

**Names as complex indices:  
On apparent Condition C violations in Thai\***

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**1. Introduction**

Thai is known to mysteriously violate Binding Condition C (Lasnik 1989, Hoonchamlong 1991). For example, in (1), the proper name *Nít* in the embedded clause is bound by an identical R-expression in the main clause.

- (1)    *Nít*<sub>1</sub> *phûut wâa*    *Nít*<sub>1</sub> *sabaaj*  
      Nit say    COMP Nit comfortable  
      ‘Nit said that she’s comfortable.’

Such examples are perfectly natural in Thai. A number of proposals have been made to account for them. For example, Lasnik (1989) suggests that the distinct characteristics of Thai R-expressions are due to parametric differences in Binding Theory, subject to a universal constraint that says a “more referential” noun phrase may not be bound by a “less referential” one, allowing binding by identical noun phrases. On the other hand, Lee (2003) argues that bound R-expressions in Thai are not really R-expressions, but are bound variables spelled out as exact copies of their antecedents. Finally, Larson (2006) proposes that bound R-expressions in Thai are actually syntactic pronouns, or  $\phi$ Ps.

This paper reconsiders the Thai facts in light of two generalizations about Thai binding first observed by Hoonchamlong (1991), and argues that the apparent Condition C violations arise in Thai due to the exceptional semantics of a subclass of R-expressions in Thai. These noun phrases, including names, are interpreted as complex indices, analogous to first and second person pronouns, or indexicals. Adopt the proposal of Sudo (2012) to account for these parallels, we show that Grodzinsky and Reinhart’s (1993) Rule I (Coreference Rule) provides a crosslinguistically robust account of Condition C.

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- (2) *Rule I (Coreference Rule)* (Grodzinsky and Reinhart 1993)  
 NP A cannot corefer with NP B if replacing A with C, C a variable A-bound by B, yields an indistinguishable interpretation.

Rule I effectively requires (A)-binding configurations to be used whenever the syntax allows, i.e., when an argument c-commands another DP. This forces the use of bound pronouns and anaphors in such configurations, deriving Condition C. The intuition behind this rule is that speakers prefer binding, which directly encodes identity in the semantics, over coreference, which must be resolved by context. Thus, if a bound variable anaphor and a co-referential R-expression or referential pronoun convey the same meaning, the latter is blocked. Our analysis of the Thai facts in (1) allows it to satisfy Rule I by virtue of the fact that certain R-Expressions in Thai, including names, are complex variables and hence can be A-bound.

## 2. Two generalizations about Thai binding

Two generalizations refine our understanding of cases like (1), both due to Hoonchamlong (1991). The first concerns the type of R-expressions that can be bound in Thai.

- (3) *Generalization 1: Pronominal R-expressions*  
 Not all R-expressions can be bound in Thai; only Pronominal R-Expressions (PREs) (Hoonchamlong 1991, Larson 2006)

PREs in Thai include names, kinship terms, and titles<sup>1</sup>. In example (4), the proper name *Nít* ‘Nit’ ((1), repeated in (4a)), the kinship term *phîi* ‘older sibling’ (4b), and the honorific title *aacaan* ‘teacher’ (4c) in the lower clauses are bound by the identical R-expressions in the upper clauses, respectively. In contrast, regular R-expressions such as the common noun *coonsalât* ‘pirate’ (4d) would trigger a Condition C effect and hence cannot be bound.

- (4) a. Nít<sub>1</sub> phûut wâa Nít<sub>1</sub> sabaaj  
 Nit say COMP Nit comfortable  
 ‘Nit said that she’s comfortable.’  
 b. phîi<sub>1</sub> khít wâa phîi<sub>1</sub> chalàat  
 older.sib think COMP older.sib smart  
 ‘The older sibling thinks that s/he’s smart.’

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<sup>1</sup>Hoonchamlong also considers epithets to be PREs. However, the ability of epithets to be bound, as in (1), is controversial. While names, kinship terms, and titles can be used consistently throughout the sentence, many Thai speakers prefer using a regular pronoun in the lower clause rather than an identical epithet, hence contradicting to Hoonchamlong’s (1991: p.41, ex. 56) judgment (new judgement added):

- (i) ??âjsàt<sub>1</sub> sŏŋsǎj wâa âjsàt<sub>1</sub> pùaj  
 EPITHET wonder COMP EPITHET ill  
 ‘The guy (vulgar) wonders if he’s ill.’

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- c. aacaan<sub>1</sub>    sǒŋsǎj    wâa    aacaan<sub>1</sub>    pùaj  
teacher.HON wonder COMP teacher.HON ill  
‘The teacher wonders if s/he’s ill.’
- d. coonsalât<sub>1</sub>    phûut    wâa    coonsalât<sub>\*1/2</sub>    sabaaj  
pirate<sub>1</sub>    said    COMP pirate<sub>1</sub>    comfortable  
i. Pirates said that pirates are comfortable.  
ii. \*The pirate<sub>1</sub> said that s/he<sub>1</sub>’s comfortable.’

The second generalization is about an identity requirement that holds between the binder and the bindee. Hoonchamlong dubs this constraint the Binder Identity Generalization (BIG).

(5)    *Generalization 2: Binder Identity Generalization*

Pronominal R-Expressions can only be bound by identical Pronominal R-Expressions.  
(Hoonchamlong 1991)

We have seen in (4a-c) that, besides both NPs being PREs, they must also be identical. Non-identical PREs result in regular Condition C effects. In example (6a), *aacaan* and *Nít* are different PREs, so they cannot be coindexed or coreferential. Similarly in (6b), *Nít* in the lower clause cannot be bound by the complex demonstrative *khon nán* ‘that person’ because they are not identical, plus *khon nán* is a regular R-expression, not a PRE.

- (6) a. Nít<sub>1</sub>    phûut    wâa    aacaan<sub>\*1/2</sub>    sabaaj.  
Nit say    COMP teacher    comfortable  
‘Nit<sub>1</sub> said that the teacher<sub>\*1/2</sub>’s comfortable.’
- b. khon    nán<sub>1</sub>    phûut    wâa    Nít<sub>\*1/2</sub>    sabaaj.  
person that say    COMP Nit    comfortable  
‘That person<sub>1</sub> said that Nit<sub>\*1/2</sub>’s comfortable.’

Both generalizations highlight that Condition C is active in Thai for regular R-expressions.

Two analyses of Thai binding have attempted to account for the apparent Condition C violation like (1); both face problems. First, Lee (2003) proposes that bound PREs such as those in (4a-c) are phonological copies in a bound variable structure. This accounts for the BIG (5), but it does not account for the exceptional behavior of PREs (3), as it predicts any element that can bind variables can be copied. However, quantifiers cannot act as bound variables (7a), nor can regular R-expressions (7b).

- (7) a. [dèk sǒŋ khon]<sub>1</sub>    phûut    wâa    [dèk sǒŋ khon]<sub>\*1/2</sub>    sabaaj.  
child two CLF    say    COMP child two CLF    comfortable  
‘Two children<sub>1</sub> said that they<sub>\*1/2</sub>’re comfortable.’
- b. coonsalât<sub>1</sub>    sǒŋsǎj    wâa    coonsalât<sub>\*1/2</sub>    pùaj  
pirate    wonder COMP pirate    ill  
‘The pirate<sub>1</sub> wonders if s/he<sub>\*1/2</sub>’s ill.’

Another analysis of Thai Condition C violations is proposed by Larson (2006), who argues that PREs are syntactic pronouns, or  $\phi$ Ps (Déchaine and Wiltschko 2002), so are subject to Condition B rather than Condition C. While this analysis successfully accounts for the exceptionality of PREs (3), it cannot account for the BIG (5). Larson’s analysis predicts PREs should have the general behavior of pronouns; but unlike overt third person pronouns or null *pro* in Thai (8a), PREs cannot be bound by quantifiers (8b):

- (8) a. [phîi thúk khon]<sub>1</sub> phûut wâa khăw<sub>1/0</sub><sub>1</sub> sabaaj.  
o.sib every CLF think COMP 3SG/*pro* comfortable  
‘Every older sibling said that they are comfortable.’  
b. [phîi thúk khon]<sub>1</sub> phûut wâa phîi<sub>\*1/2</sub> sabaaj.  
o.sib every CLF think COMP o.sib comfortable  
Only: ‘[Every older sibling]<sub>1</sub> thinks that I/you/she<sub>2</sub> is comfortable.’

The PRE in (8b) only can be interpreted referentially, not as a bound variable, although *phîi* is a PRE and can bind itself when bare (4b). Furthermore, bound PREs can generally be replaced with 3P pronoun like *khăw* or null pronouns in (4d), (6), and (8b), showing that regular third person pronouns are distinct from PREs in being exempt from the BIG. So while Larson’s account does account for the fact that PREs are exempt from Condition C, it cannot account for their sensitivity to the BIG.

### 3. The Proposal

To summarize: there are a class of elements in Thai, Pronominal R-expressions (PREs), which seem to be pronominal in that they do not violate Condition C, which is otherwise active in Thai. Additionally, PRE’s require an identical binder, and they cannot serve as quantificationally bound variables. In this section we show that we can make sense of these facts if we adopt the idea that PREs are a special kind of pronoun, in agreement with Larson (2006). Specifically, PREs are like first and second person pronouns in that they are interpreted as complex indices, consisting of a numeral and a semantic person value (Minor 2011, Sudo 2012, Podobryaev 2017). The descriptive component of PREs are proposed to have the same semantic function as person features in first and second person pronouns. This entails that ‘person’ is essentially an open class in Thai, or at least significantly larger than languages that only have only speaker- and participant-based person values for pronouns.

We adopt Sudo’s (2012) implementation of complex indices where pronouns are tuples of a natural number, a semantic type, and a person value. We will call person values  $\pi$  or  $\pi$ -restrictions. We will omit the second coordinate, semantic type, for brevity, as we only consider variables of type *e*. So our complex indices have the form  $\langle \mathbb{N}, \pi \rangle$ :

- (9) a. ‘me<sub>3</sub>’ interpreted as  $\langle 3, 1^{st} \rangle$   
b. ‘you<sub>6</sub>’ interpreted as  $\langle 6, 2^{nd} \rangle$   
c. ‘Nít<sub>1</sub>’ interpreted as  $\langle 1, \text{NIT} \rangle$   
d. ‘phîi<sub>7</sub>’ interpreted as  $\langle 7, \text{o.sib} \rangle$   
e. ‘khruu<sub>4</sub>’ interpreted as  $\langle 4, \text{TEACHER} \rangle$

The  $\pi$ -restriction of a pronoun only admits assignments to the context where its first coordinate maps to an individual with the property specified by  $\pi$ . In the simple cases of first and second person,  $\pi$  only admits assignments where the individual picked out by the index is the speaker or hearer. In the case of PREs,  $\pi$ -restrictions are more elaborate, but they do still rely on contextual knowledge of who the speaker or hearer are.

- (10) *Admissibility Condition on Assignment Functions* (cf. Podobryaev 2017:p. 332)  
 An utterance of a sentence is felicitously evaluated w.r.t context  $c$ , possible world  $w$ , and assignment function  $g$  only if  $g$  satisfies the following conditions:  
 for all  $i \in \mathbb{N}$ : ( $s_c$  = speaker in  $c$ ,  $h_c$  = hearer in  $c$ )
- a.  $[[me_i]]^{c,w,g} = g(\langle i, 1^{st} \rangle) = s_c$
  - b.  $[[you_i]]^{c,w,g} = g(\langle i, 2^{nd} \rangle) = h_c$
  - c.  $[[Nit_i]]^{c,w,g} = g(\langle i, NIT \rangle) = \text{the person called Nit by } s_c \text{ or } h_c$
  - d.  $[[phîi_i]]^{c,w,g} = g(\langle i, O.SIB \rangle) = \text{the older friend/sibling of } s_c \text{ or } h_c$ .
  - e.  $[[khruu_i]]^{c,w,g} = g(\langle i, TEACHER \rangle) = \text{the teacher of } s_c \text{ or } h_c$ .

Such elaborate  $\pi$ -restrictions seem surprising if  $\pi$  is equated with a morphosyntactic person feature. However,  $\pi$ -restrictions are part of the LF representation of a pronoun, they are not identical to the person component of syntactic  $\phi$ -features. In other words, Thai PREs are special pronouns with LFs that include  $\pi$ -restrictions besides the usual speaker and hearer.

Like first and second person, PREs are irreducibly context dependent. For example, the PRE *phîi* in (10d) is typically used to refer to the older of the speaker or hearer assuming they are friends or siblings, though a third person older friend/sibling of the speaker or hearer can also be called *phîi*. Note that *phîi* and the other PREs are not indexicals: they will consistently pick out the older member of the speaker or hearer regardless of who is speaking.<sup>2</sup> Of course, *phîi* tracks the speaker or hearer in its context dependence: when speaking to a younger friend, the speaker would use *phîi* to refer to themselves. If, a moment later, that same person calls an older friend on the phone, *phîi* would refer to the addressee, and a different term, *nôj*, could be used to refer to the speaker.<sup>3</sup>

We now turn to a few pieces of evidence that Thai PREs have the semantics of complex indices, focusing on similarities between their semantic distribution and the semantic distribution of indexicals, i.e., first and second person pronouns. First, PREs are typically used in place of indexicals when they are contextually licensed. So when talking to an older sibling, *phîi* is almost always used for direct address in place of a second person pronoun. If we

<sup>2</sup>In fact, in certain quasi-familiar contexts where neither speaker wants to claim the privileges associated with being older while still maintaining familiarity, two speakers might insist on calling each other *phîi*, perhaps as a kind of deferential move.

<sup>3</sup>The case of names (10e) is somewhat more puzzling in this regard, as names aren't usually context dependent. However, Thai first and second pronouns are honorific—ranging from vulgar to deferential ones to special terms of address for monks and royalty (Cooke 1965, Palakornkul 1975). As such, name-use may mark contexts where pronouns are being avoided. For instance, acquaintances use names to address each other when they are not sure which of the pronouns is most appropriate as their social status is unclear. It is also common for children to refer to themselves using their names when talking to their parents and relatives. Furthermore, name-use is more common in women than it is in men. For some men, using names within male peer groups sounds effeminate. They do use names, though, when talking to their partners or female friends.

assume that languages generally have a ban on using third person forms to refer to speaker and addressee,<sup>4</sup> then PREs in Thai must be exempt from this principle. One way to derive the common behavior of indexicals and PREs in allowing speaker- and addressee-reference is to analyze third person pronouns as lacking a  $\pi$ -restriction.<sup>5</sup> Our system will then need to be supplemented with the following rule:<sup>6</sup>

$$(11) \quad g(\langle 8, \emptyset \rangle) = g(8)$$

Then we can propose a principle like the following which will require the use of an indexical *or* PRE if one is available rather than a third person pronoun:

(12) *Use complex indices!*

If an index  $\alpha_n$  with a non-null  $\pi$ -restriction  $\beta$  is licensed in context  $c$  such that  $[[\alpha_n]]^{g,c} = g(\langle n, \beta \rangle) = i$ , then use of any expression  $\gamma_m$  with a null  $\pi$ -restriction such that  $[[\gamma_m]]^{g,c} = g(\langle m, \emptyset \rangle) = i$  is prohibited.

As formulated, this principle will always ban third person pronouns in contexts where complex indices — either indexicals or PREs—are allowed.

The second argument for the proposal above focuses on the claim that PREs are in fact variables of some kind, like pronouns, rather than R-expressions. This argument comes from the fact that PREs are ambiguous between strict and sloppy readings under focus, like pronouns more generally but unlike English R-expressions like names (e.g. Heim 1998).

(13) Mii khêe Nit thii khít wâa Nit chàlàat.

EXT just Nit REL think COMP Nit smart

‘Only Nit thinks that she’s smart.’

(Strict or sloppy)

a. Only Nit  $\lambda x. [x$  thinks that  $x$  is smart]

b. Only Nit  $\lambda x. [x$  thinks that Nit is smart]

Similar effects obtain under ellipsis. Sentence (13) is ambiguous between a sloppy reading where Nit is the only person who thinks “I am smart,” and a strict reading where Nit is the only person who thinks that Nit specifically is smart. This ambiguity is available for bound pronouns including ‘bound’ indexicals, for example in sentences like *Only I think that my child is talented*, where *my* is similarly ambiguous (e.g. Kratzer 2009).

As an aside, the fact that Thai PREs allow sloppy readings under focus is relevant for the analysis of such cases. In particular, the Thai facts cast doubt on the idea that ‘fake indexicals’ are generated by an Agree or feature-transmission mechanism (e.g. Kratzer 2009). Thai lacks

<sup>4</sup>For Podobryaev (2017) this is the *Elsewhere Third Person Principle*; Anvari (2019) proposes a *Ban on Illeism*, or third person reference to self.

<sup>5</sup>This claim does not entail there is no morphosyntactic feature for third person. Such a feature could be mapped to an empty  $\pi$ .

<sup>6</sup>We assume that non-person semantic content in pronouns, or at least animacy, humanness, and gender restrictions, are simple presuppositions rather than being represented as a pronominal restriction, following Sudo (2012). We return to this point briefly below.

agreement, and the features transmitted in Thai would need to be semantically contentful features like ‘older sibling’ or ‘teacher.’ In other words, the  $\pi$ -restrictions of PREs are plausible as components of their LF representation but less so as morphological features. If  $\pi$ -restrictions were morphological features, we might expect equivalents to show up in verbal agreement paradigms in some language, which is unattested to our knowledge. So the Thai facts lend support to the idea that sloppy readings arise because the mechanism responsible for calculating focus alternatives can ignore  $\pi$ -restrictions as well as pronominal presuppositions such as gender (Jacobson 2012, Sauerland 2013, Bassi and Longenbaugh 2018).

Our final argument for the proposed analysis is the fact that PREs, like indexicals, but unlike third-person pronouns, cannot be interpreted as bound variables, even when the restriction of the quantifier is explicitly composed of individuals who potentially satisfy the person restriction on the PRE, as we saw in (8b). Like PREs, indexicals cannot be interpreted as bound variables:

- (14) #Exactly one person<sub>1</sub> did my<sub>1</sub> homework(, namely me). (Sudo 2012:140)

The inability of PREs and indexicals to be interpreted as quantificationally bound variables entails that the mechanism which gives rise to variable binding, namely, Predicate Abstraction, cannot ignore the person restriction on the bound PRE the way that the computation of focus alternatives can. This could be either because Predicate Abstraction only has access to the first coordinate of a complex index, or because the binder index of quantifiers and third person pronouns lack  $\pi$ -restrictions, unlike indexicals and PREs. In any case, indexicals and PREs cannot be bound variables and third person and null pronouns can (8a).

#### **4. Why PREs satisfy Condition C**

The proposal that PREs are complex indices unlocks a simple explanation for why they do not trigger Condition C violations: as complex indices, PREs can be bound, and hence satisfy Rule I (2). The semantic setup that we adopt is basically that of Heim (1998): binding arises via movement plus Predicate Abstraction, triggered by a binder index. Following Sudo (2012) and Podobryaev (2017), the binder index of PREs and indexicals will have the same  $\pi$ -restriction as the moved expression, so it will only be able to bind variables with the same  $\pi$ . This is illustrated below for example (4b):

- (15) [<sub>S</sub> phi<sub>i</sub> [<sub>VP</sub>  $\lambda$ <4,O.SIB> <4,O.SIB> think that <4,O.SIB> is smart ]]

The subscript on the raised subject is the first coordinate of its inner index, i.e., its referential index Heim (1998), which is also complex. The complex index bound by the  $\lambda$ -operator is the binder index of the subject. The trace of movement and the bound PRE in (15) are both A-bound by the moved subject. This binding configuration is the only one allowed by Rule I, because coreference and binding are not interpretively distinct in his case. As the representation in (15) involves binding rather than coreference, it is allowed by Rule I; no Condition C qua Rule I violation arises.

If the subject is focused and the variables match, as in (15), then the alternatives will be calculated over both the matrix subject and the bound embedded subject PRE, resulting in a sloppy reading, which is available (13). To derive strict readings under focus, the first coordinate of the embedded subject can be different from the coordinate on the binder index, resulting in a strict reading under focus, even though  $\pi$  is the same in the two cases.

- (16)  $[_S \text{ phîi}_7 \lambda<4, \text{O.SIB}> [_{VP} <4, \text{O.SIB}> \text{think that } <2, \text{O.SIB}> \text{ is smart } ]]$

Binding can be avoided in such cases without violating Rule I because the interpretation with a bound vs. coreferential object PRE are distinct.

Hoonchamlong's two generalizations about Thai binding are derived straightforwardly in this system. First, the exceptionality of PREs (3) follows from the fact that R-expressions are not interpreted as complex indices, but instead as a referential expression such as a definite description. As such, binding is impossible with regular R-expressions, so they always violate Rule I. For example, in the following LF for example (7b), the subject, a bare definite, is moved, triggering predicate abstraction. The moved subject is unable to bind the definite description in the embedded clause, because it is not a PRE, so cannot be interpreted as a variable or bound:

- (17)  $[_S \iota x. \text{pirate}(x) \lambda<1, \emptyset> [_{VP} <1, \emptyset> \text{wonder if } \iota x. \text{pirate}(x) \text{ is ill } ]]$

We assume here that plain R-expressions introduce simple binder indices, i.e., indices with empty  $\pi$ -restrictions, interpreted by the rule in (11).

Such configurations have viable binding alternatives, namely variants with a bound pronoun, which would be the interpretation if the embedded subject was a coindexed third person or null pronoun in Thai:

- (18)  $[_S \text{ phîi}_7 \lambda<1, \emptyset> [_{VP} <1, \emptyset> \text{wonder if } <1, \emptyset> \text{ is ill } ]]$

As a result, regular R-expressions such as bare nouns always violate Rule I when c-commanded by identical antecedents because they cannot be bound.

Hoonchamlong's second generalization, the Binder Identity Generalization or BIG (5), follows from the proposed analysis as well. This is because PREs have different  $\pi$ -restrictions, so binding of one PRE by a different one is impossible because. By hypothesis, binding requires both coordinates of a complex index to be identical. So even if the same individual is both called Nit and is a teacher, the PREs for 'Nit' and 'teacher' cannot be used or a Rule I violation will occur (6a):

- (19)  $[_S \text{ Nit}_7 \lambda<1, \text{NIT}> [_{VP} <1, \text{NIT}> \text{said that } <1, \text{TEACHER}> \text{ is comfortable } ]]$

This analysis also predicts that true first or second person pronouns should not be bindable by a PRE in Thai, even when the PRE is being used to refer to the speaker or hearer. Binding should be impossible in such cases because first and second person pronouns have different  $\pi$ -restrictions from PREs. This prediction is correct.



- (20) a. \*Nít<sub>3</sub> phûut wâa chán<sub>3</sub> sabaaj.  
           Nit said COMP 1SG comfortable  
           ‘Nit said that I am speaking.’ (Nit=speaker)  
       b. [<sub>S</sub> Nit<sub>2</sub>  $\lambda\langle 3, \text{NIT} \rangle$  [<sub>VP</sub>  $\langle 3, \text{NIT} \rangle$  said that  $\langle 3, 1^{st} \rangle$  is comfortable ]]

This is not a binding representation because the PRE and first person pronoun have different  $\pi$ -restrictions. As such, it is ruled out by Rule I.

In the same thread, a non-PRE will be unable to bind a PRE, illustrated below for (6b). Here, the subject, a complex demonstrative (analyzed here simply as a definite description for simplicity) is a regular R-expression rather than a PRE or indexical so it will introduce a lambda abstractor with an empty contextual restriction. This plain lambda operator will be unable to bind the lower complex variable, which is the interpretation of the PRE.

- (21) [<sub>S</sub>  $\iota x.\text{person}(x)$  [<sub>VP</sub>  $\lambda\langle 2, \emptyset \rangle \langle 2, \emptyset \rangle$  said that  $\langle 1, \text{NIT} \rangle$  is comfortable ]]

In both of these cases, the indices on the trace of movement can never match the later occurrence of the PRE. As such, binding is impossible, so Rule I is necessarily violated, given the availability of binding alternatives to the above representations, namely binding of identical PREs in the case of (20), or binding of a regular third person pronoun, with an empty  $\pi$ -restriction, in (21).

Such cases with mismatching but compatible PREs present the central challenge to imaginable alternative approaches to Thai which treat PREs as simple variables, and treat the  $\pi$ -restriction of a PRE as a regular presupposition. What is unclear in such an account is how to derive the BIG. There is no obvious pragmatic reason why introducing multiple presuppositions in a single sentence should be impossible; an additional stipulation would be needed to rule such cases out. But such an analysis would likely rule out the ability of a regular R-expression to bind a plain variable with a compatible presupposition, like in the English sentence *the girl said that she was comfortable*.<sup>7</sup> Person features, and the  $\pi$ -restrictions of PREs, it seems, are different from other kinds of pronominal content in that they directly constrain possible binding relationships.

## 5. Conclusion

A few general conclusions can be drawn from the preceding discussion. First, Thai does not violate Condition C. Second, Reinhart’s Rule I or one of its more recent descendants (e.g. Roelofsen 2010) is the correct account of Condition C. Third, a view of person as part of a complex index finds support in its ability to extend to an account of Thai PREs. Finally, rather than lacking pronouns altogether, as has been suggested before for Thai (Harley and Ritter 2002:512), Thai has far more pronouns than many other languages.

<sup>7</sup>Podobryaev (2017) makes comparable observations for the inability of indexicals to be bound by non-indexical antecedents, making the same general point for person itself.

## References

- Anvari, Amir. 2019. Meaning in context. Doctoral dissertation, École Normale Supérieure.
- Bassi, Itai, and Nicholas Longenbaugh. 2018. Features on bound pronouns: an argument against syntactic agreement. *Proceedings of NELS 48*.
- Cooke, Joseph. 1965. Pronominal reference in Thai, Burmese, and Vietnamese. Doctoral dissertation, UC Berkeley.
- Déchaine, Rose-Marie, and Martina Wiltschko. 2002. Decomposing pronouns. *Linguistic Inquiry* 33:409–442.
- Grodzinsky, Yosef, and Tanya Reinhart. 1993. The innateness of binding and coreference. *Linguistic Inquiry* 24:69–101.
- Harley, Heidi, and Elizabeth Ritter. 2002. Person and number in pronouns: A feature-geometric analysis. *Language* 78:482–526.
- Heim, Irene. 1998. Anaphora and semantic interpretation: A reinterpretation of reinhart's approach. In *The interpretive tract*, ed. by Uli Sauerland and Orin Percus, volume 25 of *MITWIP*, 205–246. Cambridge, MA.
- Hoonchamlong, Y. 1991. Some issues in Thai anaphora: A government and binding approach. Doctoral dissertation, University of Wisconsin-Madison.
- Jacobson, Pauline. 2012. Direct compositionality and 'uninterpretability': The case of (sometimes) 'uninterpretable' features on pronouns. *Journal of Semantics* 29:305–343.
- Kratzer, Angelika. 2009. Making a pronoun: Fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry* 40:187–237.
- Larson, Meredith. 2006. The Thais that bind: Principle C and bound expressions in Thai. In *Proceedings of NELS*, volume 36, 427–440.
- Lasnik, Howard. 1989. On the necessity of binding conditions 1986. In *Essays on anaphora*, 149–167. Springer.
- Lee, Felicia. 2003. Anaphoric R-expressions as bound variables. *Syntax* 6:84–114.
- Minor, Sergey. 2011. Complex indices and a blocking account of the sequence of tenses. Ms., CASTL, Tromsø.
- Palakornkul, Angkab. 1975. A socio-linguistic study of pronominal usage in Spoken Bangkok Thai. *Linguistics* 11–42.
- Podobryaev, Alexander. 2017. Three routes to person indexicality. *Natural Language Semantics* 25:329–354.
- Roelofsen, Florian. 2010. Condition B effects in two simple steps. *Natural Language Semantics* 18:115–140.
- Sauerland, Uli. 2013. Presuppositions and the alternative tier. *Proceedings of SALT* 23:156–173.
- Sudo, Yasutada. 2012. On the semantics of phi features on pronouns. Doctoral dissertation, Massachusetts Institute of Technology.

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