Exempt reflexive *mình* in Vietnamese: Effects of person features and verb type

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Introduction. Anaphora resolution is a key topic in psycholinguistics as it provides insights into language processing. Experiments confirm that many reflexives (e.g. *herself*) follows Chomsky's Binding Principle A [1] and are typically locally bound [3,4,7]. However, many exempt anaphors do not follow this principle. Prior crosslinguistic work has found effects of logophoricity: in some contexts, certain reflexives can be interpreted as referring to perspective-holders and thus can have long-distance (LD) antecedents [3,6].

Prior work on the Vietnamese exempt reflexive *mình* [5] is inconclusive about whether it is logophoric, and found a cross-linguistically surprising pattern: While *mình* is sensitive to person features (1st vs 3rd), it exhibits the converse of the 1st person blocking in Chinese (where a local 1st-person pronoun is preferred as the antecedent, and blocks access to LD antecedents [8]). In contrast, with *mình,* a local 1st person pronoun is dispreferred as an antecedent relative to a local 3rd person referent. [5] attributed this to a preference for a sentence internal perspective holder. The **present work** aims to **(i)** test if this surprising 'converse' 1st person blocking effect is robust (can it be replicated?), and to **(ii)** test *mình*'s sensitivity to the logophoric hierarchy [2]. According to [2], speech verbs (e.g. *say*) are more likely to allow logophoric interpretations than perception verbs (e.g. *heard*). Our study manipulates (i) position of the 1st person pronoun *tôi* ("I") (matrix/embedded (non-local/local)) and (ii) matrix verb type *(say/hear)* to test whether the reflexive *mình* exhibits sensitivity to logophoricity-related factors.

Predictions. First, if the surprising results of earlier work replicate, *mình* should be sensitive to person (1st/3rd) but should *not* show 1st-person blocking. Second, if *mình* is sensitive to the logophoric hierarchy, more LD choices should arise with speech than with perception verbs.

Experiments. Our two studies (L1 Vietnamese speakers, PCIbex, conducted on the internet) (1) Exp.1 comprehension (N=82) and (2) Exp.2 self-paced reading (SPR) (N=100) manipulated the position of *tôi* 'I' (LD/local) and verb type (speech verb/perception verb); (Table 1). 32 targets (8 per condition, Latin Square) and 51 fillers were shown. Participants were told to imagine they were named *An* (gender-neutral name). This was done to make the questions (asking about 'I') understandable (Table 1). Following other work, people with a fixed response strategy (LD or local choices only) were excluded (6 participants were excluded).

Experiment 1: Comprehension. As Fig.1 shows, the speech-local condition (Hoang *said that I..*) elicited the highest rate of LD choices (51.4%), followed by perception-local (Hoang *heard that I*.., 38.5%). When the 1st person pronoun is in a non-local position, embedded antecedents are preferred (*I heard that Hoang..* 87.3%; *I said that Hoang..* 81.6%), the *opposite* of what 1st person blocking in Chinese leads us to expect. Logistic mixed effects regression on the LD choice proportions point to 2 key findings: **(i)** There is a main effect of the position of *tôi ('I')* [Table 2] (p=0.01). *Tôi* in local position triggers more LD choices, showing that 1st and 3rd person antecedents do not pattern alike. **(ii)** There is a main effect of verb type, speech verbs induce more LD interpretations [Table 2] (p=0.05). There is no verb x *tôi* position interaction [Table 2].

Experiment 2:SPR. As Fig.2 shows, non-local *tôi* 'I' conditions are read more slowly in the critical region (lmer, t=-2.574, p=0.01). As shown in Table 3, position of *tôi* 'I' interacts with verb type: conditions with local 'I' yield faster RTs in speech conditions but slower RTs in perception verbs. This provides further evidence for the sensitivity of *mình* to the logophoric hierarchy and the preference for a sentence-internal perspective holder.

Conclusion. We replicate the finding that while *mình* is sensitive to person features, it does *not* exhibit the 1st person blocking effects found in Chinese. We also provide the first experimental evidence that *mình* is sensitive to verb type, indicating logophoric behavior. Exp.2 further supports this sensitivity and provide evidence for the preference for a sentence-internal perspective holder. We plan to investigate *de se* and *de re* construals in the future. Overall, our results contribute to cross-linguistic variation in anaphora resolution.

Table 1. Sample item illustrating the 4 conditions (the first two columns indicate levels of the two factors verb types and position of first-person pronoun)

Verb type	Position of Tôi	Sentences
Perception	Local	Hoàng nghe nói tôi hi vọng MÌNH sẽ đi du học. Hoang heard that I hope SELF will study abroad.
Perception	Non-local	Tôi nghe nói Hoàng hi vọng MÌNH sẽ đi du học. I heard that Hoang hope SELF will study abroad.
Speech	Local	Hoàng nói là tôi hi vọng MÌNH sẽ đi du học. Hoang said that I hope SELF will study abroad.
Speech	Non-loca	Tôi nói là Hoàng hi vọng MÌNH sẽ đi du học. I said that Hoang hope SELF will study abroad.
{I/Hoang} said/heard that {I/Hoang} hope SELF would study abroad.		
Question: Who would be likely to study abroad? 1. Hoang 2. An		

Figure 1. *Percentage of non-local subject choices by condition (Errors bars +/-1SE)*

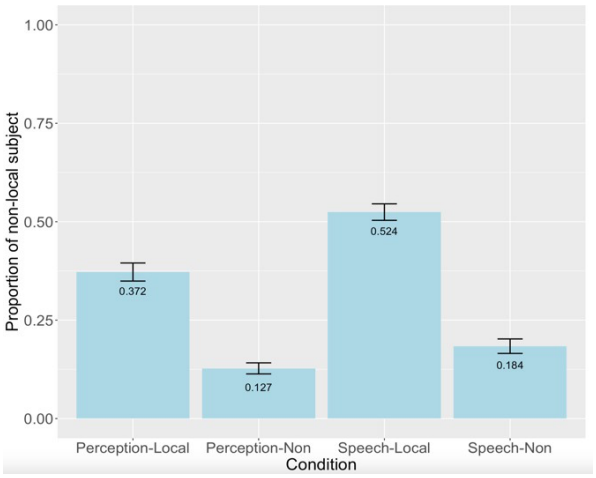

Figure 2. Average reading times per word

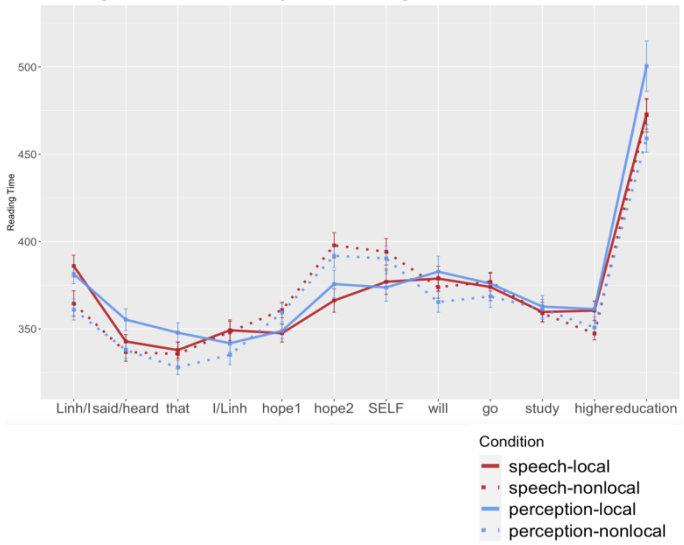

Table 2. *Logistic mixed effects regression on the LD choice proportions.*

Fixed effects	Estimate	Std. Error	Z value	Pr (> |z|)
Intercept	-0.58	0.29	-1.97	0.05*
Verb type	0.67	0.35	1.92	0.05*
Position of Tôi 'I'	-1.37	0.42	-3.25	0.001*
Verb type: Tôi 'I'	-0.53	0.50	-1.07	0.28

Table 3: Linear regression mixed effects of log RTs on Spillover region 2

Fixed effects	Estimate	Std. Error	t value	Pr (> |z|)
Intercept	5.856e+00	2.097e-02	279.188	<0.0001*
Verb type	2.624e-03	1.140e-02	0.230	0.8
Position of Tôi 'I'	-1.509e-03	1.286e-02	-0.117	0.9
Verb type: Tôi 'I'	-4.875e-02	2.206e-02	-2.210	0.03*

References

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