The Hybrid Status of the Reportative Evidential in Tagalog

Potts (2005) discusses the class of conventional implicatures (CIs), which project in the sense of Simons et al. (2010): e.g., in (1) the implication of the appositive *a doctor* persists even when embedded under the modal *maybe*:

(1)   Maybe Susan, a doctor, is from Texas.

As (1) is only felicitous if the appositive contains new information, Potts argues that it is not a presupposition. He also argues that its content is "scopeless" because it must be interpreted in the global context: (1) cannot mean that maybe Susan is a doctor.

In Tagalog, the reportative evidential *daw* is associated with an implication that the proposition expressed by its prejacent has been previously reported. We give instances from our original fieldwork data of *daw* embedded under a modal, where an implication associated with the evidential is new but still projects. We believe this constitutes the first clear evidence of an evidential with a projective implication (as defined by Simons et al.) in any language: McCready and Ogata (2007) and Lee (2011) propose instances of projective evidentials, but their data do not demonstrate projection under embedding. Further, our data also show that *daw* participates in scope interactions with respect to embedding operators, an environment not previously attested (although Harris and Potts (2009) discuss CIs scoping within attitude verbs). This full pattern is summarized by (2):

(2)   Baka   tumahol daw si   Fido.
      Maybe bark   RPT NM Fido
      'Maybe Fido barked, as it was reported that he did.' (P)
      'Maybe it was reported that Fido barked.' (NS)
      'It was reported that maybe Fido barked.' (WS)

Depending on context, (2) can have a projective reading (P) where it is possible Fido barked but the report that Fido barked is implied in the global context (only). An interpretation with *daw* taking narrow scope (NS) is also available, under which the reportative implication falls within the scope of the modal. Finally, a wide scope *daw* interpretation (WS) is available, where the reported proposition is that maybe Fido barked.

We reject Schwager's (2010) account of *daw* as a presupposition on the grounds that examples like (2) are perfectly felicitous in an out-of-the-blue context (as *daw* generally is), and thus presuppositional accounts require widespread accommodation and lack explanatory value. Moreover, it is impossible to capture the pattern in (2) in Potts's framework, since *daw* is not scopeless. Building on our own recent work, we propose a novel analysis of *daw* as a hybrid between a CI and scope-taking operator in a dynamic semantics that allows utterance components to contribute to either the root ('global') common ground (CG) or to the embedded ('local') one. Following Amaral et al. (2007) and AnderBois et al. (2010), our approach remedies a serious flaw in Potts's semantics by allowing anaphora between the root and embedded meaning "dimensions." This new framework, which updates and improves on Heim (1982) by being fully compositional, can additionally model discourse anaphora and other types of presupposition.

We assume the standard types e (of entities) and p (of propositions). Proffered contents (type k) are functions from contexts to contexts, where a context is a function from a sequence of n entities to a pair of propositions (type c $=_{\text{def}}$ e^n $\rightarrow$ (p $\times$ p)). We write a proffered content as $\lambda_{c\mathbf{x}^{\bar{c}}} \langle p, q \rangle$, where (1) c is a context, (2) $\mathbf{x}^{\bar{c}}$ is a sequence of entities

whose length is the arity of c (written $\bar{c}$), and (3) p and q are the contributions to the root and embedded CGs, respectively. Discourse referents (DRs) are modeled as natural numbers (type n): $\mathbf{x}_i$ is the i-th member of the sequence $\mathbf{x}$.

We give a mostly standard dynamic treatment to the intransitive verb *tumahol*, nominative marker *si*, and proper name *Fido*:

$$\text{TUMAHOL} =_{\text{def}} \lambda_{nc\mathbf{x}\bar{c}} \langle \mathsf{true}, \mathsf{bark}\,\mathbf{x}_n \rangle \qquad \text{SI} =_{\text{def}} \lambda_N N \qquad \text{FIDO}_i =_{\text{def}} \lambda_D.D\,i$$

The dynamic property TUMAHOL (type $\mathrm{d} =_{\text{def}} \mathrm{n} \to \mathrm{k}$) only contributes to the embedded CG, FIDO_i is a dynamic generalized quantifier (GQ) that passes the DR i to a dynamic property (suppressing here the requirement that the root CG entails that $\mathbf{x}_i$ is Fido), and the nominative marker SI is semantically the identity function. We model *daw* to both take scope and have its reportative implication project:

$$\text{DAW}_S =_{\text{def}} \lambda_{QDc\mathbf{x}\bar{c}} \langle \mathbf{rt}\,(Q\,D\,c\,\mathbf{x}), \mathsf{report}\,(\mathbf{em}\,(Q\,D\,c\,\mathbf{x})) \rangle$$
$$\text{DAW}_P =_{\text{def}} \lambda_{QDc\mathbf{x}\bar{c}} \langle \mathbf{rt}\,(Q\,D\,c\,\mathbf{x}) \text{ and } \mathsf{report}\,(\mathbf{em}\,(Q\,D\,c\,\mathbf{x})), \mathbf{em}\,(Q\,D\,c\,\mathbf{x}) \rangle$$

where $\mathbf{rt}$ and $\mathbf{em}$ give the root and embedded CG, respectively. Both *daw*s are polymorphically typed: either Q is a dynamic GQ and D a dynamic property, or else Q is a unary property of proffered contents and D a proffered content. The scoping DAW_S passes through the root CG given by its arguments, and contributes to the embedded CG the proposition that their embedded CG contributions were reported. The projective DAW_P contributes the report to the root context, while passing through both CGs contributed by its arguments. The modal BAKA passes through its argument's root CG, contributing the proposition that its argument's embedded CG contribution is possible:

$$\text{BAKA} =_{\text{def}} \lambda_{kc\mathbf{x}\bar{c}} \langle \mathbf{rt}\,(k\,c\,\mathbf{x}), \mathsf{maybe}\,(\mathbf{em}\,(k\,c\,\mathbf{x})) \rangle$$

These lexical entries allow the three readings for *daw* in (2) to be derived:

$$\text{BAKA}\,\text{DAW}_P\,(\text{SI}\,\text{FIDO}_i)\,\text{TUMAHOL} \equiv \lambda_{c\mathbf{x}\bar{c}} \langle \mathsf{report}\,(\mathsf{bark}\,\mathbf{x}_i), \mathsf{maybe}\,(\mathsf{bark}\,\mathbf{x}_i) \rangle \qquad \text{(P)}$$
$$\text{BAKA}\,\text{DAW}_S\,(\text{SI}\,\text{FIDO}_i)\,\text{TUMAHOL} \equiv \lambda_{c\mathbf{x}\bar{c}} \langle \mathsf{true}, \mathsf{maybe}\,(\mathsf{report}\,(\mathsf{bark}\,\mathbf{x}_i)) \rangle \qquad \text{(NS)}$$
$$\text{DAW}_S\,\text{BAKA}\,(\text{SI}\,\text{FIDO}_i)\,\text{TUMAHOL} \equiv \lambda_{c\mathbf{x}\bar{c}} \langle \mathsf{true}, \mathsf{report}\,(\mathsf{maybe}\,(\mathsf{bark}\,\mathbf{x}_i)) \rangle \qquad \text{(WS)}$$

In the (P) reading, the implication that maybe Fido barked is contributed to the embedded CG, and the report of his barking to the root CG. The other two readings leave the root CG untouched, yielding the two possible scopings of DAW_S with respect to BAKA.

In sum, this work makes both an important empirical contribution and an important theoretical one. Our fieldwork has produced new data showing that *daw* is the first known instance of an evidential that can both project and take scope beneath other operators. Our novel formal analysis preserves desirable attributes from Heim, contributing compositionality and the ability to capture the behavior of CIs in addition to anaphora and presuppositions. Most importantly, our framework is the first we are aware of that is capable of accounting for the hybrid status we observe for *daw* in our empirical work, further contributing to the understanding of non-presuppositional projective meaning.

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