Clarification Requests at the Level of Uptake

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Abstract

In cooperative dialogue, participants are expected to jointly *take up* each other's moves. The process leading up to uptake can be aided by repair mechanisms, in particular *clarification requests*. We discuss how clarification requests occur after mutual understanding, but before full uptake, and relate them to preparatory conditions of conversational projects.

1 Introduction

Dialogue is frequently viewed as an inherently cooperative activity where interlocutors do not merely exchange singular moves, but actively collaborate in a form of *joint action*. For each utterance put forward in a cooperative dialogue, this process fully succeeds when the addressee *takes up* (her construal of) the speaker's intended act, in which case they are jointly committed to a *joint project* (Clark, 1996). We follow Clark in treating every speech event as a joint project proposal, *e.g.*, an assertion projects adopting its content as mutual belief, and a question projects an answer.

Most work on the process of grounding and clarification has focused on coordination at the levels of perception and understanding (Traum, 1994; Gabsdil, 2003; Ginzburg and Cooper, 2004; Purver, 2004; Schlangen, 2004; Ginzburg, 2012). However, Schlangen (2004) proposes a classification scheme for clarification requests (CRs) that, amongst other dimensions, distinguishes four problem sources for CRs corresponding to the four levels of communication proposed by Clark (1996) and Allwood (1995). In addition, Benotti (2009) is concerned with CRs related to planning which we would (partly) attribute to the fourth level in such a hierarchy (uptake). The excerpt in (1), from the British National Corpus (Burnard, 2000), shows an example of what we consider to be an uptake-level clarification request:

(1) A: I know Vic has cream in his [food] and
B: **How do you know?**
A: Well it said so on the menu, that's why.

2 Types of Uptake CRs

Rodríguez and Schlangen (2004) put forward an annotation scheme based on Schlangen's classification and use it to annotate a portion of the Bielefeld corpus of task-oriented dialogue, where an instruction giver (I) guides an instruction follower (K) through the construction of a paper airplane. They define level 4 CRs as being related to "recognizing or evaluating speaker intention". Examples (2) and (3) below have been classified as level 4 by Rodríguez and Schlangen (2004).[1]

(2) I: you have to put these in between there
K: **in between how?**
I: in between the well you have the wings on top

(3) K: for me that is in fact below this [...]
I: **why below?**
K: yes, it belongs there, all okay.

In (2), K is requesting additional information on what he is to do, but seems generally willing to do what is asked of him. On the other hand, the CR in (3) seems to indicate a general reluctance on I's side to take up K's proposition: K indicates that something is on the wrong side of the plane, but instead of agreeing to this, I questions the reasons K might have for stating this.

Rieser and Moore (2005) annotate the CRs in the Carnegie Mellon Communicator Corpus (Bennett and Rudnicky, 2002) using a refined version of the annotation scheme by Rodríguez and Schlangen (2004); they see problem sources at level 4 not only in intention evaluation, but also in what they call (contradicting) belief (4) and ambiguity refinement (5).

(4) Agent: You need a visa.
Cust: **I do need one?**
Agent: Yes you do.

(5) Agent: [...] that is fifty one dollars.
Cust: **Per day?**
Agent: Per day um mm.

[1] We thank the authors for granting us access to their annotated corpus. The excerpts have been translated to English for the purposes of this abstract by a native speaker of German.

3 Clarification Potential of Uptake

The examples in the previous section show that uptake can fail for different reasons. This points towards different communicative problems arising on that level which may need to be explicitly dealt with; this is what Ginzburg (2012) has described as *clarification potential*. We propose that this potential stems from the failure of some underlying preconditions. We first describe these conditions and then present examples[2] on how they are reflected in CRs on uptake level; also see table 1.

We propose the following conditions, inspired by Clark's (1996, p. 203) discussion of joint purposes, which we take to be common to any project proposal:[3]

- The speaker has sufficient reason to take part in the project (speaker reason),
- the addressee does not have reason not to take part in the project (addressee reason), and
- both speaker and addressee have the requisite knowledge and ability to perform the project (speaker knowledge and addressee knowledge).

The asymmetry in the speaker reason and addressee reason conditions stems from the assumption that addressees are generally cooperative. So they would only refuse collaboration on a joint project if they have grounds *not to*. This effect can be observed in example (6). If the proposed project is an assertion, the typical reason for the failure of the addressee reason condition is that the addressee believes something contrary to the proposal as described by Rieser and Moore (2005).

The exchange in (6) is an example of a CR that is in turn countered by another CR on uptake level:

(6) A: Oh, you can pop in and get your fishing magazines while you're down here
B: **Why?**
A: **Well why not?**

Participant B does not take up A's joint project proposal but instead requests clarification towards the preparatory condition *addressee reason*, asking for a reason to take up the project (*'Why should I do that?'*). This request can be seen as non-cooperative if B is indifferent towards the proposal, as addressees are expected to only clarify this condition if they actually have adversarial motivations. Accordingly, in her response, A does not supply a reason, *i.e.*, does not take up B's CR. Instead, A inquires towards *speaker reason*: what grounds B has for requesting clarification instead of taking up (*i.e.*, what that adversarial reason might be).

CR Type		Example from BNC
Knowledge	Speaker	(1) *How do you know?*
	Addressee	(7) *How [can I tell]?*
Reason	Speaker	(6) *Why not?*
	Addressee	(6) *Why [do this]?*

Table 1: General types of uptake-level CRs with BNC examples; the addressee is the CR initiator.

In example (7), A provides an explanation to an earlier question, *'you can tell'*, but B is unwilling to take this up, and asks a CR towards knowledge.

(7) A: Oh you can tell ⟨pause⟩
B: **How?**
A: against the light

In this case, the surface form *'How?'* is elliptical and could either be towards speaker knowledge (*'How can you tell?'*), addressee knowledge (*'How could I tell?'*), or simply be underspecified (*'How can one tell?'*).

In (8) we have an example where the preparatory condition *addressee ability* truly fails, and the interlocutors collaborate to uncover this.

(8) A: Mummy says you gotta come to her house and pass the things ⟨laugh⟩.
B: No.
A: **No? Why not?**
B: I can't cos I can't open the door.
A: That's alright.

In response to A's CR, B argues that his ability condition fails, so the project cannot be executed.

4 Conclusion

We have surveyed the current work on clarification requests on uptake level, and explained them in terms of general preconditions that apply to both speakers willingly taking up a joint project proposal. We have presented further examples on how these preconditions occur and interact in dialogue. These considerations are part of our investigation into the notion *uptake*; our immediate next goal is a systematic corpus study of these CRs.

[2] All examples are from the BNC (Burnard, 2000) and retrieved with SCoRE (Purver, 2001)

[3] We do not claim that this exhausts possible preconditions; in particular, specific speech events are expected to have more particular conditions.

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