

The Status of Inverse Scope in Thai: A Comparison between Native and Heritage Speakers

Research on heritage languages explores superstrate effects and the results of limited input on all linguistic levels (Benmamoun, Montrul & Polinsky 2013). Recently, researchers have begun to examine interfaces between levels among heritage speakers as an area of particular interest due to the fragility they entail. This is the motivation, for example, in work such as Tsai, Scontras, Kenneth, and Polinsky (2014) work comparing Chinese heritage speakers in the US with non-heritage equivalents on a subtle phenomenon on the syntax-semantics-pragmatics interface, the delimiting of quantifier scope among native and heritage speakers. The present paper examines the same phenomenon, this time among Thais in New York City.

Scope consists of to what extent a quantifier like *every* governs the interpretation of NPs. For example, a sentence like “every shark attacked a pirate” shows scope ambiguity since although there are various sharks, they may have all attacked the same pirate or one pirate each. Not all languages show this flexibility. In Chinese and Korean, only the one-pirate interpretation is possible. Lee et al. (2011) and Scontras et al. (2014), investigated comprehension of the other reading among heritage speakers of Korean and Mandarin, respectively, two languages with (generally) rigid scope. The results suggest that English-dominant heritage speakers of Korean and Mandarin tended toward surface scope interpretations of doubly quantified Korean/Mandarin on a par with Korean/Mandarin monolinguals. The present study explores whether the Thai heritage speakers acquire a native-like competence in this area or show different patterns.

Thai is particularly interesting in this respect because not examined in the literature is the effect of lexical restrictions on scope taking in the case of contact between two languages that generally permissive of inverse scope in doubly quantified sentences. That is, the acquisition of scope Korean/Mandarin is relatively simple for the heritage learners since inverse scope is generally banned. Thai exhibits a lexical restriction on scope taking not found in English, Chinese or Korean. Specifically, I focus on the comprehension of doubly quantified sentences with quantifiers *thuk*-classifier ‘every’ and classifier-*nueng*, as in (1) and (2). Importantly, while the English translations of (1) and (2) are scopally ambiguous, the ‘one/a’ > ‘every’ interpretation is strongly preferred in Thai counterparts. This restriction is unique to the quantifier *nueng*.

- (1) Chalam thuk tua jomtee jonsalad khon nueng.
Shark every CLASSIFIER attacked pirate CLASSIFIER one
‘Every shark attacked a pirate.’
- (2) Chalam tua nueng jomtee jonsalad thuk khon.
Shark CLASSIFIER one attacked pirate every CLASSIFIER
‘A shark attacked every pirate.’

I report on a scope judgement experiment with 25 Thai native speakers and 20 heritage speakers of Thai. The experiment crossed two factors: word order (with levels *thuk*>*nueng* or *E*>*O*, and *nueng*>*thuk* or *O*>*E*) and scope (with levels inverse and surface). Subjects judged each of these four conditions two times (using two different lexicalizations). These eight critical items were pseudorandomized with 8 fillers. Subjects heard these sentences recorded in Thai by a native Thai. For each trial, subjects judged on a 7-point scale the suitability of the sentence for describing a picture (taken from Bruening 2014). In the case of the critical items the picture corresponded to either the inverse or surface interpretation.

ORDER	SCOPE	NATIVE RATING	HERITAGE RATING	P value
every (<i>thuk</i>) precedes a (<i>nueng</i>) (E>O)	Surface	4.8	4.3	ns
a (<i>nueng</i>) precedes every (<i>thuk</i>) (O>E)	Surface	5.9	6.7	>.001
every (<i>thuk</i>) precedes a (<i>nueng</i>) (E>O)	Inverse	6.0	6.5	ns
a (<i>nueng</i>) precedes every (<i>thuk</i>) (O>E)	Inverse	2.1	1.3	.021

Table (1): Average ratings by condition for the experiment between native and heritage Thai. Significant results in bold.

The results indicate that heritage learners match native speaker tendencies in judgment tasks involving a lexically idiosyncratic restriction where *nueng* takes wide scope over *thuk* in both configurations in doubly quantified sentences. However, in the surface scope reading, these results are significantly more categorical. This restriction thus confirms the availability of inverse scope in Thai especially when *thuk* appears before *nueng* in the sentence (E>O configuration). They also revealed no difference between the heritage and the Thai-dominant subjects. The heritage speakers' judgement was not influenced by their dominant language, but followed the baseline grammar of the weaker language. These results align with Lee et al.'s (2011) and Scontras et al.'s (2014) findings from heritage Korean/Mandarin where English-dominant heritage subjects demonstrated native-like behavior in scope judgment tasks: they retained the basic and core properties of their heritage language, and never violate the restriction that is unique to the quantifier *nueng*. The heritage speakers seemed more definitive in their judgements in which their ratings went further in the same direction as the native speakers': the ratings were higher in sentences where *nueng* scopes over *thuk* (O>E + Surface and E>O + Inverse), and lower when *thuk* scopes over *nueng* (E>O + Surface and O>E + Inverse). This paper additionally provides experimental support for observations about Thai scope ambiguity not previously reported in the literature.

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