notice that in Balinese control constructions, as shown in (60a)–(60d), pre-verbal objects cannot be present in the embedded clause regardless of whether the embedded verb is AV or OV. PRO of course must occupy a T-position, as PRO was originally posited due to violations of the θ -Criterion:

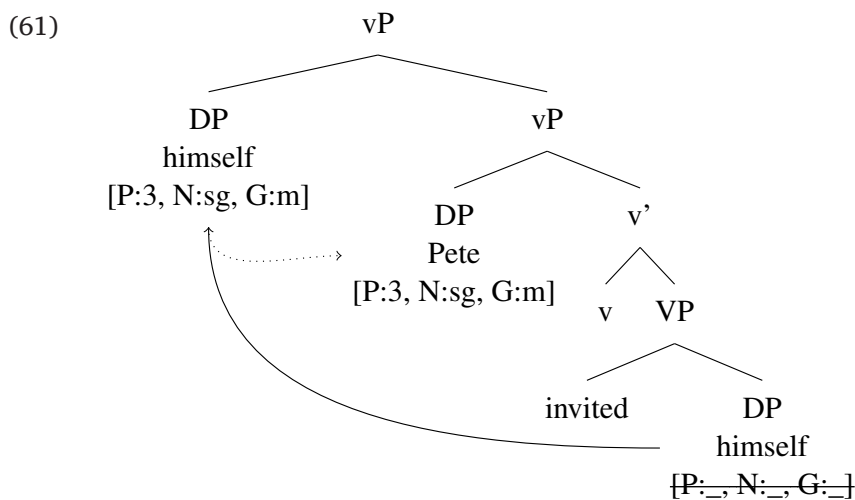
- (60) a. Tiang edot PRO periksa dokter.
 1 want PRO OV.examine doctor
 ‘I want to be examined by a doctor.’
- b. *Tiang edot dokter periksa PRO.
 1 want doctor OV.examine PRO
 ‘I want to examine a doctor.’
- c. Tiang edot PRO meriksa dokter.
 1 want PRO AV.examine doctor
 ‘I want to examine a doctor.’
- d. *Tiang edot dokter meriksa PRO.
 1 want doctor AV.examine PRO
 ‘I want to be examined by a doctor.’

It could of course be possible for Travis to further argue that Spec,TP is a θ -position in embedded OV constructions, in contrast with matrix OV. However, as Levin points out, this sort of move would render a mixed-status analysis less plausible—as it would amount to saying that Spec,TP is a T-position whenever it needs to be, which is not a satisfying solution.

Taking up the task of defending Minimalist binding approaches against the objections raised by Wechsler (1999), Levin (2014) proposes a solution to the Balinese Bind that

incorporates his proposal for Balinese voice alternation outlined above with the Agree-based anaphor licensing mechanisms put forth by Rooryck & Vanden Wyngaerd (2011) (R&W). Levin’s account sidesteps the issue of whether Spec,TP is an A- or A’-position in Balinese by positing that binding takes place lower in the syntax of raising constructions. In particular, Levin argues that reflexive binding in Balinese uniformly occurs within vP, whether in AV, OV, or raising constructions.

An illustrative tree of a derivation of the sentence *Pete invited himself* from Rooryck & Vanden Wyngaerd (2011) is given in (61) below; the anaphoric element raises to an adjoined position such as Spec,vP, at which point the anaphor ends up c-commanding its antecedent (and subsequent short movement of the verb above vP, and the EA above the anaphor, which is not shown):



This may seem counterintuitive at first glance. The unvalued ϕ -features on the anaphor cause it to probe the antecedent that it ends up c-commanding, and its features are valued. At LF, the nominal that was valued during the derivation is interpreted as bound. As noted by R&W, this proposal does not immediately extend to complex anaphors within PPs, as these anaphors do not c-command their antecedent at any point in the syntactic derivation. To account for such cases, R&W propose that the anaphor covertly moves out of the PP at PF in order to adjoin to a position from which it can probe its antecedent.

Levin extends R&W’s approach to Balinese binding. He first proposes that the IA raises to a specifier of vP, as shown in 3.1. From there, an anaphoric IA c-commands the EA, allowing it to probe the EA in order to check its unvalued ϕ -features. The binding relationship is thus established between two elements, each of which are in Spec,vP, prior to T even being Merged, thereby obviating need to appeal to Spec,TP as a potential locus of binding. This correctly predicts the effect of voice alternation on the surface distribution of reflexives seen in (52a)–(52d), since binding is established within vP prior to promotion of the pivot to Spec,TP.

In order to account for binding in raising constructions, Levin compares the Balinese Bind construction to (62). If the PP in (62) above were to undergo movement to Spec,vP and above the EA, the anaphor would be unable to value its ϕ -features as it is too far embedded:

(62) Tim looked at himself in the mirror.

According to R&W, the anaphor in (62) covertly moves outside of the PP and adjoins to Spec,vP, c-commanding the EA. This is precisely what Levin proposes for the Balinese Bind construction, as well: the reflexive experiencer moves covertly to a position that c-commands the embedded subject, allowing it to check its unvalued features before raising occurs.

Levin's proposal is able to handle the data that have previously appeared in literature discussing the Balinese Bind. But Levin makes no mention of logophoric interpretations of Balinese complex anaphors, which are available even when the anaphor is a syntactic object—which I believe any analysis of the Balinese Bind construction must include. Indeed, there is one case in which our respective accounts make distinct predictions, which was presented previously in (43c). I predict the reflexive experiencer to be available in the absence of raising, and it is:

(63) Context: Arta took a photo of Ayu and Nyoman. Ayu doesn't like the way she looks in the photo, so she hid the photo in the closet.

- a. What does Ayu think of the photo?
- b. Why did Ayu hide the photo?
- c. Ngenah sig awak-ne_i ia_i jelek sajan.
Seem to self-POSS.3 3 bad very
'(lit.) It seems to herself that she is very ugly.'

By contrast, Levin (2014) does not predict that binding would be possible in (63). The embedded clause in (63) appears to be full and finite and therefore a phase, as evidenced by the overt pronoun that has been licensed as the subject of the embedded clause.¹⁹ *Awakne* is not able to agree with its "antecedent" which it c-commands, given the phase barrier between the two. Agreement between *awakne* and its "antecedent" is made even less likely by the fact that Levin adopts a very strict conception of the Phase Impenetrability Condition (PIC) following R&W, in which elements within the c-command domain of the phase head become unavailable for probing as soon as the specifier of the phase is Merged.

Indeed, the strictness of the PIC leads to undesirable consequences more generally. As an anonymous reviewer notes, it is not clear how Levin's approach can derive binding within finite embedded clauses in which the anaphor is a subject, as seen in example (31) above, repeated in

¹⁹ See Chomsky (1977) among others for the idea that subject licensing is intimately related to finiteness. Given that Balinese does not have overt tense or agreement morphosyntactic markings, two properties often associated with finite clauses crosslinguistically, prima facie this is the only property I can use to help determine whether the embedded clause is finite or not.

(64) below. There is no mechanism under Levin's framework for the anaphor to move out of the full and finite embedded phase.

- (64) Ayu_i ngorahang awak-ne_i (ngenah) jegeg sajan.
 Ayu AV.say self-POSS.3 (seem) beautiful very
 'Ayu_i said that she_i looks very beautiful.'

To conclude, these approaches do not shed further light on the properties of Balinese anaphora, and do not make further predictions of their own: they are technical fixes. My account is at an advantage here.²⁰

3.4 Reflexive experiencers in English

Even so, multiple questions still remain open to future research. As an anonymous reviewer points out, perhaps the most pressing problem is the syntax and semantics of the *seem*-construction in both Balinese and English. Unlike Balinese, in English, it seems that the reflexive experiencer can never be logophorically bound. One test that helped to establish the presence of a perspectival center do not work in English; the reflexive cannot be read long-distance. Based on this approach to Balinese, I would predict English to behave similarly, but it doesn't:

- (65) *John thinks that Lisa seems to himself to be very happy.

Also recall the obligatory *de se* test seen in (45) previously. When we use this test for such constructions in English, we find that although the context-sentence pair in Balinese was not acceptable, it was acceptable to the native English speakers that I consulted:

- (66) Ayu is very drunk at a weekend party at her friend's house. She sees a portrait of herself that her friend has hanging up, and calls the woman in the portrait ugly, though she does not realize that she is the woman in the photo.
 Ayu seems to herself to be very ugly.

Similarly to Balinese, though, *myself* is not possible in this position:

- (67) *Lisa seems to myself to be very happy.

That the anaphor is not logophorically bound in such cases in English does *not* change the fact that anaphor in the Balinese Bind construction is logophorically bound in Balinese. Rather than being a problem for my analysis, I believe that this is an instance of crosslinguistic variation. It appears that a perspectival center is present in such constructions in Balinese but not in English. This would account for the differences between these languages we have just seen above.

²⁰ Another potential problem for Levin's account would be if split readings were permitted with the experiencer anaphor in the Balinese Bind construction. There is no obvious way to derive this via Agreement mechanisms. I have not been able to verify this, however.

Indeed, I predict that Balinese is not the only language which allows logophoric licensing with complex anaphors in this context. And this prediction is borne out. Turkish raising constructions behave similarly to Balinese ones, in which the simplex anaphor *kendi* is not allowed:

- (68) Hande_i Zeynep_k [kendi-si]_{i/k}-ne çirkin görün-üyor de-di.
 Hande Zeynep self-POSS.3-to ugly seem-PRES.3 say-PST.3
 ‘Hande_i said that Zeynep_k seems to herself_{i/k} to be ugly.’

Just like Balinese, in this context, it is not possible for a pronoun to occur instead of the logophoric anaphor; it must be interpreted as a free pronoun in (69):

- (69) Hande_i Zeynep_k o_{*i/*k/j}-na çirkin görün-üyor de-di.
 Hande Zeynep self-POSS.3-to ugly seem-PRES.3 say-PST.3
 (Lit.) ‘Hande_i said that Zeynep_k seems to her_{*i/*k/j} to be ugly.’

At the very least, Turkish demonstrates that this problem is not unique to Balinese. But I must leave further technical details of the difference between Turkish and Balinese on one hand, and English on the other, to future research, although I provide one potential avenue below.²¹

One possibility is to determine whether there are constraints on Charnavel’s mechanism for logophoric binding. Recall that under her framework a perspectival center can be inserted inside *every* Spell-Out domain. The difference between Balinese and Turkish vs. English seems to demonstrate that this is too strong: there are at least some Spell-Out domains in which a perspectival center cannot be inserted, and it can vary across languages.²² Perhaps PP in raising constructions allows the insertion of LogP in Turkish and Balinese but not English. I must leave why this is so for future work, however.

4 The simplex anaphor *awak*

Although I have proposed a novel solution to the Balinese Bind paradox, this does not yet conclude our discussion of Balinese anaphora. The simplex anaphor *awak* has been neglected in the literature on the Balinese Bind construction, even though it is an important piece of the puzzle. In 4.1, I present *awak*’s basic properties and its limited distribution, and compare it to the

²¹ Two anonymous reviewers ask whether the difference between English and Balinese might have something to do with the lack of ϕ -agreement with subjects in Balinese. This allows anaphors in the subject position in Balinese, as mentioned in section 2 previously. It is not clear to me if this is sufficient, however; Turkish patterns with Balinese but it has obligatorily ϕ -agreement with its subject.

²² Alternatively, another possibility is to determine whether there are differences in phasal domains between Balinese and Turkish vs. English. Alexiadou et al. (2014) and Wurmbrand & Haddad (2016) show that there are crosslinguistic differences in phasal domains in raising constructions with experiencers—just like the Balinese Bind construction I have been discussed in this paper—in English on one hand, and languages like Greek and Romanian on the other. This puzzle could also be solved if an additional phasal domain was present in Balinese and Turkish in which the perspectival center could be inserted. The idea is that the same phase would be missing in English.

related Indonesian simplex anaphor *diri*. In 4.2, I argue that Balinese contradicts a long-standing generalization in the literature regarding long-distance reflexives and monomorphemicity, showing the literal opposite of the expected pattern: the long-distance reflexive must be complex while the simplex anaphor must be read locally.

4.1 *Awak* as a potential reflexivizer

We have so far seen the properties of complex anaphors like *awakne*. It has not been noted in works discussing the Balinese Bind construction, such as Wechsler (1999) or Levin (2014) that Balinese also has simplex anaphors like *awak*. This anaphor cannot occur in this construction:

- (70) *Ayu_i ngenah sig awak_i jelek sajan.
 Ayu seem to self bad very
 (lit.) ‘Ayu_i seemed to herself_i to be very ugly.’

Given that this is directly relevant to untangling the Balinese Bind, I will now provide a discussion of *awak*.

In these works, *awakne* has been glossed as ‘self,’ and the possessive and definite suffixes left unanalyzed. *Awak* is not specified for ϕ -features such as person, number or gender, and it can occur with any kind of subject binder. Furthermore, it has a very limited distribution; it is almost always restricted to the direct object, right-adjacent position of certain AV verbs:

- (71) a. Ayu_i nyimpit awak_i
 Ayu AV.pinch self
 ‘Ayu_i pinched herself.’
 b. *Awak_i nyimpit Ayu_i
 self AV.pinch Ayu
 (Lit.) ‘She_i pinched Ayu_i.’
 c. *Awak_i jimpit Ayu_i
 self OV.pinch Ayu
 (Lit.) ‘She_i pinched Ayu_i.’
 d. *Ayu_i jimpit awak_i
 3 OV.pinch self
 ‘Ayu_i pinched herself.’

It cannot undergo coordination, indicating its clitic-like properties:²³

- (72) *Ia nyimpit awak teken Nyoman
 3 AV.pinch self with Nyoman
 ‘(S)he pinched herself and Nyoman.’

²³ I am grateful to an anonymous reviewer for bringing this to my attention.

The verbs that it can occur with are what Udayana (2013) calls high transitivity verbs like *nyimpit* ‘pinch’, which usually assign agent and theme θ -roles. It cannot be present as the object of a low transitivity verb like *nepukin* ‘see’. This is because such verbs bear experiencer and stimulus arguments; the stimulus object argument is not affected by the action of the verb. But it appears that as long as the experiencer of an AV verb is experiencing strong emotions, *awak* can be licensed. Thus, it is in fact possible to have *awak* as the object of a verb like *love* or *hate*. This indicates that *awak* is not always restricted to agent-theme verbs:

- (73) a. *Cang_i nepukin/ningeh awak_i.
 I AV.see/AV.hear self
 ‘I heard/saw myself.’
 b. Arta ngedegin awak.
 Arta AV.hate self
 ‘Arta hated himself.’

The only exception to the almost consistent distribution of *awak*—the object position of high transitive AV verbs—is that it can sometimes appear in the oblique position of a low transitive, non-AV verb. This violates both of the restrictions discussed above: right-adjacency and high-transitivity. This is illustrated below:

- (74) Ia inget taken awak nista.
 She remember with self poor
 ‘She had strong awareness of being poor.’ Udayana (2013) (p. 162)

Udayana suggests that this is acceptable because this implies that the referent of *awak* is experiencing strong emotions due to being poor. If we replace *nista* ‘poor’ with something like *labuh* ‘to fall’ or *telat* ‘late’ the complex anaphor must instead be used. This is perhaps because strong emotions implies greater transitivity, as Udayana points out.

- (75) Ia inget taken awak-*(ne) labuh/telat.
 She remember with self-*(POSS.3) fall/late
 ‘She remembered that she fell/was late.’ Udayana (2013) (p. 163)

We now move onto *awak*’s most important property. We have already seen that *awakne* may always have a long-distance antecedent. However, *awak* can never be interpreted logophorically, so this precludes it from receiving long-distance antecedents.

- (76) Nyoman_i ngaden Ayu_j nanjung awak_{*i,j}.
 Nyoman think Ayu AV.kick self
 ‘Nyoman_i thinks Ayu_j kicked herself_{*i,j}.’

It turns out that *awak* has different properties from simplex anaphors in closely related languages. I would now like to compare it to the Indonesian simplex anaphor *diri*, for which an analysis

has recently been provided by Kartono et al. (2021), in which *diri* is a *reflexivizer*; that is, it is a marker of intransitivity, rather than an argumental reflexive.²⁴ I conclude that such an analysis cannot be straightforwardly be extended to *awak*.

Like *awak*, *diri* only occurs with a limited class of verbs. Reinhart & Siloni (2005) provide a study of reflexivization across languages, arguing that a reflexive interpretation can also be obtained by reducing the object argument, yielding an intransitive verb. Under their analysis, two of the verb's thematic roles (such as agent-theme) are bundled together and assigned to the subject. This is seen only with grooming verbs in English, such as *Mary washed*.

It is less restricted in Indonesian. Bare *diri* is restricted to agent-theme verbs, in line with Reinhart & Siloni's (2005) generalization.²⁵ Unlike *awak*, it cannot occur as the object of *hate*:

- (77) a. Anton mem-basuh diri.
 Anton AV.wash body
 'Anton washes himself.'
- b. *Anton mem-benci diri.
 Anton AV.hate body
 'Anton hates himself.'
- Indonesian

Furthermore, while *awak* can appear in agent-benefactive constructions, *diri* cannot according to I Nyoman Udayana (p.c.); the complex anaphor *dirinya* is greatly preferred:

- (78) a. Ia_i meli-ang awak_i baju.
 She AV.buy-APPL self shirt
 '(S)he bought him/herself a shirt.'
- b. *Dia membeli-kan diri-*(nya) baju.
 (S)he AV.buy-APPL self-*(3.GEN) shirt
 '(S)he bought him/herself a shirt.'
- Indonesian

Finally, and most importantly, it appears that *diri* cannot appear after any preposition, unlike *awak* as previously seen in (74). Overall, *awak* has a significantly less restricted distribution compared to *diri*. Extending Kartono et al.'s (2021) analysis of *diri* as a reflexivizer to *awak* may not be impossible, though it appears to be difficult. Perhaps Balinese specifies different conditions for thematic role bundling than Indonesian, though this leaves open (74) and (78) above.

²⁴ An anonymous reviewer asks whether Balinese has a counterpart of the more complex anaphoric expression *dirinya sendiri* in Indonesian. To the best of my knowledge, it does not.

²⁵ I Nyoman Udayana (p.c.) confirms that *awak* can appear with grooming verbs.

4.2 Long-distance reflexives and monomorphemicity

With the properties of *awak* established, I would like to note that we have just seen data which contradicts a long-standing generalization concerning reflexives first pointed out by Faltz (1985): long-distance anaphors tend to be monomorphemic. Pica (1987) on the other hand claims that they are required to be monomorphemic. A classical example of this, and perhaps the most studied, is the Chinese reflexive *ziji*.²⁶ *Ziji* can have long-distance antecedents as the syntactic object of the embedded verb:

- (79) Zhangsan_i zhidao Lisi_j xihuan ziji_{i/j}.
 Zhangsan know Lisi like self
 ‘Zhangsan_i knows Lisi_j likes himself_{i/j}.’ (Giblin 2016: p. 58)

The dominant position in the literature—first argued for by Pica (1987) and later by Cole et al. (1990)—is that the availability of non-local binding in examples like (79) follows from the monomorphemicity of *ziji*. The reasoning is simple: the morphologically complex reflexive *ta-ziji*, made up of the addition of the third person pronoun *ta*, precludes the possibility of long-distance binding in any context; an illustration is given below:

- (80) Zhangsan_i zhidao Lisi_j xihuan ta-ziji_{*i/j}.
 Zhangsan know Lisi like 3-self
 ‘Zhangsan_i knows Lisi_j likes himself_{*i/j}.’ (Giblin 2016: p. 58)

One explanation for this is given as follows. Cole et al. (1990) argues that long-distance reflexives are interpreted via head movement, and this can only occur with morphologically simplex anaphors. Complex anaphors are not capable of head movement, so they can only be bound locally.²⁷ But there are obvious problems with Pica’s (1987) strong assertion that long-distance anaphors must be monomorphemic; as discussed in section 2.1 previously, English’s *him/herself*, which seems to be a complex anaphor, can have non-local antecedents in certain contexts.

To avoid this issue, Haspelmath (2008) provides the most generous interpretation possible of this generalization. The definition is as follows (Haspelmath 2008: p. 19):

- (81) **Haspelmath’s Universal 7:** If a language has different reflexive pronouns in local and long-distance contexts, the local reflexive pronoun is at least as complex phonologically as the long-distance one.

²⁶ See Reuland et al. (2019) for an argument for *ziji* actually being bimorphemic.

²⁷ For a more complete list of complex anaphors which may have long-distance antecedents, and relevant references, the reader is referred to Chapter 5 of Charnavel (2020). The existence of such complex reflexives, dubbed *semi-reflexives* by Reuland et al. (2019), has been previously noted in the literature in a diverse range of languages.

In other words, if the local and long-distance reflexives in a language differ, long-distance pronouns must be simpler (or monomorphemic) and local pronouns must be more complex (bimorphemic or bigger). Here are some examples:

	Local reflexive	Long-distance reflexive
Mandarin	(ta)ziji	ziji
Icelandic	sjalfan sig	sig
Dutch	zichzelf	zich
Telugu	tanu tanu	tanu
Bagvalal	e-b-da	e-b
Malay	diri-nya	diri-nya
English	him-self	him-self
Balinese	awak	awak-ne

Table 2: Local and long-distance reflexives, Table 9 from Haspelmath (2008) with Balinese added.

As is made apparent in the table above, Balinese contradicts Haspelmath's Universal 7, exhibiting the exact opposite pattern than is predicted. The simplex anaphor is monomorphemic and can never be long-distance. On the other hand, the complex anaphor is bimorphemic, and yet behaves as an exempt anaphor.²⁸

One way out of this problem might be to argue that *awak* in Balinese is an reflexivizer, as Kartono et al. (2021) propose for *diri* in Indonesian. As we have seen, such an approach cannot be straightforwardly extended to *awak*—which may be an argumental reflexive. Regardless, though, I believe that even if *awak* is a reflexivizer, this would still disprove Haspelmath's generalization, for two reasons.

First, Haspelmath (1997) himself has a much broader definition of a pronoun, in that it does not need to be an argument—it is simply a grammatical item which can replace a noun or a noun phrase (p. 10). Furthermore, he greatly extends the definition to include so-called *pro-verbs*, *pro-adjectives* and so forth, which are grammatical items that can replace verbs and adjectives respectively. Thus, reflexivizers are still pronouns under Haspelmath's own definition.

Finally, Déchaine & Wiltschko (2017) provide a formal typology of reflexives under which reflexives come in five different sizes crosslinguistically: DP > ϕ P > ClassP > nP > NP. The

²⁸ In addition, although the head movement account of long-distance reflexives has since been disputed, it is worth observing that Balinese provides a severe problem for such an approach, given that head movement would have to apply to complex anaphors but not to simplex anaphors, contrary to what the account claims.

difference between reflexivizers and, for example, English *herself* is captured by differences in size: *herself* is a full DP. For our purposes we need not get into the details of this account, but for them, reflexivizers are *n*P_s, which are still argumental reflexive pronouns that are the object of a verb.²⁹ Adopting this approach would also enable one to maintain the idea that reflexivizers are reflexive pronouns. Thus, I ultimately believe that Balinese anaphors pose a problem for this generalization.

5 Conclusion

I have tried to show that the Balinese Bind construction does not pose a problem to GB and Minimalist theories of syntax. In order to accomplish this, I have presented a wealth of novel data to demonstrate a property of Balinese complex anaphors like *awakne* that has previously gone unnoticed: they are obligatorily interpreted logophorically in the Balinese Bind construction. This observation allows one to provide an alternate solution of the Balinese Bind, which I have done here, in the framework of Charnavel (2020). Ultimately, it is not relevant whether Spec,TP is an A- or A'-position in Balinese. This proposal also improves on previous GB/Minimalist approaches as well as Wechsler's HPSG approach, none of which predict *awakne*'s wider distribution and interpretive properties.

In addition to unraveling the Balinese Bind, I have also attempted to shed light on other issues in the literature on anaphora. Balinese provides a genuine counterexample to a prominent generalization in the literature: if a language has both long-distance and local anaphors available, the local anaphor is at least as complex phonologically as the long-distance one. Balinese is literally the opposite, plainly contradicting this generalization. To conclude, further study into the anaphora of understudied languages might shed light on current theories of reflexives.

²⁹ The reader is referred to Déchaine & Wiltschko (2017) for further discussion on reflexivizers, and languages that have reflexivizers that are similar to the Indonesian *diri*.

Abbreviations

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ACC	Accusative
APPL	Applicative
AV	Agentive Voice
DAT	Dative
DEF	Definite
DEM	Demonstrative
GEN	Genitive
LNK	Linker
NEG	Negation
NOM	Nominative
OV	Objective Voice
PST	Past
POSS	Possessive
PRES	Present
REL	Relativizer

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Competing Interests

The author has no competing interests to declare.

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