

Particles, Issues and Intonation: Analyzing the Thai Particle *na*
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Overview. Particles have received substantial attention in the recent semantics and pragmatics literature, but there remains little consensus on their proper analysis. The aim of this talk is to propose a set of parameters for particle meaning (possibly partial), largely drawn from the recent literature, and to extend this basic view to incorporate observations that have been made about the interaction of particle meanings with intonation and other aspects of pragmatic interpretation. As we show, these elements all come together in the analysis of the (Central) Thai particle *na*, which is the empirical focus of the paper.

The particle *na* and its variants. The Thai particle *na* appears in a number of phonological variants (we follow Cooke 1989 in assuming they have a common semantic core). This paper will consider the primary variants *ná*, *nâ*, *náa*, *nâa*, and *naa*, and further restrict attention to their use in declaratives. These particles usually appear sentence-finally though they can also appear at clause boundaries, much like so-called sentence-final particles in Japanese. Space considerations preclude giving a full range of data, so the presentation here must be schematic (details will be given in the talk), but the following basic interpretations and restrictions can be isolated for a sentence with content *C* (cf. also Cooke 1989):

- (1) a. *ná*: calling attention to *C*
- b. *nâ*: Lightly persuasive and impatient wrt *C*
- c. *náa*: Begging, attempting to persuade that *C*
- d. *nâa*: Sustained pressure for belief in *C*
- e. *naa*: Calling attention strongly to *C*

These facts are reminiscent of observations that have been made about the Japanese particles *yo* and *ne* (also *na*) by e.g. McCready (2005, 2009), Davis (2009) and Oshima (2014). These particles also exhibit forcefulness, attention-calling, and appeals by the speaker for belief. Further, the lengthened versions of these particles (*yoo* and *nee/naa*), though they have received less attention in the formal literature, are associated with a similar emotive quality to the lengthened Thai *náa*, *nâa*, and *naa*. (2) indicates some rough similarities between the particles of the two languages; given these, a unified analysis appears desirable.

- (2) a. *ná* ~ *ne/yo* with rising intonation
- b. *nâ* ~ *yo* with falling intonation
- c. *náa* ~ *nee/yoo* with rising intonation
- d. *nâa* ~ *yoo* with falling intonation
- e. *naa* ~ *yo* with falling intonation

We suggest that both the Japanese and Thai particles can be analyzed by some combination of the following elements: (i) lexical meanings for *yo*, *ne*, and *na*, (ii) a semantics for rising

and falling intonation, and (iii) a meaning for vowel lengthening. Providing and deploying these elements to yield a proper analysis of the particles is the goal of the paper.

Analysis: framework and proposal. For the analysis, we propose that (at least these) particles reference three pragmatic factors: first, the notion of a Question Under Discussion or issue structuring conversation (e.g. Roberts 1996); second, (broadly) Gricean considerations about communication, formulated in a way which incorporates cultural variation about communicative norms (accomplishable via the use of defeasible postulates about normal communication); third, expectations about ‘normal’ events and conversational continuations. The second and third of these can be stated using a default logic (eg. Horty 2014). We further assume that these three elements are gradable, and so can be compared to some existing standards (for issue resolution, relevance, and normality, respectively). Aspects of these ideas have been applied to particles in Cantonese, German, and Japanese (e.g. McCready 2008, Davis 2009, Rojas-Esponda 2014, McCready and Hara 2015); together, we think they can be taken as three key ingredients in the analysis of particles.

We formalize these concepts as follows (using a semi-formal representation here, and assuming the particles to introduce expressive content, cf. Davis 2010, McCready 2010, Gutzmann 2012); below, \mathcal{B}_a is a belief operator and \mathcal{D}_a a bouletic operator for agent a , σ is an information state in the sense of dynamic semantics and is understood as indicating the common ground, i is the issue currently under discussion, $Rel(i, \varphi)$ indicates that φ is (sufficiently) relevant to the current issue, and $E_a(\varphi, \psi)$ is a modal operator indicating that agent a expects that ψ will hold given φ . Using these elements, (3) provides basic denotations for the particles *yo*, *ne* (Japanese) and *na* (Thai). Each has the speaker going ‘on record’ with beliefs about the information status of φ , in the usual way for expressives. (4) gives meanings for rising and falling intonation along the lines of previous work on particles: rising intonation marks relevance, and falling intonation strength of speech act. Finally, (5) takes vowel lengthening of a particle to indicate an emotive attitude of the speaker.

- (3) a. $yo\varphi$ expresses that (i) $\mathcal{B}_s\neg\mathcal{B}_h\varphi$ and (ii) $\mathcal{D}_s\mathcal{B}_h\varphi$, and yields $\sigma[\varphi]$.
- b. $ne\varphi$ expresses that (i) $\mathcal{B}_s\mathcal{B}_h\varphi$ and (ii) $\mathcal{D}_s\mathcal{B}_h\varphi$, and yields $\sigma[\varphi]$. (cf. Sudo and Hoong 2015)
- c. $na\varphi$ expresses that (i) $\mathcal{D}_s\mathcal{B}_h\varphi$ and (ii) $E_s(Utter(s, \varphi), \mathcal{B}_h\varphi)$, and yields $\sigma[\varphi]$.
- (4) a. $\uparrow\varphi$ expresses that $\mathcal{B}_sRel(i, \varphi)$ (cf. Davis 2009, McCready 2009).
- b. $\downarrow\varphi$ expresses a strong assertion that φ (cf. McCready 2008).
- (5) $PT^+\varphi$ expresses an emotive attitude of the speaker toward either (i) φ or (ii) $\mathcal{D}_s\mathcal{B}_h\varphi$.

These elements can be assembled to yield the various interpretations of *na* in the obvious way: for instance, $ná$ is defined as $[na \cup \uparrow]$, and $nâa$ as $[na^+ \cup \downarrow]$. The same system can of course be used for Japanese, realizing the goal of a unified analysis (at least at the current level of abstraction; complexities arise with other clause types, an area for future work).

Conclusions. This analysis shows that the meaning and use of these particles can be characterized using the three parameters above, which points to their usefulness for

the description of pragmatic particles elsewhere. Ultimately, the aim of this work is an empirically founded typology of the range of discourse particles in the world's languages, using the parameters above together with other elements yet to be introduced.