

On Procedural Meaning: Cognitive constraint or activation?

—Evidence from an analysis of the Japanese discourse marker *Nanka*—

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It has been generally assumed within the framework of Relevance Theory that procedural meaning *constrains* and guides the hearer's inferential process during his utterance interpretation (Blakemore 1987). Recently, an alternative view has been proposed that procedural meaning *activates* domain-specific mechanisms called “modules” (Wharton 2003, 2009, Wilson 2011, 2012). The empirical differences between the two approaches, however, have not been adequately addressed. The purpose of this paper is to show that an analysis of the Japanese discourse marker *nanka*, (approximately glossed as “something like”, “sort of”, etc.) can provide a case study for approaching this question.

We will first show that the constraint-based analysis cannot adequately account for four interesting characteristics of *nanka*. First, as shown in (1) and (2), *nanka* can be used with or without a contingent proposition. In (1), *nanka* can be analyzed to constrain the hearer's inference in the construction of the higher-level explicature (Yang 2017) while this constraint-based analysis cannot be applied to (2) since there is no propositional content to be embedded (cf. Wharton 2009: 86-87).

(1) *Nanka*, ii hito soo datta na.

DM-uncertain nice person likely be-past SF

‘*I dunno*, he seemed to be a nice person.’

(2) *Nanka*, ... iya, nandemonai.

DM-uncertain no nothing

‘*I dunno*, ... , forget it.’

Second, as shown in (3a), *nanka* can be used together with other procedural expressions but their meanings cannot be compositionally calculated (cf. Carston 2016: 159-160). A constraint-based approach cannot account for this “non-compositionality” of procedural expressions in a principled way, which may make it difficult to identify order-related issues to be noted as the third and the fourth characteristics. Third, while *nanka* and other procedural expressions can occur consecutively, their order may be restricted in such cases as (3a, b). Fourth, on the other hand, there are cases, such as (4a, b), in which their order is free. Previous studies have failed to observe these order problems of *nanka*. Even if the above facts were identified, those facts would not be able to be properly accounted for by the constraint-based analysis.

(3) Tanaka-san no nouryoku to hitogara wa kono sigoto ni husawasii.

Tanaka of ability and personality TOP this job to adequate

‘Tanaka has adequate ability and personality to this job.’

a. *Tadashi*, *nanka*, kare wa majime sugiru kamo.

DM-contrast DM-uncertain he TOP serious-minded too might

‘*nevertheless*, *I dunno*, he might be too serious-minded.’

b. **Nanka*, *tadashi*, kare wa majime sugiru kamo.

DM-uncertain DM-contrast he TOP serious-minded too might

‘*Lit. I dunno*, *nevertheless*, he might be too serious-minded.’

- (4) a. *Doomo*¹, *nanka*, kare wa majime sugiru kamo.
 somehow DM-uncertain he TOP serious-minded too might
 ‘*Somehow, I dunno, he might be too serious-minded.*’
- b. *Nanka*, *doomo*, kare wa majime sugiru kamo.
 DM-uncertain somehow he TOP serious-minded too might
 ‘*I dunno, somehow, he might be too serious-minded.*’

In the present study, we show that an activation-based analysis of *nanka* can account for the above four characteristics in a unified way. This analysis is based on the following two assumptions. First, besides the inferential comprehension module (Sperber&Wilson 2002), humans possess the epistemic vigilance module, which helps the hearer to assess the believability and reliability of communication (Sperber, et al. 2010), and the cooperation module, which helps the hearer to cooperate or empathize with the speaker. Second, these three modules are organized hierarchically: while the inferential comprehension module contains the epistemic vigilance and the cooperation modules, the epistemic vigilance and the cooperation modules are parallel with each other without any inclusive relation.

Under these assumptions we propose that *nanka* has a procedural meaning that activates the epistemic vigilance module and show that the four characteristics of *nanka* follow as consequences. First, since the activation of epistemic vigilance does not rely on a proposition, the independent occurrence of *nanka* as in (2) can be accounted for in the same way as (1). Second, the non-compositionality of procedural expressions can be naturally explained as follows: they activate two modules separately and sequentially, which also accommodates their order-related characteristics. Third and fourth, both order restrictions and freedom can be explained by attributing them to the hierarchical organization of relevant modules.

Finally, we will argue that the proposed analysis not only provides empirical evidence that *activation* is superior to *constraint* in the sense that the former, but not the latter, can account for the above-mentioned four characteristics concerning *nanka*, but also contributes to a further exploration of the property and structure of modules and mind-architecture.

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¹ Takeuchi (2015) proposes that in using *doomo*, the speaker intends to build a favorable relationship with the hearer. In other words, the hearer is expected to interpret the utterance in a cooperative way and to accept the intended implicature. In the present study, it is assumed that *doomo* activates the cooperation module.