

### The blocking effect in Vietnamese

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**Abstract** This article explores a restriction on non-local binding in Vietnamese the blocking effect—including a systematic comparison with its Mandarin Chinese counterpart. Our finding is that the blocking effect in Vietnamese appeared to be rather different from that in Mandarin but, in fact, employs essentially the same syntactic mechanism. While binding of Mandarin *ziji* is governed by a [+participant] feature, binding of the Vietnamese anaphor *minh* is governed by a [+author] feature. Together with the assumption of the presence of a silent performative frame, this derives that binding of Vietnamese *minh* yields what one may call an *Author effect*.

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Like many languages, Vietnamese is not entirely homogeneous. The data in this article reflect the language spoken in the Center/Middle of the country (Phương ngữ Trung) based on grammaticality judgments from 15 native speakers, including the first author, mostly linguistic researchers. The reader should be aware that speakers from the Northern region (Phương ngữ Bắc) or the Southern region (Phương ngữ Nam) might diverge in some of their judgments. So far, a comprehensive study of the variation within Vietnamese is not available. Where relevant, we will note divergence based on the literature and on the comments graciously provided by an anonymous reviewer.

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#### Introduction

Many languages have anaphors that allow an antecedent beyond the local domain, but only some exhibit a Blocking effect as illustrated by the Mandarin Chinese example in (1) from Huang and Tang (1991).

(1)	a.	Zhangsan <sub>i</sub>	renwei	Lisi <sub>i</sub>	hai	le	ziji <sub>i/j.</sub>
		Zhangsan	think	Lisi	hurt	ASP	self
		'Zhangsan th	ought that	Lisi had h	urt him/h	nimself.'	
	b.	Zhangsan <sub>i</sub>	renwei	wo/ni <sub>i</sub>	hai	le	ziji <sub>*i/j</sub> .
		Zhangsan	think	I/you	hurt	ASP	self
		'Zhangsan th	ought that	I/you had I	hurt mys	elf/yours	elf/*him.'

The Mandarin reflexive *ziji* may refer to a remote antecedent (1a), but intervention of a 1st or 2nd person pronoun as in (1b) blocks this long-distance binding of *ziji*, which is generally argued to be due to a mismatch in person features between the intervening subjects *wo/ni* and the matrix one *Zhangsan*.<sup>1</sup> According to Cole et al. (1993) and Cole and Sung (1994), only languages without overt subject-verb agreement are likely to induce the blocking effect and Mandarin Chinese is one of that kind.

Similarly to Mandarin Chinese, Vietnamese does not show subject-verb agreement, and Vietnamese has an anaphoric element *minh* 'body', which, like Chinese *ziji*, allows non-local binding (cf. 2).

(2)  $Nam_i$  nghĩ  $Hùng_j$  biết Mai thích  $minh_{i/j}$ . Nam think Hung know Mai like body 'Nam thinks Hung knows Mai likes him (=Nam, Hung).'

This makes it interesting to consider Vietnamese in this respect, and indeed, if Hung in (2) is replaced by the first person pronoun *tôi*, *Nam* is not available as an antecedent of *minh*, showing that Vietnamese exhibits a blocking phenomenon as well (see Doan 2020 for relevant observations and earlier discussion; see also Doan 2022; Chou and Vu 2022).

The aim of the present contribution is to provide an account of why this is so, taking into account the differences and similarities between Vietnamese and Mandarin Chinese.

Preparing the ground for our discussion, it is useful to point out one difference between *minh* and its Mandarin counterpart *ziji*. While Mandarin *ziji* freely allows

<sup>&</sup>lt;sup>1</sup> See also Huang (1984), Battistella (1989), Cole et al. (1990), Huang and Tang (1991), Sung (1990), Cole et al. (1993), Cole and Sung (1994), Huang and Liu (2001). A blocking effect also occurs in Malayalam (Jayaseelan 1999).

coargument binding, coargument binding of *minh* is subject to restrictions. More specifically, in the variety of Vietnamese we base our analysis on, *minh* can only be used to express reflexivity in combination with the verbal reflexive particle  $t\mu$  'self', where English would use *himself* as illustrated in (3a) (cf Doan 2022; Tran 2009: 66), although there is some regional variation.<sup>2</sup> Under these conditions the pronominal *nó* can also have a local antecedent.<sup>3</sup> When  $t\mu$  is present, it always enforces a local interpretation.<sup>4</sup>

(3) a. Lan<sub>i</sub> tự trừng phạt mình<sub>i</sub>/nó<sub>i</sub>. Lan Self punish body/3sg 'Lan punished herself.'
b. Lan<sub>i</sub> trừng phạt mình<sub>\*i</sub>/nó<sub>\*i</sub>. Lan punish body/3sg

'Lan punished \*herself.'

As shown in Reuland et al. (2020) (contra most of the preceding literature), *ziji* is a complex anaphor consisting of a reflexivizing element *zi* and a pronominal element *ji*. By contrast, *minh* is monomorphemic, qualifying as simplex (Doan 2022), and like other simplex anaphors, such as Dutch *zich* and its counterparts in Scandinavian, it cannot be co-argument bound, unless this is licensed by some other factor (see Reuland et al. 2020 for a succinct overview of the issue). This will be relevant for the choice of examples since in the variety of Vietnamese we based

 (i) Anh ấy chỉ có thể trách mình chứ không thể trách người khác.
 3 Dem only can blame MINH but NEG can blame people other 'He can blame himself rather than the others.' (Ngo 2021: 43)

 (i) Tâm<sub>i</sub> bầu cho mình<sub>i</sub>. Tam vote for body
 'Tam voted for himself.'

In this respect Vietnamese is not that different from French  $Jean_i est fier de lui_i/lui même_i$  'Jean is proud of himself'.

<sup>&</sup>lt;sup>2</sup> Fukuda (2005) and Narahara (1995) base their discussion on the variety needing *tu* for local binding. Bui (2019) and Ivan and Bui (2019) report on a regional variant in which the presence of *tu* is not needed, giving cases like (3b) as grammatical. However, Ivan and Bui (2019: 58) note that the preverbal marker greatly "increases the likelihood of reflexive readings for sentences," and Bui (2919) shows that with a quantificational antecedent local binding of *nó* is not possible (without mentioning a possible effect on *minh*, though).

An anonymous reviewer notes that, for them, (3b) is indeed acceptable. Further study on this particular point is needed. Take, for instance, the following example from a Routledge reference grammar (Ngo 2021) pointed out to us by Andrew Simpson:

This seems to confirm that local binding without  $t_{\ell}$  is possible. However, note that this sentence contains the verbal particle *chi*. And, as mentioned in Doan (2022: 80), this particle seems to have the same effect as  $t_{\ell}$ .

<sup>&</sup>lt;sup>3</sup> Note that both Doan (2022) and Bui (2019) show that the reflexive particle is not obligatory in cases of prepositional objects: verbs like 'vote for' (cf i). All experimental results of Bui (2019) are based on such predicates:

<sup>&</sup>lt;sup>4</sup> For discussion of condition B and C effects in Vietnamese, see Pham (2011), Trinh and Truckenbrodt (2018) and Trinh (2022).

the exposition of our analysis on, the local subject will not qualify as a possible antecedent for this reason. For our eventual analysis of non-local binding, the regional variation reported with respect to local binding of minh plays no role, however.<sup>5</sup>

What is important to observe is that *minh* virtually always also allows a speaker value from discourse, indicated by the subscript 'sp' (cf. Sect. 7 for further discussion), but only in the absence of  $t_{r}$ :

(4) Lan (\*tự) trừng phạt mình<sub>sp</sub>.
 Lan self punish body
 'Lan punished me.'

We will now consider the Vietnamese blocking phenomenon in more detail. We illustrate it in the following examples:<sup>6</sup>

(5)	a.	$Nam_i$	nghĩ	bạn <sub>i</sub>		biết	Mai	thích	mình <sub>i/j/sp</sub> .
		Nam	think	frier	nd.add	know	Mai	like	body
		'Nam	thinks	you	know(s	) Mai l	ikes hi	m/you/	/me.'
	b.	$Nam_i$	nghĩ	tôi <sub>j</sub>	biết	Mai	thích	mình*	i∕j∙
		Nam	think	1sg	know	Mai	like	body	-
		'Nam	thinks	I kno	ow Mai	likes 1	ne.'		

(6) Tôi<sub>i</sub> nghĩ Nam<sub>j</sub> biết Mai thích mình<sub>i/j</sub>.
1sg think Nam know Mai like body
'I think Nam knows Mai likes him/me.'

In (5a), the antecedent of *minh* can be the intermediate subject, *ban* as the addressee, or the matrix subject *Nam*, or a speaker value, as discussed above. In contrast, *minh* in (5b) can only be coreferential with the intermediate subject, namely the first person pronoun  $t\hat{o}i$  'I', and binding of *minh* by the matrix subject *Nam* is blocked. Hence, a blocking pattern arises. When the first person doesn't intervene, as in (6), no blocking is observed.

The following questions then arise: What blocks *minh* from having the longdistance antecedent in (5b)? How can we account for the blocking phenomenon in Vietnamese? Can we subsume Vietnamese blocking effects under the same type of blocking effects in other languages and, specifically, Mandarin?

 $<sup>^{5}</sup>$  A more extensive discussion of the interpretation of *t*<sub>*t*</sub> 'self' and its reflexivizing effect can be found in Doan (2022).

 $<sup>^{6}</sup>$  In (5a) we use the common noun *ban* (friend) that groups with kinship terms, which are used as pronominal elements, in this case the addressee (cf. Pham 2002; Doan 2022 for discussion). But see also Sect. 8 and 9.

In (5b) we use the first person pronoun  $t\hat{o}i$  'is' for a neutral interpretation of the sentence. Aside from  $t\hat{o}i$ , there are commonly two other first-person pronouns, which have different contextual nuances such as *ta* 'I,' implying the superiority of a figure (yet rarely used nowadays), and *tao* 'I,' expressing a familiar usage between peers or by elders toward younger individuals (Thompson 1965; Nguyen 1975, 1996, 1998; Pham 2002).

We will pursue an analysis in which the first person pronoun  $t\hat{o}i$  in (5b) plays a role as a blocker, and in which, due to its intervention,  $m\hat{i}nh$  cannot receive a value from the matrix subject *Nam*. Our analysis of binding of the anaphoric element  $m\hat{i}nh$  is based on Multiple Agree (Chomsky 2000, 2001; Hiraiwa 2001, 2002, and others) following Giblin (2016)'s approach to Mandarin Chinese. Our derivation of the blocking effect will be inspired by the main idea of Giblin's approach, but significantly modified in the details.

The structure of the article is as follows. In Sect. 2, we will revisit a general description and discussion of the Blocking effect in Mandarin Chinese. In Sect. 3, we introduce Multiple Agree. Section 4 presents Giblin's account of the Blocking effect in Mandarin Chinese. Sections 5 and 6 explore the properties of the blocking phenomenon in Vietnamese and show how its manifestation contrasts with its Chinese counterpart. Section 7 introduces Ross (1970)'s Performative Hypothesis. Section 8 will be dedicated to developing an account for the blocking effect in Vietnamese in which we introduce the person-feature geometry proposed by Béjar and Rezac (2009) and investigate whether Giblin's account would extend to Vietnamese. We will then argue that Giblin's approach does not fully carry over to Vietnamese, as the blocking pattern for *minh* is distinct from that of Chinese *ziji*. Hence, an alternative account is required. Section 9 summarizes our findings and concludes with a discussion of the blocking effect as it occurs with other nominal expressions such as kinship and status terms.<sup>7</sup>

#### **Revisit the blocking effect in Mandarin Chinese**

In order to understand the specific properties of the blocking effect in Vietnamese, a comparison with blocking in Mandarin is useful. Its main features are illustrated below:

(7) a. Zhangsan<sub>i</sub> renwei Lisi<sub>j</sub> zhidao Wangwu<sub>k</sub> xihuan ziji<sub>i/j/k</sub>. Zhangsan think Lisi know Wangwu like self 'Zhangsan thinks Lisi knows Wangwu likes himself/herself.'
b. Zhangsan<sub>i</sub> renwei wo/ni<sub>j</sub> zhidao Wangwu<sub>k</sub> xihuan ziji<sub>\*i/\*j/k</sub>. Zhangsan think I/you know Wangwu like self 'Zhangsan thinks I/you know Wangwu like self 'Zhangsan thinks I/you know Wangwu like self 'Cole et al. 2006)

In (7a), *Zhangsan*, *Lisi* and *Wangwu* are 3rd person and are all available as antecedents of *ziji*. In (7b), the matrix subject *Zhangsan* and the intermediate subjects *wo* ('I') or *ni* ('you') differ in person, *Zhangsan* being 3rd person and *wo* 

 $<sup>^{7}</sup>$  As was pointed out to us, recently, Phan and Chou (2023) presented a proposal for an account of the blocking effect in Vietnamese based on the approach in Charnavel (2019), just as Chou and Vu (2022) did. Their proposal stipulates that *minh* is ambiguous between being a first-person pronoun and an anaphor. Our proposal provides a unified analysis of *minh*. Furthermore, as shown in Doan (2022: 142), Charnavel's approach makes the incorrect prediction that non-locally bound *minh* allows split antecedents. Hence we will refrain from further discussing Phan and Chou's proposal here.

and *ni* being 1st and 2nd person, respectively. This configuration prohibits the reflexive *ziji* from being bound by the matrix subject *Zhangsan*; the intermediate subject (*wo* or *ni*) itself is not admissible as an antecedent either.<sup>8</sup>

Intervention of a 2nd or 1st person pronoun blocks the long-distance binding of *ziji* even when these pronouns are not subjects themselves (see Huang and Tang 1991, and also Giblin 2016). This is illustrated in (8); note that, in fact, the non-subject *Lisi* in (8a) is able to bind *ziji*, as we will discuss below and in Sect. 5:

(8) a. Zhangsan<sub>i</sub> renwei Lisi<sub>i</sub> de jiao'ao hai-le ziji<sub>i/i</sub>. Zhangsan think Lisi of arrogance self harm-Perf 'Zhangsan felt that Lisi's arrogance harmed him.' b. Zhangsan<sub>i</sub> renwei  $wo_i$  de jiao'ao hai-le ziji\*i/j. Zhangsan think Ι of arrogance harm-Perf self 'Zhangsan felt that my arrogance harmed \*him/me.'

(Huang and Tang 1991)

One striking difference between the blocking effect in Mandarin and Vietnamese is that in the latter language only the 1st person is a blocker (cf 5).<sup>9</sup> As we will see there are some other differences as well. These differences will be among the main issues to be discussed later in Sects. 5 and 6.

As noted, there is substantial literature on non-local binding and the blocking effect in Mandarin, with different types of implementations. They vary from approaches in which non-local binding of *ziji* is effected by (covert) syntactic movement (as in Battistella 1989; Cole et al. 1990; Cole and Sung 1994) to approaches where non-local binding of ziji is effected by a discourse-based operation involving logophoricity (as in Huang and Liu 2001). We believe that these previous approaches to non-local binding in Mandarin may face a range of challenges (which we are unable to discuss at length here, for reasons of space). It will be sufficient to note that, for example, the head-movement approach cannot account for the blocking effect by non-subjects; see Huang and Tang (1991) and Wong (2021), for instance. As discussed in Wong (2021), the approach in Huang and Liu (2001) sets out to reduce the blocking effect to a conflict in perspective between clause mates. This does not cover cases where the blocking is caused by a more distant intervener, as is also the case in Vietnamese. Moreover, these approaches do not seem to easily carry over to Vietnamese. For instance, the fact that only 1st person is a blocker in Vietnamese is hard to reconcile with an approach along the lines of Huang and Liu (2001). In addition, it is not clear that

<sup>&</sup>lt;sup>8</sup> It may be tempting to think that it is the mismatch between the higher subject and the lower subject, which results in blocking, but this cannot be the case since the following is fine, as discussed in Giblin (2016: 43 and 108):

Wo<sub>i</sub> renwei [Lisi<sub>j</sub> hen ziji<sub>i/j</sub>].
 I think Lisi hate self
 'I think that Lisi hates self.'

<sup>&</sup>lt;sup>9</sup> Phan and Chou (2023) also report a blocking effect by 2nd person, contrary to Chou and Vu (2022). This doesn't apply to the varieties of Vietnamese we are familiar with. Presumably, then, Phan and Chou's variety is closer to Mandarin.

logophoricity plays a comparable role in Vietnamese as it does in Mandarin. We refer to Charnavel et al. (2017) and Wong (2021) for overviews and further discussion.

Huang and Tang (1991) develop an account that provides an answer to the role of non-subjects in binding and blocking as shown in (8). To account for this pattern, they propose that the c-command condition in binding is too strong for Mandarin Chinese. Rather, it is governed by sub-command, as defined in (9) (Tang 1989: 101):<sup>10</sup>

(9) Sub-command

 $\beta$  sub-commands  $\alpha$  iff:

- a.  $\beta$  c-commands  $\alpha$ , or
- b.  $\beta$  is an NP contained in an NP that c-commands  $\alpha$  or that sub-commands  $\alpha$ , and any argument containing  $\beta$  is in subject position.

According to (9), the sub-commanding NP *Lisi* in (8a) can bind *ziji*, inherently animate, since it is the most prominent potential subject contained in the c-commanding NP *Lisi de jiao'ao* 'Lisi's arrogance'. As is standard, long-distance binding of *ziji* by the matrix subject *Zhangsan* is not affected. However, the intervention of the first person pronoun *wo* as the sub-commanding subject in (8b) blocks *ziji* from being bound remotely by the matrix subject *Zhangsan*.

In elaborating their proposal, they develop a system that provides a detailed account of the data considered in their paper, but like the other earlier proposals in the literature it relies on the use of indices, thus violating the inclusiveness condition (Chomsky 1995).<sup>11</sup> We will refrain from further discussing its details, but as we will see in Sect. 5, the sub-command configuration itself is also relevant for Vietnamese.

Unlike other extant approaches, Giblin (2016) develops a proposal that is compatible with the inclusiveness condition. Building on the works of Progovac (1992, 1993) and Reuland (2005, 2011), Giblin proposes a syntactic account for non-local binding and the blocking effect in Mandarin Chinese. Binding of phifeature deficient anaphors such as *ziji* is established by forming an Agree-based dependency (Chomsky 2000, 2001, 2008; Reuland (2005, 2011). More specifically, Giblin's approach uses the operation of Multiple Agree, as proposed by Hiraiwa (2001, 2005). We therefore opt to pursue an account here that builds on Giblin's approach.

<sup>&</sup>lt;sup>10</sup> Huang and Liu (2001:(80)) argue that in Kayne (1994)'s approach to syntactic structure, in fact no special definition is needed. Assuming that specifiers are introduced by adjunction, and that c-command is as defined in (i), then any specifier of X c-commands everything that X c-commands.

<sup>(</sup>i) X c-commands Y iff X and Y are categories and X excludes Y and every category that dominates X dominates Y.

<sup>&</sup>lt;sup>11</sup> As Chomsky (1995) argues, syntactic computations have to be limited to morpho-syntactic objects. Syntactic indices in the sense of Chomsky (1981) don't meet that requirement, and hence, they must be eliminated from the theory. For expository reasons, we keep using indices.

A more detailed discussion of Giblin's approach will be presented in Sects. 3 and 4.

#### Multiple agree

As discussed in Chomsky (2000, 2001), Agree is a syntactic operation. The appeal to its existence is justified by the fact that, quite commonly, in natural languages, different constituents share features. Technically, in Chomsky's implementation, Agree takes place between an element that is unvalued for some relevant feature (a probe) and an element that can supply such a value (a goal), and is subject to the requirement that the probe c-commands the goal. The domain in which a probe can look for a value constitutes its search domain. Thus, the c-command domain of a probe contains its search domain. Such a probe and a goal are in a feature-checking relation. However, the theory of Agree proposed by Chomsky cannot deal with cases where a multiple feature-checking operation occurs in Japanese, such as in Raising to Object and Clefting (see Hiraiwa 2001, 2005; Ura 1996). Extending the theory of Agree, Hiraiwa proposes a theory of Multiple Agree in which a single probe can simultaneously agree with multiple goals in its search domain. Multiple Agree is characterized as in (10a) from Hiraiwa 2001, 2002, revised and elaborated in Hiraiwa (2005), as in (10b):

(10) a. Multiple Agree: (Multiple feature checking) with a single probe is a single simultaneous syntactic operation; Agree applies to all the matched Goals at the same derivational point derivationally simultaneously.
b.

MULTIPLE AGREE (P,  $\forall G$ ) Agree is a derivationally simultaneous operation AGREE (P,  $\forall G$ ).

 $P > G_1 > \dots > G_n$ 

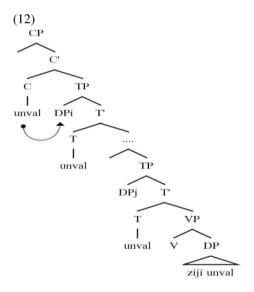
Since anaphor binding may include interpretive dependencies between one antecedent and multiple anaphors, Multiple Agree is potentially better suited for modeling it than the original Agree operation. Multiple Agree as defined in (10) possesses two characteristic features, namely simultaneity and multiplicity. Together they mean that the probe searches down its domain to match the nearest goal, then postpones valuation until it finds all other possible goals, and Agree applies to all the matched goals in one fell swoop.

As noted, Mandarin Chinese ziji can be non-locally bound, as illustrated in (11):

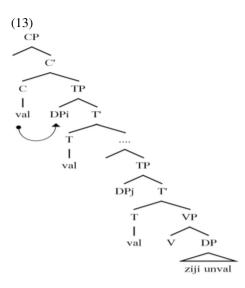
(11) Zhangsan<sub>i</sub> renwei Lisi<sub>j</sub> hen ziji<sub>i/j</sub>. Zhangsan think Lisi hate self 'Zhangsan thinks that Lisi hates self.' In accounting for long-distance binding of *ziji* in Mandarin Chinese, Giblin (2016) proposes that there is a matrix  $C^0$ , which starts out unvalued for some relevant phifeature, specifically a [+participant] feature (see Sect. 4), and looks for a value in its search domain.  $C^0$  finds a value on the matrix subject and gets valued. Subsequently, the matrix  $T^0$  and all embedded  $T^0$ s receive this value from  $C^0$ , hence indirectly from the matrix subject.

The element *ziji* is phi-feature deficient, and assuming that a subordinate TP contains an occurrence of *ziji*, this element will be visible for probing by the embedded  $T^0$  and share the relevant value. What results is a phi-feature dependency with the matrix subject, which is interpreted as binding. Giblin assumes that the dependency between  $C^0$  and elements lower in the structure are not blocked by intervening complementizers and other phase boundaries (see also Bošković 2007). Hence, long-distance binding is accounted for.

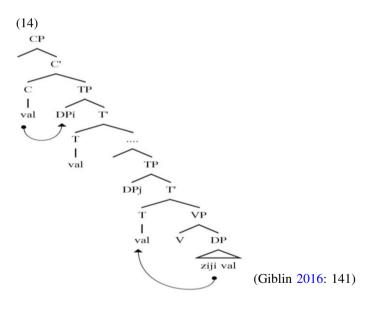
Note that, like Mandarin, Vietnamese lacks subject-verb agreement. Hence an embedded  $T^0$  need not match its feature with the local subject. The derivation is represented in (12–13). The tree in (12) presents the starting point: The elements  $C^0$ ,  $T^0$  and the reflexive *ziji* all start out unvalued for phi-features; the arrow represents the search operation of  $C^0$ . It probes for a valued feature in its domain and finds a value on the matrix subject DP<sub>i</sub>, which then causes  $C^0$  to be valued.



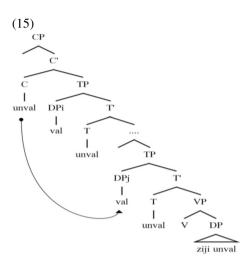
Due to the effect of Multiple Agree, the operation valuing  $C^0$  simultaneously values the relevant phi-feature on the matrix  $T^0$  and the embedded  $T^0$  's, as illustrated in (13).

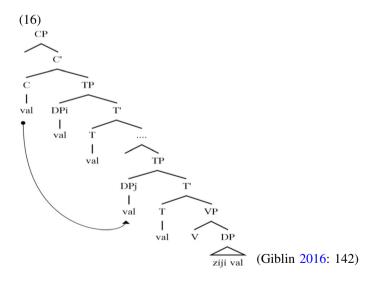


The embedded  $T^0$  bears the same value as the matrix subject, and is able to share these values with *ziji*; hence, *ziji* ends up being bound by the latter, as in (14):



Next, consider how Giblin's account accommodates the binding relation between the embedded antecedent  $DP_j$  and *ziji*. Informally, what we see is that the binding relation between anaphor and antecedent is indirect: It is mediated by a head c-commanding both the antecedent and the anaphor. As assumed earlier, being in a Multiple Agree operation, the probe  $C^0$  can check multiple goals in its search space; hence it can probe beyond  $DP_i$ , and continue looking for a match with another goal; In (15) it finds one, namely  $DP_i$ . In Giblin's system, one of these DPs will be used to value the features of the probe, from which the binding relation follows (but see the next section for a restriction). If the matrix  $DP_i$  values the features of the probe, *ziji* gets bound by the matrix  $DP_i$ . Alternatively, if the intermediate  $DP_j$  values the probe, the latter will bind *ziji*. This option is represented in (15) and (16):





Summarizing (15) and (16):

(15): The elements  $C^0$ , two instances of  $T^0$ , and the reflexive *ziji* all start out unvalued; the arrow represents the search operation of  $C^0$  in its domain. It may find  $DP_i$ , which values  $C^0$ .

(16): After  $C^0$  gets valued by  $DP_j$ , both the matrix  $T^0$  and the embedded  $T^0$  inherit the matched features from  $C^0$ . The features inherited from  $C^0$  then pass down to *ziji*, which ends up being bound by  $DP_j$ .

### Giblin (2016)'s account of the blocking effect in Mandarin Chinese

As discussed, non-local binding in Mandarin is subject to the Blocking effect. Giblin proposes an analysis of this effect, which we will summarize below, using (17) as an example:

(17) Zhangsan<sub>i</sub> renwei wo/ni<sub>j</sub> zhidao Wangwu<sub>k</sub> xihuan ziji<sub>\*i/\*j/k</sub>.
Zhangsan think I/you know Wangwu like self
'Zhangsan thinks I/you know Wangwu likes him/\*me/\*you/himself.'
(Cole et al. 2006: 23)

As (17) shows, *ziji* cannot be bound by a third-person matrix subject NP like *Zhangsan* if there is a 1st/2nd-person pronoun such as *wo/ni* in the search space of the matrix  $C^0$ . Note that this intervening element need not be in a position that would make it a potential antecedent (see Giblin 2016: 110–113 for details). Here, we will restrict the discussion to the main features of the approach presented in Giblin (2016). It is based on the following conditions:

## (18) *A Condition on Multiple Agree*: Multiple Agree can take place only under non-conflicting feature specifications of the agreeing elements.

In light of (18), two arguments cannot have contrasting specifications for person when entering Multiple Agree; otherwise, the sentence is ungrammatical. But it is possible for one argument to be fully specified while the other lacks specification.

Giblin's account of the blocking effect is based on the feature system for personal pronouns proposed in Béjar and Rezac (2003, 2009). They make use of the semantic categories [+/-participant] and [+/-speaker], with the encoding of person feature specifications formulated as in (19):

A: P	erson specificat	B: Shorthand 1>2>3			
3rd	2nd	1st	3rd	2nd	1st
[π]	[π] [participant]	[π] [participant] [speaker]	[3]	[3] [2]	[3] [2] [1]

(19) Person specifications As shown in (19), on the left-hand side of the table, while  $\pi$ , representing *person*, is shared by all pronouns, the participant feature is only shared by 1st/2nd person. The latter form a contrastive relation in that the 1st person is not only assigned a marked [+participant] value shared with the 2nd person, but also contains the marked [+speaker] value, which is absent in the 2nd-person entry. Furthermore, the table expresses that the [+speaker] value will always go together with a [+participant] value.<sup>12</sup> The right-hand side of the table presents a short-hand version of the left-hand side in which the number 3 stands for person, 2 refers to the participants, and 1 to the speaker.

Giblin's account for the Blocking effect now works in the following manner. He proposes that the probe  $C^0$  merged in the matrix clause is unvalued for a [+participant] feature and searches for a goal as a source for a value. The valuation operation of  $C^0$  will be prohibited if it violates the requirement of Contiguous Agree (Nevins 2007):

### (20) *Contiguous Agree* (informally): *There can be no interveners between P and x that are not in the domain of relativization that includes x.*

In the condition, P represents the probe, and x is the goal. The domain of relativization represents a set of feature values that are in some relevant sense related. Thus, no interveners in the path from the probe to the goals are allowed to be 'too different' from the feature the probe searches for.<sup>13</sup> For the case of Mandarin Chinese, this amounts to the requirement in (21):

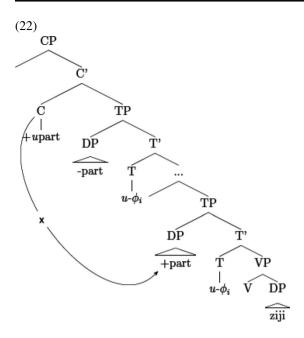
(21) i. The C<sup>0</sup> probe searches for a particular feature, namely [+participant].
ii. A convergent derivation will occur when there are no unmarked values of [participant] that intervene between the probe and the featural specification that it is looking for. That is, there can be no [-participant] DPs that occur between the probe and a [+participant] DP.

(Giblin 2016:147)

In a nutshell, the feature [-participant] is 'too different' from a [+participant] feature in the sense of Nevin's contiguity requirement. Let us see how this works in sample derivations. (21i) is illustrated in (22) (Giblin 2016: 54), where the intervention of the [-participant] DP between the probe  $C^0$  and the [+participant] DP as the goal, which is a better match, causes a violation of Contiguous Agree. Hence, the derivation crashes, which is indicated by the star. Crucially, the [+participant] feature is shared by 1st/2nd-person pronominals. Hence, its role in the derivation entails that both 1st/2nd-person pronominals cause a blocking effect.

<sup>&</sup>lt;sup>12</sup> In what follows, we will use the feature [author] instead of [speaker], following Nevins (2007).

<sup>&</sup>lt;sup>13</sup> Note that Nevin's Contiguous Agree draws its original motivation from a very different empirical domain, namely the Person Case constraint in the distribution of clitics.



The Contiguous Agree constraint works effectively in dealing with the fact that blocking can be caused by interveners that are not themselves possible binders, an issue that is problematic for other approaches.

Although Giblin's approach works well for Mandarin, we will see that it does not fully carry over to Vietnamese, as the blocking pattern for *minh* is distinct from that of Chinese *ziji*. Hence, an alternative account must be provided. We will argue that, unlike Chinese, the blocking effect in Vietnamese is not caused by a violation of Contiguous Agree with respect to the [+participant] feature but by a violation with respect to the [+author] feature. In the end, then, the source for the blocking effect in Vietnamese will be closer to that in Mandarin than the differences would lead one to initially expect.

#### A blocking effect in Vietnamese

As already mentioned in the introduction, non-local binding of Vietnamese *minh* also shows a blocking effect. The examples are repeated here as (23), (24), and (25):

(23)	$Nam_i$	nghĩ	Hùng/b	ạn <sub>i</sub>	biết	Mai	thích	mình <sub>i/j/sp</sub> .
	Nam	think	Hung/fi	iend.add	know	Mai	like	body
	'Nam	thinks	you/Hui	ng know(s	s) Mai l	ikes h	im/you	/me.'
(24)	$Nam_i$	nghĩ	tôi <sub>j</sub>	biết	Mai	thích	mình*	i∕j∙
	Nam	think	1sg	know	Mai	like	body	-
	'Nam	thinks	I know	Mai likes	me.'			
(25)	Tôi <sub>i</sub>	nghĩ	Nam <sub>i</sub>	biết	Mai	thích	mình <sub>i/</sub>	/i•
	1sg	think	Nam	know	Mai	like	body	
	'I thir	ık Nam	knows	Mai likes	him/m	e.'		

The blocking configuration in Vietnamese differs from that in Mandarin Chinese in that the second person pronoun does not serve as a blocker, as illustrated in (26):<sup>14</sup>

(26) Nam<sub>i</sub> nghĩ mày<sub>j</sub> biết Mai thích mình<sub>i/j</sub>. Nam think 2sg know Mai like body 'Nam thinks you know Mai likes him/you.'

Furthermore, in Mandarin Chinese the intervening first person pronoun is itself ruled out as an antecedent, whereas it is licit in Vietnamese, as in (24). Similarly to Chinese, an intervening third-person NP does not serve as a blocker in Vietnamese, as shown in (25). Here *minh* refers to the speaker realized as the first-person pronoun *tôi* in the matrix clause, while binding by the intermediate antecedent *Nam* is also acceptable. *Minh* can optionally refer to the speaker when there is no first-person antecedent as in (23).

In general, there are two cases of the blocking effect in Vietnamese, which are given as follows:

- (i) There is a blocking effect when a first-person pronoun subject structurally intervenes between *minh* and a more remote potential antecedent.
- (ii) The blocking effect is also induced when a sub-commanding, first-person pronoun, inherently animate, intervenes between *minh* and a more remote potential antecedent.

Case (i) is illustrated in (24) in which the intervening subject of the first person  $t\hat{o}i$  triggers a blocking effect. The same pattern holds in cases where the predicates are various kinds of thinking and saying verbs such as  $ng\dot{\sigma}$  'doubt',  $ti\hat{e}t \ l\hat{\rho}$  'reveal', tin 'believe',  $hi\hat{e}u$  'understand,  $tur\dot{\sigma}ng$  'mistakenly guess',  $qu\hat{e}n$  'forget'. See (27), (28), and (29):

(27)	a.	Nam <sub>i</sub>	ngờ	là	Hùng <sub>i</sub>	đã	tiết lộ	với
		Nam	doubt	that	Hung	PST	reveal	with
		mọi người	rằng	Thu	ghét	mình <sub>i/j/sp.</sub>		
		everybody	that	Thu	hate	body		
		'Nam doubte	d that Hu	ing reve	ealed to every	body that Tl		nim/me.'
	b.	Nam <sub>i</sub>	ngờ	là	bạn <sub>i</sub>	đã	tiết lộ	với
		Nam	doubt	that	friend.add	PST	reveal	to
		mọi người	rằng	Thu	ghét	mình <sub>i/j/sp</sub> .		
		everybody	that	Thu	hate	body		
		'Nam doubted	d that you	ı reveale	ed to everybod	ly that Thu h	ated him/y	you/me.'

<sup>&</sup>lt;sup>14</sup> Note that, unlike the case of the common noun *ban* 'friend' used as the addressee shown in (23), the speaker interpretation is impossible in (26) when the second person-pronoun is the intervening subject. We will come back to this issue in Sect. 8. An anonymous reviewer notes that, for them, the discourse status of Nam is relevant. That is, if (26) only reports Nam's state of mind, then long-distance binding appears more plausible.

	c.	<i>Nam<sub>i</sub></i> Nam mọi người everybody 'Nam doubte	ngờ doubt rằng that ed that I	là that Thu Thu reveal	1 g h	<i>ôi<sub>j</sub></i> .sg ghét nate o every	boo	ı <i>h∗<sub>i/j</sub>.</i> ly	rev	t lộ veal me.'	với With
(28)	a.	<i>Nam<sub>i</sub></i> tin Nam believ muốn bảo want prote 'Nam believ protect him/n	vệ ct body ed Hung			h <sub>i/j/sp</sub> .	hiểu understa d that Th	nd tha		nu a	lways
	b.	Nam <sub>i</sub> tin Nam believ muốn bảo want prote 'Nam believ protect him/	<i>bạn<sub>j</sub></i> ve frien vệ ct body ed you v	d.add	mìn	h <sub>i/j/sp.</sub>	hiểu understa that Thu		it Tl		lways
	c.	Nam <sub>i</sub> tin Nam believ muốn bảo want prote 'Nam believ protect me.'	<i>tôi<sub>j</sub></i> ve 1sg vệ ct body			$h_{*i/j}$ .	hiểu understa t Thu alv	nd tha		nu a	ıôn lways
(29)	a.		ippose l	C	ot the		quên y forget	that	Thu		eive
	b.	$Nam_i$ tuNamsu $minh_{i/j/sp}$ .body	rởng <i>l</i> ippose f	b <i>an<sub>j</sub></i> Friend.a	add	đã PST	quên forget	rằng that	Thu Thu	dece	eive
	c.		tổng t ippose 1	<i>ôi<sub>j</sub></i> Isg		đã alread	quên y forget	rằng that	Thu Thu	lừa	eive
		run suppo	Joan univ	2	- 50	. mai 1			- •		

The examples (27c), (28c), and (29c) show that the presence of an intervening firstperson pronoun  $t\hat{o}i$  simply excludes long-distance binding of *minh* by the matrix subject *Nam*. By contrast, the intervening (low) status term *ban* as the addressee in (27b–29b), like the 2nd person pronoun *mày* in (26), and the third person NPs in (27a–29a), does not trigger a blocking effect. Similar patterns hold for sentences in (30) and (31) where the matrix predicates are verbs of perception such as *nghe* 'hear' and *thây* 'see.

(30)	a.	Nam <sub>i</sub>	nghe	Hùng <sub>i</sub>	tiết	lộ	với	mọi	người	rằng
		Nam	hear	Hung	revea	ıl	with	every	body	that
		Thu	ghét	mình <sub>i/j/sp.</sub>						
		Thu	hate	body						
		'Nam I	heard H	lung reveal w	vith ev	eryb	ody tha	t Thu	hated sel	
	b.	$Nam_i$	nghe	bạn <sub>j</sub>	tiết	lộ	với	mọi	người	rằng
		Nam	hear	friend.add	revea	ıl	with	every	body	that
		Thu	ghét	mình <sub>i/j/sp</sub> .						
		Thu	hate	body						
		'Nam I	heard y	ou reveal wit						
	c.	$Nam_i$	nghe	tôi <sub>j</sub>	tiết	lộ	với	mọi	người	rằng
		Nam	hear	1sg	revea	ıl	with	every	body	that
		Thu	ghét	mình* <sub>i/j</sub> .						
		Thu	hate	body						
		'Nam I	heard m	ne reveal with	n ever	ybod	y that ]	Thu ha	ted me.'	

(31) a.  $Nam_i$  thấy  $Hùng_i$ tiết lô với moi người răng Nam with everybody that see Hung reveal Thu ghét mình<sub>i/i/sp.</sub> Thu hate body 'Nam saw Hung reveal with everybody that Thu hated self.' b. Nam<sub>i</sub> thấy ban<sub>i</sub> tiết lô với moi người răng Nam see friend.add reveal with everybody that ghét mình<sub>i/j/sp.</sub> Thu Thu hate body 'Nam saw you reveal with everybody that Thu hated self.' c. Nam<sub>i</sub> thây *tôi*<sub>i</sub> tiết lô với moi người rằng Nam reveal with everybody that see 1sg Thu ghét  $minh_{*i/i}$ . Thu hate body

'Nam saw me reveal with everybody that Thu hated me.'

These sets of sentences indicate that the predicates do not play a role in causing the blocking effect, but the first-person pronoun does.

As indicated in (ii), a sub-commanding NP of the first person also yields a blocking pattern. See (32). However, unlike in Mandarin (Giblin 2016: 45), in Vietnamese a 1st-person pronoun in object position does not act as a blocker, as illustrated in (33):

- (32) a. Hùng<sub>i</sub> nghĩ *tính kiêu ngạo của Nam<sub>j</sub>* đã làm hại mình<sub>i/j/sp</sub>. Hung think CL arrogance of Nam PST cause harm body 'Hung thought that Nam's arrogance harmed him/me.'<sup>15</sup>
  - b. Nam<sub>i</sub> nghĩ *tính kiêu ngạo của tôi<sub>j</sub>* đã làm hại mình $*_{i/j}$ . Nam think CL arrogance of 1sg PST cause harm body 'Nam thought that my arrogance harmed me.'
- (33) a. John<sub>i</sub> nói với  $t \delta i_j$  là Nam ghét mình<sub>i/j</sub>. John say with 1sg COMP Nam hate body 'John said to me that Nam hates him/me.'
  - b. John<sub>i</sub> luôn nhắc  $t \partial i_j$  là Nam ghét mình<sub>i/j</sub>. John always remind 1sg COMP Nam hate body 'John always reminds me that Nam hates him/me.'

In (32a), *minh* may take the matrix subject  $H\hat{u}ng$  or the sub-commanding *Nam* as its antecedent or it may receive a speaker value from discourse. On the other hand, the presence of the first-person pronoun  $t\hat{o}i$  as the sub-commanding element in (32b) results in a blocking effect. Here, *minh* can only be bound by the first-person pronoun  $t\hat{o}i$ , while its remote binding by the matrix subject *Nam* is ruled out. In (33), however, the intervening  $t\hat{o}i$  does not keep *John* from acting as an antecedent for *minh*, contrary to what happens in Mandarin.<sup>16</sup>

<sup>&</sup>lt;sup>15</sup> Contrary to (32a), *minh* cannot take *Nam* as its potential antecedent in (i) as it is contained in the animate NP *me của Nam* 'Nam's mother'. Nevertheless, the presence of the first pronoun *tôi* in the animate NP *me của tôi* 'my mother' in (ii) still triggers a blocking effect, similar to (32b).

(i)	Nguyên <sub>i</sub> cho rằng [mẹ của Namj] <sub>k</sub> đã hại	mình <sub>i/*i/*k/sp</sub> .
	Nguyen give that mother of Nam PST harm	body
	'Nguyen supposed that Nam's mother harmed hi	m/*him/*herself/me."
(ii)	Nguyên <sub>i</sub> cho rằng [mẹ của tôi <sub>i</sub> ] <sub>k</sub> đã	hại mình <sub>*i/j/*k</sub> .
	Nguyen give that mother of 1sg PST harm body	-
	'Nguyen supposed that my mother harmed *him	/me/*herself."

Note that there is some variation here. An anonymous reviewer notes that, for them, the sub-commanding Nam in (32a) cannot serve as an antecedent of *minh*. This is an interesting observation, possibly due to a different role of sub-command in the reviewer's variety of Vietnamese. We know independently that languages vary in this respect. The same reviewer notes that, for them, *me của Nam* can serve as an antecedent of *mình*. This is to be expected given the fact that as noted in fn 3, this reviewer is more liberal with respect to local binding. This also shows up in their different assessment of (ii). Chou and Vu (2022) and Phan and Chou (2023) note that there is no blocking effect in an example with a similar structure to (ii). This may again be due to a difference in the status of sub-command. We leave further discussion of such output of a such variation to another occasion.

<sup>16</sup> An anonymous reviewer argues that, in (33a,b), while indeed  $t\hat{o}i$  does not act as a blocker,  $t\hat{o}i$  or a 2ndperson expression in its position cannot antecede *minh*. While this is certainly correct for a 2nd-person expression, we found that a speaker interpretation is certainly available in a context such as (i):

(i) A is asking B.

A:Tại sao trông bạn buồn thế? Why look friend.add sad Q? 'Why do you look sad?' B replies as in (33a) and (33b) Note that, as a subcase, blocking does also occur when minh functions as a nominative anaphor. Consider (34):

- (34) a.  $Hùng_i$  nghĩ  $tôi_j$  sẽ thừa nhận mình<sub>\*i/j</sub> đã chỉ trích Mai. Hung think 1sg will admit body PST criticize Mai 'Hung thought I would admit that I criticized Mai.'
  - b.  $T \hat{o} i_i$  nghĩ  $H \hat{u} ng_j$  biết  $m \hat{i} nh_{i/j}$  đã chỉ trích Mai. 1sg think Hung know body PST criticize Mai 'I thought Hung knew he/I criticized Mai.'

As shown in (34a), with the intervention by the first person pronoun  $t\hat{o}i$ , binding of *minh* by the remote antecedent  $H\hat{u}ng$  is blocked. By contrast, in (34b), when the intervening subject is a third person expression, namely  $H\hat{u}ng$ , binding by  $H\hat{u}ng$  as well as binding by the first-person pronoun  $t\hat{o}i$  are fine. Note that this differs from what Giblin (2016: 169–170) observed for Mandarin Chinese, where *ziji* in subject position is exempt from binding requirements and can have a non-local antecedent even in the presence of [+participant] interveners.

As in the cases discussed above, long-distance binding of *minh* as a possessor is blocked as well when a first-person pronoun intervenes. Consider (35):

(35)  $Nam_i$  nghĩ  $t \hat{o} i_j$  biết Thu<sub>k</sub> thích khu vườn của  $m \hat{i} n h_{*i/j/k}$ Nam think 1sg know Thu like garden POSS body 'Nam thought that I knew Thu likes self's garden'.

In (35), *minh* may take the local subject *Thu* or the first-person pronoun  $t\hat{o}i$  as its antecedents. However, binding of *minh* by the matrix subject *Nam* is ruled out as a result of the blocking effect.

The question of how to accommodate both the differences and the similarities between the blocking effects in Vietnamese and Mandarin will be addressed and resolved in the next sections.

Footnote 16 continued

b. John<sub>i</sub> luôn nhắc tôi<sub>j</sub> là Nam ghét mình<sub>i/j</sub>.
 John always remind 1sg COMP Nam hate body
 'John always reminds me that Nam hates him/me.'

Here, the speaker interpretation of *minh* is clearly felicitous.

<sup>(33)</sup> a. John<sub>i</sub> nói với  $t \delta i_j$  là Nam ghét mình<sub>i/j</sub>. John say with 1sg COMP Nam hate body 'John said to me that Nam hates him/me.'

## The difference in the blocking effect between Vietnamese and Mandarin Chinese

The evidence presented so far shows that whatever causes the blocking effect shows up differently in Vietnamese than it does in Mandarin Chinese. As we will show, one factor is that the blocking effect in Vietnamese is based on the [+author] feature, rather than on the [+participant] feature. In the previous section, we discussed possible combinations of third-person subject NPs with lower subjects as potential interveners. Here, we will further examine the combinations of the first-person pronoun  $t\hat{o}i/tao$  and the second-person pronoun  $m\hat{a}y$  as the higher subjects with the different options for lower subjects. See (36) and (37):

- (36) a.  $T \delta i_i$  biết  $n \delta_j$  tin Hà không ghét  $m \delta_{i/j}$ . 1sg know 3sg believe Ha not hate body 'I knew he believed that Ha did not hate self.' = > 1 > 3
  - b.  $Tao_i$  biết  $may_j$  nghĩ Hà không ghét mình<sub>i/j</sub>. 1sg know 2sg think Ha not hate body 'I knew you thought that Ha did not hate self.' =>1>2
  - c.  $T \hat{o} i_i$  nói  $t \hat{o} i_i$  nghĩ Hà không ghét mình<sub>i</sub> 1sg say 1sg think Ha not hate body 'I said I thought that Ha did not hate self.' =>1>1
- (37) a.  $May_i$  biết nói Hà không tin nói vào mình<sub>i/i/\*sp</sub>. 2sg know 3sg say Ha not believe in body 'You knew he said that Ha had no confidence in self.' =>2>3b. Mày<sub>i</sub> nói Hà không ghét mình<sub>i/\*sp</sub>.  $m a y_i$  tin
  - b. May<sub>i</sub> noi may<sub>i</sub> tin Ha khong ghet minh<sub>i/\*sp</sub>.
    2sg know 2sg believe Ha not hate body 'You said you believed that Ha did not hate self.'
    =>2>2
    c. Mày<sub>i</sub> nói tao<sub>j</sub> tin Hà không ghét mình<sub>\*i/j</sub>.
    2sg know 1sg believe Ha not hate body
  - 2sg know 1sg believe Ha not hate body 'You said I believed that Ha did not hate self.' =>\*2>1

The sentences in (36) and (37) show that there is a blocking effect only in the case of (37c) where the first-person pronoun *tao* serves as the intervener and triggers a blocking effect. Note that (37a,b) deserve attention in one other respect, namely that the speaker interpretation of *minh* is not available here; see Sect. 8 for discussion.

The difference between the blocking effect in Vietnamese and that in Mandarin Chinese is summarized in Table 1 (based on the Vietnamese facts that we have

Higher subject	Intervening subject							
	1st	2nd	3rd					
1st	Vacuous	LD allowed (cf.14b)	LD allowed (cf.14a)					
2nd	LD blocked (cf.15c)	LD allowed (cf.15b)	LD allowed (cf.15a)					
3rd	LD blocked (cf.2)	LD allowed (cf.1,4)	LD allowed (cf.1,6a,7a,8a)					

 Table 1
 The blocking versus non-blocking patterns in Vietnamese

 Table 2
 The blocking versus non-blocking patterns in Mandarin Chinese (summarized by Li (1990); slightly modified)

Higher subject	Intervening subject							
	1st	2nd	3rd					
1st	Vacuous	LD allowed	LD allowed					
2nd	LD blocked	Vacuous	LD allowed					
3rd	LD blocked	LD blocked	LD allowed					

established so far) and Table 2 (representing the facts from Mandarin Chinese provided by Li 1990).

*Further properties*:

- i. In Vietnamese, the intervener that causes the blocking can itself act as an antecedent of *minh*.
- ii. A [+author] element in object position does not cause blocking.
- iii. Minh in subject position is subject to blocking.

Further properties:

- i. In Mandarin, the intervener that causes the blocking cannot itself act as an antecedent of *ziji*.
- ii. A [+participant] element in object position does cause blocking.<sup>17</sup>

iii. Ziji in subject position is not subject to blocking.

However, as we will see, there are two other factors as well. One is the fact that *minh* can virtually always be valued as the speaker from the discourse. In the traditional literature, this has been taken to indicate that, alongside the anaphor *minh*, there is also a (1st-person) pronominal *minh*. We argue, instead, for a uniform analysis of *minh*. This is achieved by deriving the speaker interpretation by the *optional* insertion of a *performative frame*, which will be discussed in more detail in Sect. 7, below. The other major factor, to be discussed in more detail in Sect. 8, we hypothesize to reside in the optional merger of a complementizer in complement clauses.

<sup>&</sup>lt;sup>17</sup> See Miyagawa (2017: fn. 8) for some interesting discussion, with some observations about variation.

# The performative hypothesis (Ross 1970) and its application to Vietnamese

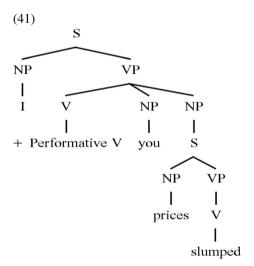
Consider the following sentences from Ross (1970):

- (38) a. Prices slumped.b. Even Rodney's best friends won't tell him.
- (39) a. I promise you that I won't squeal.b. I sentence you to two weeks in the Bronx.

Elaborating Austin (1962), who distinguishes constative sentences as in (38) from performative sentences in (39), Ross (1970) proposes that every sentence is embedded under a performative frame: a covert syntactic structure containing a representation of the speaker, the hearer, and a performative verb. The proposal is formulated as in (40):

(40) **The performative analysis**: All declarative sentences occurring in contexts where first-person pronouns can appear, derive from deep structures containing one and only one superordinate performative clause whose main verb is a verb of saying.

Ross uses the term *deep structure*, which is currently no longer in use, but refers to a structural representation of a sentence before movement and deletion operations. He proposes that a sentence like (38a) will have a deep structure as in (41).



(41) contains a performative frame "I—performative V—you" as the highest clause. In Ross's analysis, this frame is subsequently deleted. In more current terms, one

would say that the elements of the frame are syntactically represented but are not realized at PF (Phonological Form). This is the form in which we will adopt it.

To demonstrate the syntactic visibility of the performative frame, Ross provides thirteen arguments in English, seven of which are dedicated to postulating a higher subject NP I; three are to prove that verbs in the silent clause must be verbs of saying with the feature composition [+communication, +linguistic, +declarative]; and the other three arguments are to provide the evidence for a 2nd-person indirect object.

Let us revisit some arguments that are of relevance to our later discussion. The first argument we would like to relate to is the existence of the 1st-person subject in the hidden clause when the visible clause contains picture-NPs such as *picture of oneself, story or portrayal of oneself,* etc. The argument is based on a similarity between the sentences in (42) and (43):

- (42) a. Tad knew that it would be a story about himselfb. Mike will not believe that this is a photograph of himself.c. L promised Omer that it would be a near shout himself
  - c. I promised Omar that it would be a poem about himself.

(Ross 1970)

(43) a. This is a picture of myself.

b. (I  $V_{told}$  you) this is a picture of myself.

The sentences in (42) feature a construction in which the reflexive pronoun *himself* embedded in a picture-NP can refer to the NP in the higher clause and where *himself* is anaphoric. If the performative analysis is adopted, the fact that *myself* in (43) is licit without an overt antecedent can be accommodated, given that there is in fact an antecedent, namely the 1st-person subject of the silent higher clause.

An argument for a silent 2nd-person antecedent is provided by the contrast in (44):

(44) a. Kick yourself.b. \*Kick themselves.

In order to capture this contrast, the structure must contain an element that may serve as antecedent for *yourself*, but not for *themselves*.

Furthermore, according to Ross, the silent verb must be a verb of saying which bears the features [+communication, +linguistic, +declarative]; otherwise, the sentence is ungrammatical. See (45):

(45) Tom<sub>i</sub> said/declared/asserted/\*laughed/\*groaned/\*snorted that Ann could swim, but nobody believed him<sub>i</sub>.

Thus, Ross's performative analysis expresses that there is a silent performative clause in the highest position in every declarative sentence.

We are not the first to apply the performative hypothesis to Vietnamese. For earlier proposals, we refer to Trinh and Truckenbrodt (2018) and Trinh (2022).

Trinh and Truckenbrodt employ the performative frame in order to derive the fact that, in Vietnamese, names cannot be bound. Trinh uses it in accounting for the fact that names can be used to refer to the speaker or the hearer.

As indicated above, we use the performative frame to account for the existence of a speaker interpretation for minh. Consider the structures in (46).

(46) a.  $Nam_i$  khen mình $*_{i/sp}$ . Nam praise body 'Nam praises \*himself/me.' b.  $(T \hat{o} i_{sp} k \hat{e}) Nam_i$  khen mình $*_{i/sp}$ . (1sg tell) Nam praise body '(I'm telling that) Nam praised me.'

As already noted, unlike Mandarin *ziji*, *mình* cannot be co-argument bound (in the variant we are discussing). Hence, in (46a) the local subject *Nam* is not available as an antecedent. Even though no 1st-person pronoun is realized, *mình* in (46a) gets a 1st-person interpretation. The question is how this interpretation is assigned. In fact, the availability of this interpretation follows straightforwardly if we adopt the performative hypothesis. As noted, we assume that every sentence in Vietnamese optionally contains a syntactically-expressed, but silent, first-person pronoun as the subject of a silent verb of saying or thinking (and a silent second-person indirect object, which we will not extensively discuss), as illustrated in (46b):

The interpretation of *minh* as a speaker now follows on the same footing as in (45). With the silent performative frame *tôi*  $k^{\hat{e}}$  'I tell', *minh* receives the speaker value from the silent 1st-person subject. This, then, accounts for the availability of the speaker interpretation in the absence of an overt 1st-person antecedent.

As noted by an anonymous reviewer, minh can also be interpreted as the addressee, like Chinese *ziji*. However, as discussed in Pham (2002) this use is rather rare, limited to a very special context such as conversations between husband and wife or when used to address someone intimately. Moreover, like Chinese *ziji*, it seems to be limited to a structural configuration when there is no antecedent available in the sentence, as in (47):

(47) Minh ăn cắp rồi còn đổ lỗi cho người khác. body.add steal already also blame for person another 'You stole it but still blamed the others.'

In the next section, we will show in detail how Vietnamese non-local binding patterns can be accounted for.

#### Our analysis: the interaction of minh with the [+author] feature

In this section, we will systematically account for the following facts, including the differences between Vietnamese and Mandarin.

- i. In Vietnamese, a speaker interpretation of *minh* is in principle always available (with an exception to be discussed).
- ii. In Vietnamese, only a 1st-person intervener causes blocking, unlike in Mandarin where both 1st- and 2nd-person interveners cause blocking.
- iii. In Vietnamese, the intervener that causes the blocking can itself act as an antecedent of *minh* in its domain, whereas in Mandarin such an intervener cannot bind *ziji*.
- iv. In Vietnamese, *minh* in subject position is subject to blocking, unlike *ziji* in Mandarin.
- v. In Vietnamese, a [+author] element in object position does not cause blocking, unlike that in Mandarin where it does.

As we will see, property i. follows from the optional insertion of a performative frame and the assumption that, in Vietnamese,  $C^0$  probes for the [+author] feature rather than for the broader [+participant] feature that it probes for in Mandarin. This seems like a minimal stipulation needed to derive the differences. Thus, henceforth we will refer to the blocking effect in Vietnamese as the **author effect**.<sup>18</sup>

We will now derive property i. in more detail, and then proceed to illustrate the binding procedure more generally. We start with the proposal that, in Vietnamese, sentences are *optionally* embedded under a silent performative frame (Ross 1970), which is visible to the syntax, including a silent 1st-person subject. This entails that a sentence such as (48a), with indices omitted, may have the structure in (48b) with possible binding dependencies as indicated, or the structure of (48c). It is the latter structure that gives rise to the availability of the speaker value for *minh* (note that here and elsewhere in this section indexings given are relative to a derivation, so the range of interpretations available for (48a) is provided by (48b) together with (48c), in line with a comment by an anonymous reviewer).

(48)	a.	Nam	nghĩ	(rằng)	Hùng	biết	(rằng)
		Nam	think	(that)	Hung	know	(that)
		Thu	thích	mình.			
		Thu	like	body			
	b.	Nam <sub>i</sub>	nghĩ	(rằng)	Hùng <sub>j</sub>	biết	(rằng)
		Nam	think	(that)	Hung	know	(that)
		Thu	thích	mình <sub>i/j</sub> .			
		Thu	like	body			
		'Nam thought that	Hung k	new Thu li	ikes him	(= Nam,	Hùng)'
	c.	[ <i>Tôi</i> <sub>sp</sub> kể [ <i>Nam<sub>i</sub></i>	nghĩ	(rằng)	Hùng <sub>j</sub>	biết	(rằng)
		[1sg tell Nam	think	(that)	Hung	know	(that)
		Thu	thích	mình <sub>sp</sub> ]]			
		Thu	like	body			
		(I told that) 'Nam	thought	that Hung	knew Th	u likes 1	ne.'

<sup>&</sup>lt;sup>18</sup> See also the discussion of the Ultra Strong PCC in Giblin (2016: 4.4). As Iain Giblin (personal communication, April 18th, 2022) notes, the Li (1990) data suggests that differently-flavored probes are even available in Mandarin.

As discussed in Sect. 3, the general mechanism of syntactic binding is based on Multiple Agree. Thus, as in Hirawai (2005) and Giblin (2016)'s approaches, one probe can agree with multiple goals simultaneously. The general structure of (48c) is as in (49). C<sup>0</sup> initially has an unvalued [+author] feature, and so does *minh*. Hence C<sup>0</sup> probes to value this feature. By assumption, the NP<sub>valφ</sub> of the performative frame is 1st-person and will contain a valued [+author] feature as part of its feature specification. If so, it will value C<sup>0</sup>. C<sup>0</sup> shares its value with *minh* by Multiple Agree, yielding (50).

(49) 
$$[C_{u\phi}^{0} [NP_{val\phi} [T_{u\phi}^{0} ... V.. [T_{1u\phi}^{0} ... minh_{u\phi} .... ]]]]_{\rightarrow}$$

(50) [ 
$$C_{val\phi}^{\theta}$$
 [ $NP_{val\phi}$  [ $T_{val\phi}^{\theta}$ ..., [ $T_{1val\phi}^{0}$ ..., minh<sub>val\phi</sub>....]]]]

Chain formation is possible given that Vietnamese lacks an obligatory  $C^0$  introducing subordinate clauses.<sup>19</sup> In line with Giblin's assumption for Mandarin, we assume that in the absence of intermediate complementizers, the dependency between  $C^0$  and elements lower in the structure is not blocked by phase boundaries (see also Bošković 2007). Thus, the silent first person qualifies as the NP<sub>valφ</sub> in (48), and *minh* is valued as the speaker, as in (49). This, then, derives property i, according to which a sentence like (48) allows an interpretation of *minh* as the speaker.<sup>20</sup>

However, there is another interpretation in which *minh* is valued as the 3rdperson expression *Nam*. This is achieved by an alternative derivation under which the silent performative frame is absent (recall we assumed that this frame is optional). So, consider again the structure of (49/50), but now the italic part is not silent and just corresponds to the initial part *Nam nghĩ* 'Nam think' of (48b). Here, *Nam* is valued for  $\varphi$ -features, but does not contain the [+author] feature. However, as discussed by Giblin, Preminger (2014) developed a theory of valuation in which the impossibility of achieving full valuation does not lead to a crash. Informally, it is possible to settle for a 'next best'. So, even if C<sup>0</sup> probes for an [+author] feature, if it cannot find this feature on the NP<sub>vale</sub>, it settles for what it can find there, for

<sup>&</sup>lt;sup>19</sup> Note that the presence or absence of C in the relevant sense is independent of the presence of  $r \dot{a} ng$  'that', which is, then, not a complementizer in a syntactic sense.

 $<sup>^{20}</sup>$  To the extent in which, as reported by an anonymous reviewer, an inclusive *we* is also a possible interpretation, as in (i) from Doan (2022), this can be accommodated by the assumption that the frame may optionally contain a silent inclusive 'we' as the subject rather than a silent 1st person pronoun 'I'.

 <sup>(</sup>i) Mình không chú ý đến nó là được.
 body NEG notice to 3sg be alright
 'That we don't take a notice of him/her is all right.'

instance, whatever represents a 3rd-person feature.<sup>21</sup> Giblin develops this formally in terms of the feature structure for pronouns proposed by Béjar and Rezac (2003, 2009) as in (19), repeated here:

(19) Person specifications

A: Person specifications			B: Shorthand 1>2>3			
3rd	2nd	1st	3rd	2nd	1st	
[π]	[π] [participant]	[π] [participant] [speaker]	[3]	[3] [2]	[3] [2] [1]	

In (19)  $[\pi]$  is shared by all pronouns and other 3rd-person expressions. Therefore, and more precisely, what C<sup>0</sup> in (49) settles for is  $[\pi]$ . This feature will be shared with *minh* and binding obtains. This accounts for the option in (48b) where *Nam* binds *minh*.<sup>22</sup>

The next question is how to account for the option where minh is bound by the intermediate subject Hung in (48b). A straightforward way to capture this, is to assume that the matrix verb  $ngh\tilde{i}$  'think' may optionally select for a CP. If so, the structure that allows the intermediate subject to act as a binder of minh is one in which the complement of the verb  $ngh\tilde{i}$  'think' is a CP with a C<sup>0</sup> bearing an unvalued [+author] feature and the same procedure applies to that CP.

Summarizing, the reading of (48b) where *Nam* is the binder is illustrated in (51). The matrix  $C^0$  is merged. Upon merger,  $C^0$  probes its search domain for the [+author] feature, does not find it, but sees the 3rd person as next-best on the matrix subject NP *Nam* and gets valued. The  $T^0$  projections inherit the  $[\pi]$  feature from  $C^0$  and then share it with *minh*, which leads to its being bound.

(51) 
$$[_{CP} C^0_{u\varphi \to val\varphi} [Nam_{val\varphi} \text{ nghĩ } Hùng_j \text{ biết Thu thích } mình_{u\varphi \to val\varphi=Nam}]]$$
  
Nam think Hung know Thu like body  
'Nam thinks Hung knows Thu likes him.'

To see how the alternative is derived where the intermediate subject is the binder, consider (52). Here the verb  $ngh\tilde{i}$  'think' is taken to select a CP with a C head. Let's

<sup>&</sup>lt;sup>21</sup> Iain Giblin (personal communication, April 18th, 2022) suggests that it would be interesting to explore whether this would enable one to dispense with the performative frame. If the probe is an [author] probe perhaps it can default to the [author] valuation. However, pursuing the implications of this idea will have to wait for another occasion.

<sup>&</sup>lt;sup>22</sup> This allows us to briefly comment on the observation that *minh* without an overt antecedent marginally allows the interpretation of an addressee (cf 47). Recall that Ross assumed that the performative frame, as in (40), also contains a representation of the addressee. Assuming that this applies to Vietnamese, and furthermore that in a silent structure the arguments are equidistant from the  $C^0$ , the valued [+participant] feature of the addressee will qualify as a second-best option for valuing  $C^0$ , which therefore (marginally) is allowed to be chosen.

refer to this intermediate C as  $C_1^0$ . Thus  $C_1^0$  will have been merged in the intermediate clause.  $C_1^0$  gets valued by the embedded subject *Hùng* and transfers its  $[\pi]$  feature to *mình*, which results in the interpretation of *mình* as bound by *Hùng*.

(52) Nam nghĩ [ $_{CP1} C_{1u\phi \rightarrow val\phi}^{0}$  [ $Hùng_{val\phi}$  biết Thu thích  $_{u\phi \rightarrow val\phi=Hùng}^{minh}$ ]] Nam think Hung knows Thu like body 'Nam thinks Hung knows Thu likes him.'

Note that there will also be a matrix CP, but its  $C^0$  cannot probe beyond the embedded  $C_1^0$  due to minimality.<sup>23</sup> This, then, accounts for binding by an intermediate subject.

The next task is to account for property ii: In Vietnamese a 1st-person intervener causes blocking. To see how this works, consider a case like (53), where the first-person pronoun *tôi* intervenes. If we assign (53) the structure of (54), we have a configuration that violates Contiguous Agree (see Sect. 4) since *Nam*, not valued for the [+author] feature, intervenes between C<sup>0</sup> probing for this feature and *tôi* that is valued for this feature (see the structure in (22) with *part* replaced by *author*). Since Contiguous Agree is a general formal constraint, it would not be plausible to assume that it would not apply in Vietnamese. Thus, under this structure, *tôi* is a blocker. Since Contiguous Agree is violated, no Agree chain is formed, which is indicated by  $*\rightarrow_{val\varphi}$  in (54). Consequently, the first-person interpretation of *minh* is not derived either.

- (53)  $Nam_i$  nghĩ (rằng)  $tôi_j$  biết (rằng) Thu thích  $mình_{*ij}$ . Nam think (that) 1sg know (that) Thu like body 'Nam thought that I knew Thu likes \*him/me.'
- (54)  $[C^{0}_{u\phi^* \rightarrow val\phi} [Nam_{val\phi} \text{ nghĩ } tôi \text{ biết Thu thích } mình_{u\phi^* \rightarrow val\phi=*Nam/*me}]]$ Nam think 1sg know Thu like body 'Nam thinks I know Thu likes \*him/\*me.'

Thus, property ii. has been derived.

Consider next, property iii. Unlike in Mandarin Chinese, the blocker can itself serve as an antecedent of *minh*. Note now that, given our assumptions, there is indeed another derivation, which does yield the intermediate 1st person as an antecedent. As we saw in the discussion of (52), Vietnamese has the option of merging an intermediate C. Consider again the sentence in (53) but now under the option of merging a  $C_1^0$  as the complement of the verb *nghĩ* 'think' as in (55):

(55) 
$$[_{CP} C^{0}_{u\varphi \to val\varphi} | Nam_{val\varphi} nghĩ [_{CP} C^{0}_{1u\varphi \to val\varphi} [tôi_{+author} biết Nam think lsg know Thu thích mình_{u\varphi \to val\varphi=+author}]]]$$
  
Thu like body 'Nam thinks I know Thu likes \*him/me.'

<sup>&</sup>lt;sup>23</sup> See Rizzi (1990) and see Zubkov (2018) for minimality as a constraint on probing.

Under this option, *minh* is effectively valued by the intervening 1st person without a contiguity violation. Upon merger,  $C_1^0$  probes its search domain for an [+author] feature and finds the first-person pronoun  $t\hat{o}i$ , which intrinsically bears the [+author] feature.  $C_1^0$  gets valued, thus the complement  $T_1$  and embedded  $T^0$ s inherit this feature from  $C_1^0$  and finally value *minh*. This configuration satisfies Contiguous Agree as there is no unmarked [author feature] intervening between the probe  $C_1^0$ and the [+author] tôi. As a result, minh ends up having the author interpretation. Note that this derivation says nothing about the binding possibilities of lower subjects. We know that in (53) and (55) Thu is not available as an antecedent of minh, but this is due to the fact that minh cannot be coargument bound. If the possibility of tôi as an antecedent in (55) is due to the optional presence of the complementizer  $C_1^0$ , this would make us wonder what happens if the *minh* is further embedded, for instance as a possessive. If so, locality would not prevent Thu from binding minh. Let's therefore consider the sentence in (56a). Assuming that complementizers can always be optionally inserted, one possibility is the structure in (56b).

(56)	a.	Nam <sub>i</sub>	nghĩ	(rằng)	tôi <sub>i</sub>	biết	(rằng)	Thu <sub>k</sub>		
				(that)			(that)	Thu		
		thích	khu	vườn	của	mình <sub>*i/j/k</sub> .				
		like	CL	garden	of	body				
						Thu likes self's ga				
	b.	Nam <sub>i</sub>	nghĩ	$[C_1^0]$	[tôi <sub>j</sub>	biết	$[C^0_{2u\varphi \rightarrow val\varphi}]$	[Thu <sub>valφ</sub>		
		Nam	think		1sg	know		Thu		
		thích	[khu	vườn	của	$minh_{u\phi \rightarrow val\phi}]]]]]$				
		like	[CL	garden	of	body]				
		'Nam thought that I knew Thu likes self's garden'.								

In this structure,  $C_2^0$  is a minimality barrier for  $C_1^0$ . Given our reasoning so far, mediated by  $C_2^0$ , the local subject *Thu* should be able to bind *minh* and, in fact, it does. This indicates that the analysis proposed is indeed on the right track. Note that the derivation of a case like \*2 > 1... in (36c) with *mày* as the matrix subject is no different from the cases of \*3 > 1 ... discussed here. Like a 3rd person matrix subject, a 2nd person matrix subject causes a contiguity violation. But merging an intermediate C licenses the 1st-person interpretation of *minh*.

For sake of completeness, consider next (57a) with  $t\hat{o}i$  as the matrix subject. We may assume that the performative frame is absent as the first-person pronoun  $t\hat{o}i$  bears the [+author] feature and the derivation proceeds as in the case of (57b). C<sup>0</sup> is merged and gets valued by the first person pronoun  $t\hat{o}i$ . The [+author] feature from C<sup>0</sup> is inherited by the matrix T<sup>0</sup> and the embedded T<sup>0</sup> that, in turn, values *minh* yielding the first-person interpretation.

(57)	a.	<i>Tôi</i> <sub>i</sub>	nghĩ		(rằng)	Nam <sub>i</sub>	biết	(rằng)
		1sg	think		(that)	Nam	know	(that)
		Thu	thích		mình <sub>i/j</sub> .			
		Thu	like		body			
		'I thought	that Nam knew	Thu 1	ikes me/him.'			
	b.	$[C^0_{\varphi \to val\varphi}]$	$[T\hat{o}i_{val\varphi=author}]$	nghĩ	(rằng)	Nam	biết	(rằng)
			1sg		(that)	Nam	know	(that)
			Thu		$minh_{val\varphi=author}]]$			
			Thu	like	body			
			'I thought that	Nam 1	new Thu likes m	ne/him.	,	

As assumed, a  $C_1^0$  with an unvalued feature can also optionally be merged in the intermediate clause as in (58). As in the other cases discussed,  $C_1^0$  constitutes a minimality barrier for the matrix  $C^0$ . It probes in its search domain and gets valued by the intermediate subject *Nam*. The  $T^0$  projections inherit the value from  $C_1^0$  and transfer to *minh*. As a result, *minh* can also take *Nam* as its potential antecedent.

(58)	[C <sup>0</sup> <sub>=unval</sub>	[Tôi	nghĩ	(rằng)	$[C^0_{1u\phi \rightarrow val\phi}]$	$[Nam_{val\varphi}]$	biết	(rằng)
		1sg	think	(that)		Nam	Know	(that)
		Thu	thích	mình <sub>valø</sub> ]]]]				
		Thu	Like	body				
		'I the	ought t	hat Nam knew	w Thu likes	me/him.'		

The approach we are exploring also allows us to account for the occurrence of the author effect when the first person pronoun  $t\hat{o}i$  is a sub-commander serving as a possessor, as in (59a). The relevant options are shown in (59b) and (59c).

(59)	a.	Nam <sub>i</sub>	nghĩ	[[tính	kiêu ngạo	của	tôi <sub>j=author</sub> ]]
		Nam	think	CL	arrogance	of	Ι
		đã	hại	$minh_{*i/j=author}$ ].			
		PST	harm	body			
				nat my arrogance	harmed m	e.'	
	b.	[C <sup>0</sup> <sub>=unval</sub>	$[Nam_i$	nghĩ	[[tính	kiêu ngạo của	tôi <sub>j=author</sub> ]
			Nam	think	CL	arrogance of	Ι
			đã	hại	mình <sub>*i/j</sub> ]]]		
			PST	harm	body		
	c.	Nam <sub>i</sub>	nghĩ	$[C_{1=unval}^{0}]$	[[tính	kiêu ngạo của	tôi <sub>j=author</sub> ]
		Nam	think		CL	arrogance of	Ι
		đã	hại	mình* <sub>i/j=author</sub> ]]			
		PST	harm	body			

We assume that a sub-commanding  $t \delta i$  is available as a target for probing. As a consequence, the configuration in (59b) violates contiguity, and under that derivation neither *Nam* nor  $t \delta i$  will be able to bind *minh*. An alternative derivation is available if the complement of the verb *nghī* 'think' is headed by a  $C_1^0$  as in (59c). By assumption,  $C_1^0$  is underspecified for phi-features, in particular it has an unvalued

author feature that it seeks to value. If the nearest NP in its c-command domain (its nearest goal) is inanimate, such as *tinh kiêu ngạo của tôi* 'my arrogance' is, for example, it is considered an impossible source, and is therefore skipped for being invalid. The next available element is then its specifier. If the specifier would be *tôi*, that settles it. Thus,  $C_1^0$  finds *tôi* as a target, gets valued and now binds *mình* without a contiguity violation.<sup>24</sup>

Consider now property iv. with minh a nominative anaphor. In this respect, Vietnamese differs from Mandarin. In Mandarin subject *ziji* is exempt and not sensitive to blocking. In Vietnamese subject *minh* is sensitive to blocking. Consider therefore (60):

ody

The derivation will proceed as in the other cases we discussed. In the case of (60b), there will be a contiguity violation, but in the case of (60c), with an intermediate  $C_1^0$ , *minh* will be bound by *tôi*. The simplest assumption to account for the difference between Vietnamese and Mandarin is that, unlike what Giblin assumes for Mandarin,  $T^0$  in Vietnamese has a residual phi-feature that enters in an agree-relation with *minh* in subject position, thus making it visible for probing and chain formation along the lines of the given derivation.

Finally, consider property v: In Vietnamese  $t\hat{o}i$  in object position does not act as a blocker, while in Mandarin a [+participant] element does. In order to act as a blocker, an element must be visible for probing. Consider then the configurations in (33), repeated here as (61a, b):

(61) a. John<sub>i</sub> nói với  $t \hat{o} i_j$  là Nam ghét mình<sub>i/j</sub>. John say with me that Nam hate body 'John said to me that Nam hates him/me.'

 $<sup>^{24}</sup>$  An anonymous reviewer notes that for them *minh* in (59a) can also refer to *Nam*. For native speakers recently consulted, this interpretation is definitely unnatural. The contrast may again well be due to the different status of sub-command in the respective varieties.

b. John<sub>i</sub> luôn nhắc  $t \partial i_j$  là Nam ghét mình<sub>i/j</sub>. John always remind me that Nam hate body 'John always reminds me that Nam hates him/me.'

To account for the pattern in (61a) it suffices to assume that the preposition  $v\dot{\sigma}i$ 'with' creates a domain that is opaque for probing, whereas the corresponding structure in Mandarin is not. The case of (61b) is perhaps less straightforward, but it suffices to assume that in Vietnamese oblique marked arguments carry a functional layer that protects them from probing.<sup>25</sup>

This, then, derives the main patterns of non-local binding in Vietnamese listed at the beginning of this section with some minimal stipulations.

Let's now come back to the issue left open in Sect. 6. That is, why does the presence of a second-person pronoun may block a speaker interpretation of minh? See (62) for illustration:

(62) Nam<sub>i</sub> nghĩ mày<sub>j</sub> biết Mai tấn công mình<sub>i/j/\*sp</sub>.
 Nam think 2sg know Mai attack body
 'Nam thinks you know Mai attacks him/you/\*(me).'

Interestingly, kinship terms like *em* 'younger brother/sister', status terms such as *ban* 'friend', and proper names with, prima facie, the same interpretation, namely that of the addressee, do not block the speaker interpretation. See (63a) and (63b):

(63)	a.	Nami	nghĩ	bạn/em <sub>i</sub>	biết	Mai		
		Nam	think	friend.add/kin.younger.add	know	Mai		
		tấn	công	$minh_{i/j/sp}$ .				
		attack		body				
			'Nam thinks you know Mai attacks him/you/me.'					
	b.	[Tôi kể [Nam <sub>i</sub>	nghĩ	bạn/em <sub>j</sub>	biết	Mai		
		tấn	công	$minh_{i/j/sp}$ .]]				
		[I tell [Nam think friend.add/kin.younger.add know Mai attack body]						
		'[I told that] Nam	n thinks y	ou know Mai attacks him/y	ou/me.'			

This restriction has a rather different type of explanation. It is due to the fact that honorificity is an important factor in Vietnamese, and sentences must respect a certain degree of harmony in honorificity. The form may reflects a high degree of informality, almost rudeness, whereas *ban* 'friend' is rather neutral, and *em* 'younger brother' is more intimate than 'familiar'. The high degree of informality expressed by may does not match with the degree of esteem a speaker is supposed to have for herself. Therefore, the presence of may is incompatible with the presence of

<sup>&</sup>lt;sup>25</sup> Ideally one would like to find independent evidence for this assumption. As suggested by Iain Giblin (personal communication), perhaps the operation of AGREE in this case proceeds in some sort of phase-like manner. Suppose that the phases have phi-features derived from the clausal subjects and it is these boundary features that are checked for contiguity. Multiple Agree is still allowed but the stops along the way are only phase-boundaries. See Miyagawa (2017) for a discussion along these lines with regard to Mandarin. However, pursuing this idea would lead us beyond the scope of the current contribution. Note that, technically, *minh* is not directly bound by *tôi* in (61), but by the subject of the performative frame.

the performative frame. Consequently, the speaker interpretation, which depends on the presence of the performative frame, is absent in (62). From the opposite end, a high degree of formality, as one may find in status terms, has the same effect; see (64).

(64) Nam<sub>i</sub> nghĩ thầy<sub>j</sub> biết Mai tấn công mình<sub>i/j/\*sp</sub>.
 Nam think stat.male teacher.add know Mai attack body
 'Nam thinks you know Mai attacks him/you/\*(me).'

Here, the status of a teacher appears to be too high for compatibility with the performative frame. As observed by an anonymous reviewer, this analysis predicts that embedding (62) under an overt performative frame has the same effect. As shown by the impossibility of a speaker interpretation in (65), this predication is borne out:

(65) [Tôi kể [Nam<sub>i</sub> nghĩ mày<sub>j</sub> biết Mai tấn công mình<sub>i/j/\*sp</sub>]] I tell Nam think 2sg know Mai attack body '[I told that] Nam thought you knew Mai attacked him/you/\*me.'

We will conclude this contribution with a discussion of alternative forms of reference to the speaker, their role in blocking, and what this tells us.

### Forms of reference to the speaker and blocking and conclusions

Vietnamese has a rich inventory of forms that can be used to refer to the speaker and the addressee. These include proper names like Hùng or Mai, kinship terms such as anh 'elder brother', em 'younger brother/sister', and status terms like thay 'male teacher', etc<sup>26</sup>. Our discussion here will be limited to expressions with a speaker role. There is a clear difference between such terms and pronominals. Pronominals are dedicated to a certain role. A form like tôi is always used for the speaker, never for the addressee or a third party. It is an important issue to what extent the use of non-pronominals in what one intuitively might understand as pronominal roles, is just a free discourse-based use, or whether it is somehow syntactically encoded. Interestingly, the blocking effect in Vietnamese may shed light on this issue. Under the account given, blocking is an effect that is intrinsically related to properties of feature chains, in the form of the contiguity requirement. If the use of nonpronominals in 'pronominal' roles were just a free discourse-based process, one would expect that non-pronominals would not give rise to intervention effects. However, they do. As illustrated in (66), not only the first person pronoun tôi can serve as an intervener in a blocking configuration, but also kinship terms, status

<sup>&</sup>lt;sup>26</sup> In Vietnamese even proper names and common nouns such as kinship terms and status terms can also be used to self-address (Pham 2002; Trinh and Truckenbrodt 2018), but in this paper we limit our discussion to the first-person pronoun only.

terms, and proper names that are used to self-address can produce the blocking effect.

(66)	a.	Nam <sub>i</sub>	nghĩ	anh <sub>i</sub>	đã	biết	Mai	không	
		Nam	think	kin.elder brother.sp	PST	know	Mai	NEG	
		tin	mình <sub>*i/j</sub> .						
		trust	body						
		'Nam the	ought I kn	ew Mai did not trus	st me/*	him.'			
	b.	Nami	nghĩ	thầy <sub>j</sub>	biết	cái	Mai	tố cáo	
		Nam mình <sub>*i/i</sub> .	think	stat.male teacher.sp	know	CL	Mai	denounce	
		body							
		'Nam the	ought I kn	ew Mai denounced	me/*hi	m.'			
	c.	Nam <sub>i</sub>	nghĩ	Hùng <sub>i</sub>	biết	Mai	ghét	mình∗ <sub>i∕j</sub> .	
		Nam	think	sp	know	Mai	dislike	body	
	'Nam thought I knew Mai disliked me/*him.'								

The contrast in (66a,b,c) shows that the kinship term *anh*, the status term  $th\hat{a}y$ , and the proper name *Hùng*, referring to the speaker, all induce the blocking effect, prohibiting long-distance binding of *mình* by the matrix subject *Nam*, and leaving only the speaker/author value for *mình*. Since, clearly, these non-pronominals cannot have the value [+author] feature intrinsically, they must receive it from the frame in which they appear. This presupposes a left periphery that is at least as rich as assumed in works such as Delfitto and Fiorin (2011)—see the discussion in Reuland (2015) —and which allows such elements to obtain a valued [+author] feature by being linked to the relevant position in the left periphery. Further pursuing this issue would lead us beyond the scope of this article. It will therefore be left for future research.

In this article, we provided an account of the blocking effect in Vietnamese. We took as our starting point the approach developed in Giblin (2016) for Mandarin. The differences between the binding patterns of Vietnamese *minh* and Mandarin *ziji* follow from the factors outlined below:

- i. Minh is simplex, whereas ziji is complex.
- ii. In Mandarin, C<sup>0</sup> searches for a valued [+participant] feature, whereas the feature searched for in Vietnamese is [+author].
- iii. In Mandarin, only the root clause has a  $C^0$ , whereas in Vietnamese a  $C^0$  can optionally be merged to each complement clause.
- iv. Vietnamese allows the optional merger at the root of a performative frame containing a silent 1st-person subject pronoun.

Vietnamese has a rich system of non-pronominal forms, including proper names, kinship terms, and status terms that may receive a speaker value in interpretation. Prima facie, the blocking effect in Vietnamese appeared to be rather different from that in Mandarin, but once considered in detail, it turned out that the basis mechanism is quite similar to that in Mandarin, the difference being largely reducible to the factors in (ii), (iii) and (iv), above.

Our analysis of the blocking effect in Vietnamese and its similarities and differences with the blocking effect in Mandarin is testimony to the fruitfulness of a modular approach to the complexity of linguistic phenomena.

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#### References

Austin, John L. 1962. How to do things with words. Cambridge, MA: Harvard University Press.

- Battistella, Edwin. 1989. Chinese reflexivization: A movement to INFL approach. *Linguistics* 27: 987–1012.
- Béjar, Susana, and Milan Rezac. 2003. Person licensing and the derivation of PCC effects. In *Romance Linguistics: Theory and Acquisition*, ed. Ana Teresa Pérez-Leroux and Yves Roberge, 49–61. Amsterdam: John Benjamins.
- Béjar, Susana, and Milan Rezac. 2009. Cyclic agree. Linguistic Inquiry 40: 35-73.
- Bošković, Željko. 2007. On the locality and motivation of move and agree: An even more minimal theory. *Linguistic Inquiry* 38: 589–644.
- Bui, Thuy. 2019. Binding and coreference in Vietnamese. Doctoral Dissertation. University of Massachusetts Amherst.
- Charnavel, Isabelle. 2019. *Locality and Logophoricity: A theory of exempt anaphora*. Oxford: Oxford University Press. https://doi.org/10.1093/oso/9780190902100.001.0001.
- Charnavel, Isabelle, C.-T. James Huang, Peter Cole, and Gabriella Hermon. 2017. Long-distance anaphora: Syntax and Discourse. In *The Wiley Blackwell companion to syntax*, vol. 4, ed. Martin Everaert and Henk van Riemsdijk, 2321–2402. New York: Wiley-Blackwell.
- Chomsky, Noam. 1981. Government and binding. Dordrecht: Foris.
- Chomsky, Noam. 1995. The minimalist program. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries: The framework. In Step by step: Essays on minimalist Syntax in honor of Howard Lasnik, ed. Roger Martin, David Michaels, and Juan Uriagereka, 89–155. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.
- Chomsky, Noam. 2008. On phases. In Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud, ed. Robert Freidin, Carlos Otero, and Maria Zubizarreta, 133–166. Cambridge, MA: MIT Press.

- Chou, C.-T. Tim, and Tuan-Hai Vu. 2022. *On Vietnamese exempt anaphor and the blocking effect*. Talk given at the 31st Annual Meeting of the Southeast Asian Linguistics Society (SEALS-31), May 18–20, Mānoa, Hawai'i.
- Cole, Peter, Gabriella Hermon, and C.-T. James-Huang. 2006. Long-distance binding in Asian languages. In *The Blackwell Companion to Syntax*, vol. I, ed. Martin Everaert and Henk van Riemsdijk, 21–84. Blackwell Publishing Ltd.
- Cole, Peter, Gabriella Hermon, and Li-May. Sung. 1990. Principles and parameters of long-distance reflexives. *Linguistic Inquiry* 21: 1–22.
- Cole, Peter, Gabriella Hermon, and Li-May. Sung. 1993. Feature percolation. *Journal of East Asian Linguistics* 2: 91–118.
- Cole, Peter, and Li-May. Sung. 1994. Head movement and long-distance reflexives. *Linguistic Inquiry* 25: 355–406.
- Delfitto, Denis, and Gaetano Fiorin. 2011. Person features and pronominal anaphora. *Linguistic Inquiry* 42 (2): 193–224.
- Doan, Quy Ngoc Thi. 2020. Blocking effect in Vietnamese: The interaction of *minh*-binding with the 1stperson value. Talk given at the 53rd Annual Meeting of the Societas Linguistica Europaea, 31-08-2020. http://www.sle2020.eu/downloads/SLE%202020%20Book%20of%20abstracts.pdf
- Doan, Quy Ngoc Thi. 2022. Anaphoric dependencies in Vietnamese—A syntactic approach. Doctoral Dissertation, Utrecht University.
- Fukuda, Shin. 2005. *Subjects and reflexives in Vietnamese*. A talk presented at UCSD Linguistics Department Colloquium.
- Giblin, Iain. 2016. Agreement restrictions in Mandarin long-distance binding. Doctoral Dissertation. MIT, Cambridge, MA.
- Hiraiwa, Ken. 2001. Multiple agree and the defective intervention constraint in Japanese. In *Proceedings* of the HUMIT 2000: MIT working papers in Linguistics 40:67–80. Cambridge, MA: MIT, Department of Linguistics and Philosophy.
- Hiraiwa, Ken. 2002. Multiple agree. A talk given at the 25th GLOW Colloquium: Tools in Linguistic Theory (TILT).
- Hiraiwa, Ken. 2005. Dimensions of symmetry in syntax: Agreement and clausal architecture. Doctoral Dissertation, MIT, Cambridge, MA.
- Huang, Yun-Hua. 1984. Chinese reflexives. In *Studies in English Literature and Linguistics* 10:163–188. Taipei: National Taiwan Normal University.
- Huang, C-T James., and C.-S. Luther Liu. 2001. Logophoricity, attitudes, and ziji at the interface. In Long-distance reflexives, ed. Peter Cole, Gabriella Hermon, and C-T James. Huang, 141–192. New York: Academic Press.
- Huang, C.-T. James., and C-C Jane. Tang. 1991. On the local nature of the long-distance reflexive in Chinese. In *Long-distance anaphora*, ed. Jan Koster and Eric Reuland, 263–282. Cambridge: Cambridge University Press.
- Ivan, Rudmila-Rodica, and Thuy Bui. 2019. Vietnamese Anaphora: Binding Principles and the Lack Thereof. In Proceedings of Triple A: Fieldwork Perspectives on the Semantics of African, Asian, and Austronesian Languages 5, 47–61
- Jayaseelan, Karattuparambil A. 1999. Parametric studies in Malayalam syntax. New Delhi: Allied Publishers.
- Kayne, Richard. 1994. The Antisymmetry of Syntax. Cambridge: MIT Press.
- Li, F-X. 1990. The effect of person hierarchy on the blocking of the long-distance binding of the Chinese pronoun ziji. In *Proceedings of the Western Conference on Linguistics* 3:186–197. Department of Linguistics, California State University, Fresno.
- Miyagawa, Shigeru. 2017. Agreement beyond phi. Linguistic Inquiry Monograph 75. Cambridge, MA: MIT Press.
- Narahara, Tomiko. 1995. Alternatives to reflexives in Thai and Vietnamese: Binding theory and language variations. In Southeast Asian Linguistics Society III, 157–170.
- Nevins, Andrew. 2007. The representation of third person and its consequences for person-case effects. *Natural Language and Linguistic Theory* 25: 273–313.
- Ngo, Binh. 2021. Vietnamese: An essential grammar. Routledge Essential Grammars.
- Nguyen, Tai Can. 1975. Từ loại danh từ trong tiếng Việt hiện đại (Nouns in modern Vietnamese). Hanoi: NXB Khoa Học Xã Hội (The Social Science Press)
- Nguyen, Thien Giap. 1998. *Từ vựng học tiếng Việt* (The lexicon in Vietnamese). Hanoi: NXB Giáo dục (The Education Press).

- Nguyen, Phu Phong. 1996. Personal pronouns and pluralizations in Vietnamese. *Monkhmer Studies* 25: 7–14.
- Pham, Hoa Andrea. 2002. Gender in addressing and self-reference in Vietnamese—Variation and change. In *Gender across languages. The Linguistic Representation of Men and Women*, vol. 2, ed. Marlis Hellinger and Hadumod Bußmann, 281–312. Amsterdam: Benjamins.
- Pham, Mike. 2011. Are Vietnamese kinship terms pronouns? Agreement seminar paper. Chicago: University of Chicago.
- Phan, Tran, and Chou, C.-T, Tim. 2023. Vietnamese bare reflexive and the blocking effect. Poster presented at the Workshop on Theoretical East Asian Linguistics 13 (TEAL-13), National Taiwan Normal University, May 12–14.
- Preminger, Omer. 2014. Agreement and its failures. Cambridge, MA: The MIT Press.
- Progovac, Ljiljana. 1992. Relativized SUBJECT: Long-distance reflexives without movement. *Linguistic Inquiry* 23: 671–680.
- Progovac, Ljiljana. 1993. Long-Distance reflexives: Movement-to-INFL versus Relativized SUBJECT. Linguistic Inquiry 24: 755–772.
- Reuland, Eric. 2005. Agreeing to bind. In Organizing grammar: Linguistic studies in honor of Henk van Riemsdijk, ed. Hans Broekhuis, Norbert Corver, Ursula Kleinhenz, Jan Koster, and Riny Huijbregts, 505–513. Berlin: Walter de Gruyter.
- Reuland, Eric. 2011. Anaphora and language design. Cambridge, MA: MIT Press.
- Reuland, Eric. 2015. Introduction to Broadening the domain of grammar. In *Broadening the domain of grammar—A Batch from Linguistic Inquiry*, ed. Eric Reuland and S. Jay-Keyser, 8–27. Cambridge, MA: MIT Press.
- Reuland, Eric, Sally Chi Ho. Wong, and Martin Everaert. 2020. How the complexity of Mandarin zi-ji simplifies the grammar. *Linguistic Inquiry* 51 (4): 799–814.
- Rizzi, Luigi. 1990. Relativized minimality. Cambridge, MA: MIT Press.
- Ross, John Robert. 1970. On declarative sentences. In *Readings in English transformational grammar*, ed. Roderick A. Jacobs and Peter S. Rosenbaum, 222–272. Waltham, MA: Ginn.
- Sung, Li-May. 1990. Universals of reflexives. Doctoral Dissertation. University of Illinois.
- Tang, Chih-Chen Jane. 1989. Chinese reflexives. Natural Language and Linguistic Theory 7: 93-121.

Thompson, Laurence C. 1965. A Vietnamese grammar. Seattle: University of Washington Press.

- Tran, Thuan. 2009. Wh-quantification in Vietnamese. Doctoral Dissertation. University of Delaware
- Trinh, Tue, and Hubert Truckenbrodt. 2018. The Participant-Pronoun Restriction: English and Vietnamese. In 5th NAFOSTED Conference on Information and Computer Science (NICS), 317–321.
- Trinh, Tue. 2022. Three ways of referring to discourse participants in Vietnamese. *Journal of the Southeast Asian Linguistic Society*, 221–230. University of Hawai'i Press.
- Ura, Hiroyuki. 1996. Multiple feature-checking: A theory of grammatical function splitting. Doctoral Dissertation. MIT, Cambridge, Mass.
- Wong, Sally Chi Ho. 2021. Reflexivization in Mandarin: the role of zi-ji and its components. Doctoral Dissertation. Utrecht: LOT International dissertation series.
- Zubkov, Peter. 2018. The grammar of binding: A study with reference to Russian. Doctoral Dissertation. Utrecht: LOT International dissertation series.

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