The role of Tagalog verbal agreement in processing wh-dependencies
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It is well-established that parsers attempt to associate wh-phrases to a gap even before there is any direct evidence in the input that signals the gap’s position [1]. This is referred to as the Active Filler Strategy (AFS) [2]. While the parser’s initial association may be correct, this is not a guarantee: it may turn out to be wrong and need to be revised. Thus, AFS is a systematic risk that parsers take when interpreting filler-gap dependencies (FGDs) in real-time. In this study we ask whether this strategy is realized in Tagalog—a language that is typologically distant from most investigated languages—and whether parsers leverage the special morphological cues provided by its grammar.

Tagalog is a verb-initial Austronesian language spoken in the Philippines. We compare the time-course of FGD-resolution when verbs exhibit agreement with the extracted argument (see Fact #1) and when they do not (see Fact #2). In a Stop Making Sense task [3], we find an earlier onset in rejection rates for an implausible filler with an agreeing verb, relative to a non-agreeing verb. Only later in the sentence when the co-argument occurred do we find a rise in rejection rates for an implausible filler with non-agreeing verbs. Thus Tagalog verbal agreement facilitates FGD-resolution by providing parsers an unambiguous cue to the gap’s position. Unlike many better-investigated and typologically distinct languages, Tagalog seems to require unambiguous evidence about the gap’s position before interpreting FGDs.

Fact #1: Verbs can be inflected differently depending on whether the verb agrees with its external or internal argument (EA and IA, respectively). If a verb must show inflection, then only the noun with which the verb agrees can undergo extraction. (1) illustrates a plausible extraction of an internal argument: the verb inom ‘drink’ is marked with the affix -IN-.

(1)  Aling alak ang INinom niya kani-kanina lang para pamparelaks …
‘Which wine did s/he drink recently to relax …’ Agreeing, Plausible

Fact #2: Verbs in the recent past (RP) do not exhibit agreement [4]. Both EA- and IA-extractions are generally licit. However, when one of the co-arguments is obligatorily specific (i.e., a pronoun or a proper name), only IA-extraction is licit. Thus, in-marked verbs and verbs in RP can form a minimal pair—they can both restrict extraction to IAs. (2) illustrates an implausible extraction of an argument, coerced to be parsed as the internal argument because of the pronoun niya ‘s/he’, with the verb inom ‘drink’ (KAKA- is the RP aspectual marker).

(2)  Aling babae ang KAKAinom lang niya para pamparelaks …
‘Which woman did s/he drink recently to relax …’ Non-agreeing, Implausible

To isolate the contribution of agreement in FGD-resolution, we compared how quickly implausible wh-phrases are detected when verbs bear agreement and when they do not using the SMS paradigm [3]. Participants (n=80) read sentences one word at a time and were instructed to terminate the presentation if the sentence stopped making sense. We crossed Agreement and filler Plausibility in a 2 x 2 design (12 items, 60 fillers).

We found that at the V-region, the rates of rejection for implausible fillers were higher than those of plausible fillers (p<.001), especially when the verb exhibited agreement (p=.03). These trends persisted through the V+2-region. Crucially, this region disambiguates RP’s intended parse by introducing the co-argument that coerces an illicit IA-extraction interpretation. Rejection rates of implausible fillers converged thereafter (V+3, p=.23; V+4, p=.40).

References