

Can intonation contours introduce a QUD into discourse?

Jakob MACHÉ

As pointed out by Ginzburg (2012, pp. 69) and Krifka (2013), response particles such as *yes* or *no* serve as means to detect a QUD which was introduced into discourse with the latest move. Calling contours (CC) as previously discussed by Liberman (1975, pp. 30–32), Gibbon (1976, pp. 274–287), Ladd (1978, pp. 520–524), Pierrehumbert and Hirschberg (1990, pp. 293–294), Truckenbrodt (2012, pp. 2045–2048) and others provide an interesting case. In languages like German it is possible to respond to CC with a propositional anaphora, which occur due to their nature discourse initially:

- (1) a. Mother: [fri:. də. 'ri:. kə]
 L+H* !H-%
- b. Friederike: [ja:. a:]
 L+H* !H-%

Assuming Ginzburg's and Krifka's analysis, the question arises at this point to what exactly Friederike is referring to when she utters *ja* 'yes'. In previous work, Truckenbrodt (2012, pp. 2045–2048) assumes that these so-called routine calling contours (RCC) described above introduce a proposition salient from context with the content 'I am talking to you'. However, this cannot be the base for the QUD, as the addressee does not confirm the fact that the speaker is talking to them, when saying 'yes'.

Given the whole variety of utterance types this calling contour is observed with in (Viennese) German, it is more accurate to assume that the QUD could be rephrased as 'Are you ready to cooperate with respect to the content a certain message?'. Apart from isolated names and vocatives, RCC are attested with declarative clauses (2), well-wishing imperatives, (3) (cf. Condoravdi and Sunwoo (2017) and Condoravdi and Sunwoo (2018)), some *wh*-questions (4), even more restricted with polar questions (5)–(6) and finally with verb- less, non-sentential utterances as in *hallo* in (6) or (7) and (8).

(2) (das) Essen (ist) fertig!

L+H* !H-%

'Food is ready!'

(3) Grüß mir die Oma!

L+H*!H-%

'Send my regards to grandma!'

(4) Wer will noch Vanillekipferl?

L+H*!H-%

'Who wants more vanilla-flavored crescent cookies!?'

(5) *Will wer noch Vanillekipferl?

L+H*!H-%

'Does anybody want more vanilla-flavored crescent cookies!?'

(6) Hallo! Ist da jemand!?

L+H*!H-% L+H* !H-%

'Hello! Is there anybody?'

(7) Vanillekipferl!

L+H*!H-%

'(I have) vanilla-flavored crescent cookies (to share) !?'

(8) Ab ins Bett!

L+H*!H-%

'(go) in your bed'

All of these utterances can be responded to with *ja* 'yes', thereby confirming the QUD paraphrases above. The only case in which such a response appears less

felicitous is the *wh*-question (4), apparently there is a clash between the QUD introduced by the question and the QUD that comes with the RCC.

As well known, RCCs impose further restriction on the discourse, they are only felicitous if (i) the addressee has not confirmed their engagement, (ii) there is some unresolved issue between hearer and speaker, and (iii) if there is some information which is either beneficial to the hearer or to the addressee.

These phenomena can most efficiently be accounted for with an analysis in *Type Theory with Records/ Conversation oriented Semantics* (KoS), as developed by Cooper (2005a) and Cooper (2005b), Cooper and Ginzburg (2015) and Ginzburg (2012). The analysis involves two components: First of all a conversational rule that licenses moves with calling contours, which could be pragmatically considered as attention requests (cf. Figure 1). This rule requires that the RCC has to be applied at the begin of the discourse (empty moves list, empty qud list) and that there is some unresolved issue from earlier discourse (eg. Friederike should come home before night). Secondly, it assumes in line with *Autosegmental Metrical Phonology* as developed by Ladd (2008) that utterances involve some representations which are prosodically fully specified but underspecified with respect to their intonation and to their illocutions. RCC will be considered as phrasal signs that embed utterances which are (partially) underspecified with respect to intonation and illocution and they contributing the QUD with the meaning sketched above. It will be shown that a similar analysis can be applied to the stern and urgent calling contours discussed by Quiroz and Z' ygis (2017).

$$\begin{array}{l}
 \textit{AttentionRequest} =_{def} \\
 \left[\begin{array}{l}
 \text{pre} : \left[\begin{array}{l}
 \text{moves} = \langle \rangle : \text{IllocProp} \\
 \text{qud} = \{ \} : \text{poset}(\text{Question}) \\
 \text{issues} : \text{poset}(\text{Question})
 \end{array} \right] \\
 \text{issues} : \text{poset}(\text{Question}) \\
 \text{effects} : \left[\begin{array}{l}
 \text{LatestMove} = ?\text{ready-to-cooperate}(\text{addr}, \text{m}) : \text{IllocProp} \\
 \text{qud} = \{ \} : \text{poset}(\text{Question})
 \end{array} \right]
 \end{array} \right]
 \end{array}$$

Figure 1: Conversational rule for L+H* !H-% 'routine' calls

References:

- Condoravdi, Cleo and Jeong Sunwoo (2017). "Imperatives with the calling contour". In: *Berkeley Linguistics Society (BLS) 43*. Ed. by Julia Nee et al. Vol. 1. Somerville, Mass: Cascadilla Proceedings Press, pp. 185–210. (2018). "Imperatives and intonation: the case of the down-stepped level terminal contour". In: *West Coast Conference on Formal Linguistics (WCCFL) 35*. Ed. by William G. Bennet, Lindsay Hracs, and Dennis Ryan Storoshenko. Somerville, Mass: Cascadilla Proceedings Press, pp. 214–223.
- Cooper, Robin
(2005a). "Austinian Truth, Attitudes and Type Theory". In: *Research on Language and Computation* 3, pp. 333–362. DOI: 10.1007/s11168-006-0002-z.
(2005b). "Records and record types in semantic theory". In: *Journal of Logic and Computation* 15.2, pp. 99–112.
- Cooper, Robin and Jonathan Ginzburg (2015). "Type theory with records for natural language semantics". In: *The Handbook of Contemporary Semantic Theory*. Ed. by Shalom Lappin and Chris Fox. Malden, MA: John Wiley, pp. 375–407.
- Gibbon, Dafydd (1976). *Perspectives of intonation analysis*. Bern: Lang.
- Ginzburg, Jonathan (2012). *The interactive stance: meaning for conversation*. Oxford University Press.
- Krifka, Manfred (2013). "Response particles as propositional anaphors". In: *Proceedings of SALT 23*. Ed. by Todd Snider. Santa Cruz, CA, pp. 1–18. <https://doi.org/10.3765/salt.v23i0.2676>.
- Ladd, Robert D. (1978). "Stylized intonation". In: *Language* 54.3, pp. 517–540. DOI: <http://www.jstor.org/stable/412785>. (2008). *Intonational Phonology*. Cambridge University Press.
- Lieberman, Mark Yoffe (1975). "The intonational system of English". PhD thesis. Cambridge, Mass.: Massachusetts Institute of Technology.
- Pierrehumbert, Janet and Julia Hirschberg (1990). "The meaning of intonational contours in the interpretation of discourse". In: *Intentions in Communications*. Ed. by P. R. Cohen, J. Morgan, and M. E. Pollack. Cambridge: MIT Press, pp. 271–311.
- Quiroz, Sergio I. and Marzena Zygis (2017). "The Vocative Chant and Beyond: German Calling Melodies Under Routine and Urgent Contexts". In: *Proc. Interspeech 2017*, pp. 1208–1212. DOI: 10.21437/Interspeech.2017-1635. URL: <http://dx.doi.org/10.21437/Interspeech.2017-1635>.
- Truckenbrodt, Hubert (2012). "Semantics of intonation". In: *Semantics. An International Handbook of Natural Language Meaning*. Vol. 3. Berlin: Walter de Gruyter, pp. 2039–2969.