Accommodating Social Relationships

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Abstract

Many social aspects of a dialogue context are determined by the way an addressee 'takes up' an utterance of the speaker. We show that inferences about the dialogue context based on uptake, are essentially a form of *presupposition accommodation*. The account is illustrated by an analysis of commands, advice and threats.

1 Introduction

When describing the semantics and pragmatics of dialogue, social aspects of the dialogue context are crucial. Social roles and relationships are often part of the felicity conditions of a speech act (Austin, 1962). For example, a command is only warranted when the speaker has some power or authority over the addressee. Advice requires that the speaker has expertise. For threats to be convincing, the threatener must appear to be willing and able to actually carry out the threat, which must be feared by the addressee. Thus, by making an utterance of a certain type, requirements are put on the social relationships between the dialogue participants. Witness the following examples.

(1) S: Clean up the floor!
     A.1: Yes, sir.
     A.2: Do it yourself.

(2) S: You should do the literature review, before collecting your data.
     A.1: All right.
     A.2: Why?

(3) A: If you haven't paid by Tuesday, I'm gonna break your balls.
     S.1: Yes.
     S.2: We'll see.

When the social relations are partially unknown, the response of the addressee further determines the common ground in this respect. For example, by accepting the command in (1), addressee A helps to establish a power relation; and by rejecting the advice in (2), A challenges S's expertise, undermining the supervisor-student relationship. So the way in which an addressee 'takes up' the utterance of the speaker helps to determine the dialogue context. This process may be called *uptake* (Austin, 1962; Hulstijn and Maudet, 2006).

This paper explores the idea that the inferences that can be made as a result of uptake, are the result of *presupposition accommodation* (Lewis, 1979). The speaker presupposes that the felicity conditions of the speech act are part of the common ground (Austin, 1962, p.50,51). If they are not, the addressee will adapt his or her version of the common ground to accommodate the felicity conditions, provided that there is no information to the contrary. Otherwise, the dialogue becomes awkward, typically indicated by the addressee.

2 Roles in Dialogue

Dialogue participants are executing some social activity, the conventional rules of which may be expressed as a *dialogue game*. Crucial are the roles of the participants. Roles *prescribe* obligations and permissions, but like stereotypes, roles also *describe* expectations, allowing others to predict behaviour. We distinguish three kinds of roles (Hulstijn, 2003): (i) *Turn taking roles*, such as speaker, addressee or (over)hearer, alternate repeatedly. (ii) *Participant roles*, such as expert and novice in an information exchange, remain stable during a dialogue. (iii) *Social roles*, like teacher and pupil, extend beyond single dialogues. Their scope depends on the social setting.

We specify the social aspects of the felicity conditions of our examples, with notation s: speaker, a: addressee, and pres(.): presuppositions.

(4) $\mathrm{pres}(\mathrm{command}(s, a, \varphi)) =$
  $\mathrm{authority}(s, a) \wedge$
  $\mathrm{capable}(a, \varphi)$

(5) $\mathrm{pres}(\mathrm{advice}(s, a, \varphi)) =$
  $\mathrm{expertise}(s, \varphi)$

(6) $\mathrm{pres}(\mathrm{threat}(s, a, \varphi, \psi)) =$
  $\mathrm{fear}(a, s) \wedge$
  $\mathrm{goal}(s, \neg\varphi \rightarrow \psi) \wedge$
  $\mathrm{capable}(s, \psi)$

3 Presuppositions and Common Ground

A *presupposition* is whatever the speaker takes to be part of the common ground, when making an utterance (Stalnaker, 1974). The hypothesis is that this can be generalised to addressees, who reveal their version of the common ground by responding in a certain way.

Suppose we represent belief with a standard KD45 operator $\mathrm{B}_i\varphi$. We use $\mathrm{C}\varphi$ to represent that φ is common belief in group $\{1...n\}$. Let $\mathrm{E}^1(\varphi) = \mathrm{B}_1\varphi \wedge ... \wedge \mathrm{B}_n\varphi$, and define recursively $\mathrm{E}^{m+1}(\varphi) = \mathrm{E}^1(\mathrm{E}^m(\varphi))$. Define $\mathrm{C}\varphi = \mathrm{E}^k\varphi$, for all $k \geq 1$ (Fagin et al., 1995). Now a participant's presupposition can be represented by $\mathrm{B}_i\mathrm{C}\varphi$.

However, Stalnaker (2002) proposes to use the notion of *acceptance*. To accept a proposition, is to treat it publicly as true. Let $\mathrm{A}_i\varphi$ mean that i accepts φ. Acceptance has the same logic as belief, namely KD45. The common ground is understood as common belief about what is accepted: $\mathrm{CG}\varphi \equiv \mathrm{C}(\mathrm{A}_1\varphi \wedge ... \wedge \mathrm{A}_n\varphi)$. Presuppositions then are beliefs about the common ground: $\mathrm{B}_i\mathrm{CG}\varphi$.

To become common ground, acceptance must be indicated by explicit or implicit acknowledgements. This process is called *grounding* (Clark and Schaefer, 1989). The recent dialogue history can serve as a kind of *basis* for establishing the common ground (Lewis, 1969).

Given an utterance with a presupposition, how should the addressee respond? There are three possibilities, inspired by the satisfaction theory of presupposition (Beaver, 1996): (i) the presupposition is already part of the (addressee's version of the) common ground, (ii) the presupposition is not yet part of the common ground, but can be added consistently, or (iii) the common ground contains information that contradicts the presupposition.

4 Conclusion

Presupposition accommodation provides a dialogue game rule, similar to the Gricean maxims. In case (i) and (ii) the addressee should acknowledge acceptance of the utterance. In case (iii) the addressee should explicitly reject the utterance.

(7) Suppose $\mathrm{pres}(\alpha(s, a, \varphi)) = \psi$.
  If $\neg\mathrm{B}_a\mathrm{CG}\neg\psi$, then $\mathrm{ack}(a, s, \alpha(s, a, \varphi))$,
  else $\mathrm{reject}(a, s, \alpha(s, a, \varphi))$.

Here, α stands for any speech act, and 'ack' for an acknowledgement. Because of KD45, case (i) $\mathrm{B}_a\mathrm{CG}\psi$, is included under (ii) $\neg\mathrm{B}_a\mathrm{CG}\neg\psi$.

Suppose a hears utterance $\mathrm{command}(s, a, \varphi)$, $\mathrm{advice}(s, a, \varphi)$ or $\mathrm{threat}(s, a, \varphi)$, as in (1) - (3). Based on the response, A.1 or A.2, we can derive that the presupposed social relationship is either accommodated to the common ground, or denied.

– Response A.1 indicates acceptance. Because this response forms a sufficient basis to establish a common ground, we can derive $\mathrm{CA}_a\psi$. Similarly, we can derive $\mathrm{CA}_s\psi$ from the speaker presupposition. By distribution we get $\mathrm{C}(\mathrm{A}_a\psi \wedge \mathrm{A}_s\psi)$ and by definition $\mathrm{CG}\psi$.

– Response A.2 indicates rejection. Again we derive $\mathrm{C}\neg\mathrm{A}_a\psi$, so $\neg\mathrm{CA}_a\psi$ by and therefore $\neg\mathrm{CG}\psi$.

This shows that presupposed social relations are indeed accommodated or rejected, and that we can reason about this on the basis of the 'uptake' by the addressee. Exploring alternative ways of dealing with presupposition and grounding, remains a topic for further research.

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