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Formal approaches to discourse particles and modal adverbs¹

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The articles presented in this volume are the proceedings of the fourth workshop on formal approaches to discourse particles and modal adverbs, which took place in Ljubljana in August 2011.

Discourse particles form a borderline case between semantics and pragmatics, and can thus be the source of new insights in both domains. Usually, the formal description of the meaning of discourse particles involves more dimensions than what is usually taken into account in semantic description. Therefore, their study gives clues about the articulation between various layers of meaning, especially given that the combination of discourse particles is possible, but not in an arbitrary manner.

A proper account of the meaning of discourse particles is also a very promising avenue for computational linguistics since they are precious indicators for the disambiguation of discourse structure and speaker intentions. Probably one of the biggest challenges in the study of discourse particles is that of *variety*. First, the meanings conveyed by discourse particles cover a wide range of interpretations and effects. Among other things, discourse particles can convey intensification and emotivity, affect speech acts, bear on informational structure aspects or constrain the structure of the discourse they are used in.

Another domain of great variation is that of the differences between languages. While some languages lexicalize a great number of particles (e.g. Japanese and German) others are much poorer in this domain, and between languages that do have discourse particles, the lexicalized meanings greatly differ.

¹ We would like to thank the speakers and audience of the workshop on formal approaches to discourse particles and modal adverbs. In addition, we are very grateful to the program committee of the workshop and the reviewers of this special issue for their invaluable help and advice.

Finally, the formal approaches used to characterize properly the meaning of discourse particles also prove very varied and go from dynamic semantics to decision theory, quite often borrowing from several trends.

All the papers presented in this volume are representative of this variety. The particles studied belong to several languages (Thai, Russian, Japanese, Korean, English and German) convey very different meaning (emphasis, exclusion, epistemic features etc.) and are analyzed in different ways, depending on the meaning conveyed by each particle.

Tawilapakul, Winterstein and Hara and Kinuhata discuss the semantics of a particular particle. Tawilapakul's contribution deals with the Thai particle *lɛɛw45*. This particle is traditionally analyzed as a perfective aspect marker. Tawilapakul, however, argues that this traditional classification is empirically incorrect. For example, the particle can be used in combination with a progressive/imperfective marker yielding a progressive/imperfective reading, as in (1).

- (1) maa45 kam33lan33 wiŋ42 (Tawilapakul, this volume)
 horse PROG run
 'The horse is running.'

The function of *lɛɛw45* in such examples can therefore not be to mark perfectiveness. Rather, Tawilapakul argues, the particle creates emphasis on the change of state the topic of the sentence undergoes. Tawilapakul argues that *lɛɛw45* triggers the presupposition that the proposition expressed in the host sentence was previously believed to be false. Following Zeevat's (2002) analysis of discourse particles, Tawilapakul analyzes the choice for an utterance with or without *lɛɛw45* in Optimality Theory.

Winterstein discusses the meaning of *only* and argues against the claim made by several authors that *only* has a scalar component as part of its semantics. Those authors base this claim on the observation that the use of *only* is infelicitous in combination with an associate which takes in a position at the top of some scale (as in 2) and the observation that *only* does not exclude elements that are situated below the associated on a particular scale (as in 3, which does not entail that John doesn't have a bachelor's degree).

- (2) # John is only a top general (Winterstein, this volume)
 (3) a. John only has a master's degree (Winterstein, this volume)

However, a scalar analysis of *only* cannot account for examples like (4), which Winterstein calls *improvement readings* of *only*.

(4) John only likes to drink single malt scotch (Winterstein, this volume)

Here, *only* does not mark that its associate takes in a low position on some scale. On the contrary, *only* seems to mark that its associate is at the top of the scale. To account for the improvement reading of *only*, Winterstein argues for a semantics of *only* without a scalar component. In line with Zeevat (2011), Winterstein argues that *only* $P(x)$ superweakly presupposes that there is an alternative to x , y and it asserts that the predicate P does not hold for y . The scalar interpretation and the argumentative effect of *only* are byproducts of this simple exclusive meaning.

Hara & Kinuhata address the Osaka Japanese particle *nen* and argue that it marks a sentence as an assertion or, in terms of Gunlogson (2003), that it publicizes that the proposition expressed by the host sentence is part of the speaker's beliefs. Given this definition of the particle, it seems puzzling at first sight that *nen* can also be felicitously used in wh-questions. However, it can only be used with wh-questions in certain contexts. The defining characteristic of those contexts, Hara and Kinuhata argue, is that the speaker in those contexts expects the hearer to have an answer to the question. In general, questions pragmatically presuppose that the speaker assumes the hearer to have an answer to the question. According to Hara and Kinuhata, *nen* can attach to this presupposition, indicating that the speaker publicly commits to the assumption that the hearer knows the answer. Hence, *nen* is a particle that can attach to both the at-issue proposition of its host sentence as well as the presuppositional proposition. Interestingly, there seems to be a similarity between *nen* and the intonation of English questions as described by Bartels (1999). Bartels (1999) argues that the low phrasal tone L- can be seen as an ASSERT morpheme. Similar to wh-questions with *nen*, wh-questions uttered with the low phrasal tone give rise to the presupposition that there is an answer to the question.

Lee's paper is a partial overview of the inventory of evidential, reportative and modal markers in Korean. One of the markers discussed is the evidential marker *-te*. One of its characteristics is that the evidence indicated by *-te* is always acquired before speech time. When *-te* is combined with null tense marking the

narrator of the story and the protagonist. This has been modeled (by, amongst others, Schlenker 2004) by assuming two utterance contexts, one for the narrator: C, and one for the protagonist: c. The class of indexicals can be divided into those that are shiftable and those that are non-shiftable. For example, pronouns and tense markers are always interpreted relative to C in free indirect discourse, while temporal adverbials can be interpreted relative to c. Eckardt argues that German particles belong to the shiftable indexicals; in free indirect discourse they indicate the narrators attitude towards the proposition. For example, *ja* in (7) indicates that the protagonist (not the narrator) believes that the addressee might already know the content of the sentence.

(7) Schloß und Riegel waren die ganze Zeit über offen gewesen! Die Alte hatte, wohl aus Vorsicht, hinter ihm nicht abgesperrt. Aber mein Gott! Er hatte **ja** auch Lisaweta gesehen und konnte sich doch denken, daß sie irgendwie hereingekommen war! Sie hatte ja nicht durch die Wand eintreten können! (Eckardt, this volume)

‘No lock, no bolt, all the time, all that time! The old woman had not shut it after him perhaps as a precaution. But, good God! **Why**, he had seen Lizaveta afterwards! And how could he, how could he have failed to reflect that she must have come in somehow! She could not have come through the wall!’

In this particular example, both the narrator and the protagonist have reason to believe that the reader already knows the content of the sentence so both an interpretation relative to c and an interpretation relative to C would satisfy the presupposition triggered by *ja*. Nonetheless, *ja* is interpreted as reflecting the protagonist’s point of view. To explain this, Eckardt argues that we need to look at the function of discourse particles rather than their truth conditional content. In the case of example (7), *ja* is used to make an argument and it is the protagonist who is trying to make a point in this fragment, and not the narrator. Eckardt furthermore shows that discourse particles and the majority of temporal indexicals are always interpreted relative to the same context in free indirect discourse, thereby confirming a coherent context of narration. The indexicals *jetzt/now* and *hier/here*, however, form an exception in that they are not necessarily interpreted relative to the same context as other shiftable indexicals.

Chernilovskaya investigates the relation between expressive particles and exclamatives. Like exclamatives, expressive particles express the speaker’s attitude towards the content of the utterance. Exclamatives and utterances with

expressive particles therefore come with two types of content: descriptive content and expressive content. In contrast to the common view of wh-exclamatives as degree-constructions, Chernilovskaya argues that wh-exclamatives express noteworthiness, either of the referent associated with the wh-word or of the proposition referred to with the wh-exclamative (at least in Russian, this latter option seems not to be available in English). Analyzed in terms of the model of Farkas and Bruce (2009) an exclamative updates the speakers Discourse Commitment Set with the descriptive content and the Common Ground directly with the expressive content. Chernilovskaya focuses on the Russian expressive particle *nichego sebe*. The Russian particle is similar in several respects to the English expressive particle *man*, as described by McCready (2009). Like *man*, *nichego sebe* can be uttered with two intonation patterns: with a pause after *nichego sebe* (the comma intonation) and with no pause after it (the integrated intonation). The effect of using *nichego sebe* in declarative clauses is also similar to the effect of English *man*. As McCready (2009) argues, *comma man* expresses the speaker's attitude with respect to the proposition denoted by the host sentence and *integrated man* in addition performs degree intensification of some salient gradable predicate. As such, both *nichego sebe* and *man* with the comma intonation in combination with a declarative sentence convey the same meaning as an declarative exclamative (e.g. *John has a car!*), whereas *nichego sebe* and *man* with the integrated intonation in combination with a declarative sentence can be compared to a wh-exclamative (e.g. *How tall John is!*). This similarity could lead us to believe that expressive particles are lexicalized exclamative speech act operators. However, as Chernilovskaya argues, there are a couple of problems with such an analysis if we look at the Russian data. For instance, *nichego sebe* only expresses a subset of the attitudes that can be expressed by exclamatives. Furthermore, *nichego sebe* can be used in combination with an wh-exclamative, which would mean that the sentence is marked twice as an exclamative. Chernilovskaya proposes that expressive particles modify an exclamative speech act, specifying the range of attitudes exclamatives can express. *Nichego sebe*, for example, expresses unexpectedness, whereby *nichego sebe* with comma intonation expresses unexpectedness of a contextually salient proposition and *nichego sebe* with integrated intonation expresses unexpectedness of the proposition that forms the descriptive content of the exclamative.

Finally, McCready deals with the context-dependent nature of certain types of expressions. His starting point is the analysis of Underspecified Emotive

Content (UEC), as put forward by McCready (2011). The utterance in (8), for example, indicates that the speaker is not neutral with respect to the proposition expressed, but whether she holds a negative or positive attitude towards it is unspecified.

(8) The police trashed the fucking OWS library (McCready, this volume)

McCready (2011) models the reasoning process by which the speaker and hearer coordinate on a context in nonmonotonic logic followed by a game-based model of interpretation. In the present paper, McCready investigates whether this process could account for other phenomena involving underspecification as well, such as the problem of domain restriction in the interpretation of quantifiers. Domain restriction is different from UEC determination in that such restrictions are not unitarily selected by the speaker but are already present in the background of the context in which the quantifier is uttered. Therefore, a coordination game combined with a mechanism to narrow down the space of possibilities seems to be more appropriate for this type of problem. The space of possibilities is restricted by making some possibilities more salient than others, creating so-called focal points. McCready looks at the interpretation of gradable adjectives like *tall* to determine what mechanism lies behind the determination of such focal points. For gradable adjectives this comes down to finding the standard by which, in the case of *tall*, the height of a person is judged. McCready suggests that a mechanism of utility maximization causes biases towards particular resolutions of the contextual standard. For example, when talking about height relative to the NBA, it would be useful to learn that someone is 2.10 meters tall but not so useful to learn that he is 1.80 meters tall. As such, the focal points are themselves the result of a game model, rather than given as part of our world knowledge.

References

Bartels, C. (1999). *The intonations of English statements and questions*. Garland Publishing.

Chernilovskaya, A. (this volume). What Russian men do with exclamatives. *Sprache und Datenverarbeitung: International Journal for language Data Processing*.

Eckardt, R. (this volume), Particles as Speaker Indexicals

in Free Indirect Discourse. *Sprache und Datenverarbeitung: International Journal for language Data Processing*.

Farkas, D. and Bruce, K. (2009). On reacting to assertions and polar questions. *Journal of Semantics*, 27, 81-118.

Gunlogson, Christine. 2003. *True to form: Rising and falling declaratives as questions in English*. New York: Routledge.

Hara, Y. and Kinuhata, T. (this volume). Osaka Japanese Nen: One-sided Public Belief and Paratactic Association. *Sprache und Datenverarbeitung: International Journal for language Data Processing*.

Lee, C. (this volume). Evidentials and Modals: What Makes them Unique. *Sprache und Datenverarbeitung: International Journal for language Data Processing*.

McCready, E. (2009). What man does. *Linguistics and Philosophy*, 31, 671-724.

McCready, E. (2011). *Emotive equilibria*. Manuscript, Aoyama Gakuin University and UT-Austin.

McCready, E. (this volume). How to Coordinate on Pragmatic Content. *Sprache und Datenverarbeitung: International Journal for language Data Processing*.

Schlenker, P. (2004). Context of thought and Context of utterance. A note on free indirect discourse and the historical present. *Mind and Language* 19(3), 279 - 304.

Tawilapakul, U. (this volume). On the Role of the Particle *læw45* in Thai, *Sprache und Datenverarbeitung: International Journal for language Data Processing*.

Winterstein, G. (this volume). Only without its scales. *Sprache und Datenverarbeitung: International Journal for language Data Processing*.

Zeevat, H. (2002). Explaining presupposition triggers. In K. van Deemter and R. Kibble (eds.) *Information sharing: Reference and presupposition in language generation and interpretation*. Stanford: CSLI Publications, pp.61-88.

Zeevat, H. (2011). *Expressing surprise by particles*. Manuscript, University of Amsterdam.