

Clarification Requests as Enthymeme Elicitors

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Abstract

In this paper, we aim to establish a relation between enthymematic arguments and clarification requests. We illustrate our discussion with examples where the clarification following a clarification request, together with the problematic utterance, make up an enthymeme. We also suggest possible analyses of how conversational participants, in order to work out an enthymeme, draw on topoi - notions or inference patterns that constitute a rhetorical resource for an agent engaging in dialogue.

1 Introduction

Enthymemes, semi-logical arguments drawing on “common knowledge”, have evoked interest among scholars within different fields: computer science (Hunter, 2009), and philosophy (Burnyeat, 1996) on the one hand, composition and cultural studies on the other (Rosengren, 2008). Despite this, the enthymeme has not been studied to a great extent as a linguistic phenomenon. However, there is at least one study that elucidates enthymemes as conversational phenomena - Jackson and Jacobs (1980).

Jackson and Jacobs, whose work is in the CA tradition, claim that the enthymeme is linked to disagreements and objections raised in conversation, and therefore is best understood in terms of dialogue rather than monologue. We agree with this, but would like to suggest that the role of the enthymeme is more fundamental. Consider Walker’s (1996) example of an interaction between two colleagues on their way to work:

(1)

- i A: Let’s walk along Walnut Street.
- ii A: It’s shorter.

Breitholtz and Villing (2008) suggested that the presence of (1)ii despite its informational redundancy (assuming both dialogue participants know that it is shorter to walk along Walnut Street), could be explained in rhetorical terms. The informational content lies in that it refers to an enthymeme according to which, if suitable topoi are employed, Walnut Street being shorter is a good reason for choosing that way to work.

This indicates that enthymemes may play a role in other contexts than just disagreement, for example contexts where an utterance needs to be elaborated, explained, motivated, or in other ways supported in order for grounding to occur. In many dialogue situations, however, reference to an enthymeme is not given spontaneously - attention is called to the need for more information by the posing of a clarification request.

In this paper we will look at the relation between enthymemes and clarification requests, more specifically how problematic utterances and clarifications can be analysed as enthymemes. We will first give some background information about Aristotle’s notion of enthymeme, then look at a few examples of dialogues where some sort of communication problem is signalled by a clarification request that elicits reference to an enthymeme.

2 Enthymemes and topoi

An enthymeme can be described as a rhetorical argument rule similar to an inference rule in logic. In the *Rhetoric* (Kennedy, 2007), Aristotle claims that learned, scientific argumentation differs from argumentation concerning every day matters. In rhetorical discourse, it is inefficient to present chains of logical arguments. Aristotle therefore recommends shortening the arguments, which results in them not being strictly logical. However, Aristotle still emphasises the logoi-based, deductive nature of the enthymeme, and calls it a sort of syllogism (Kennedy, 2007).

Some enthymemes can be made into a logical arguments by adding one or more premises, which may be supplied from an agent's knowledge of culture, situation and co-text (what has been said earlier in the discourse), according to argument schemes known as the *topoi* of the enthymeme. These patterns can be very general assumptions based on physical parameters such as volume (if x is smaller than y , x can be contained in y), or more specific assumptions like *the sky is blue*, *dogs bark*, etc.

2.1 Topoi as a resource in dialogue

In his work on *doxology*, a theory of knowledge concerned with what is held to be true rather than what is objectively true, Rosengren (2008) employs rhetorical concepts to describe how common-sense knowledge and reasoning are organised. To know a society, claims Rosengren, is to know its topoi. In a micro-perspective, we could say that an important part of being able to handle a specific dialogue situation is to know relevant topoi. Thus an agent involved in dialogue has at his or her disposal a set of topoi, some of which pertain to the domain, some to the topic discussed and a great number of others that the agent has accumulated through experience. This collection of topoi could be regarded as a rhetorical resource, parallel to the way grammatical and lexical competence may be described as resources available to an agent, as envisaged by Cooper and Ranta (2008), Larsson and Cooper (2009) and Cooper and Larsson (2009).

3 Clarification Requests

Jackson and Jacobs (1980) argue that enthymematic arguments result from disagreement in a system built to prefer agreement. This suggests that the enthymemes we use in conversation are often evoked by some kind of objection, as in Jackson and Jacob's example in (2):

(2)

J: Let's get that one.

A: No. I don't like that one. Let's go somewhere else.

J: Shower curtains are all the same.

Jackson and Jacobs convincingly show that the discourse of disagreement is indeed associated with use of enthymemes. It seems to us, however, that enthymemes are not just used in order to work out disagreements. They should be just as important in situations where a conversational participant does not understand what another conversational participant is saying or why and how his/her utterance is relevant. The type of utterance that would be used in this type of situation is a *clarification request*. Ginzburg (2009) defines the posing of clarification requests (CR:s) as the engaging in "discussion of a partially comprehended utterance". According to a corpus study by Purver (2004), a little less than half of CRs have the function of questioning the semantic contribution of a particular constituent within the entire clausal content (Ginzburg, 2009). This function is referred to by Ginzburg as Clausal confirmation. Ginzburg (2009) gives an example of this type of CR, repeated here in (3). The meaning of the reprise fragment is to clarify if the rendezvous should really be in the drama studio, indicating that it is not an obvious place to meet and that the suggestion of meeting there requires an explanation.

(3)

Unknown: Will you meet me in the drama studio?

Caroline: Drama studio?

Unknown: Yes, I've got an audition.

(Ginzburg, 2009), p 146

The function performed by the clarification in (3), seems to us similar to that of “it’s shorter” in (1), namely to validate the proposition made in an earlier utterance in terms of its relevance in the dialogue situation. We would like to argue that the clarification is validating precisely because it gives reference to a specific rhetorical argument, an enthymeme consisting of the utterance that provokes the CR, and the clarification.

3.1 Examples of Enthymematic Clarification

In this section we will consider two examples where references to enthymemes are made explicit by CRs. The examples are extracted from the British National Corpus using SCoRE (Purver, 2001). First, let us consider (4), where a child is being questioned about a character in a narrative:

- (4)
- i A: Brave
 - ii B: Brave?
 - iii B: You thought she was brave?
 - iv B: Why was she brave?
 - v A: She went into the woods.

BNC, File D97, Line 518-522

In (4) we have an example of a clausal confirmation CR - (4)ii does not serve to find out why the character was brave in the first place (e. g. because she was born brave) but to elicit a motivation to why A said the character was brave.

A topos that would make sense of the argument would be one concerning danger/courage, for example:

$$(5) \frac{x \text{ does } A}{A \text{ is dangerous}} \therefore x \text{ is brave}$$

Our second example works somewhat differently:

$$(6)$$

- i A: Does the group have an office?
- ii B: No.
- iii C: We’ve got our plastic box!
- iv A: Plastic?
- v C: I know I know everybody will be disappointed but I couldn’t get cardboard ones.

BNC, File F72, Line 283-287

First, the clarification (6)v elicited by the reprise fragment, points to two different arguments. Let us first consider the second half of (6) v, “I couldn’t get cardboard ones”. The argument is that C could not get cardboard boxes, and therefore got plastic boxes. An important point to make here is that there are many possible topoi that could be used to reach a certain conclusion. Also, it is not the case that one particular topos makes sense in every possible argument - even within a limited domain. Instead, the topos should be perceived as a resource from which an agent can choose and combine topoi according to the situation. A set of topoi that could be drawn on to resolve this enthymeme is:

$$(7) \frac{x \text{ is made of } y}{y \text{ is bad}} \therefore x \text{ is bad}$$

$$(8) \frac{x \text{ is made of } y}{y \text{ is good}} \therefore x \text{ is good}$$

$$(9) \frac{x \text{ is better than } y}{\therefore \text{choose } x!}$$

$$(10) \frac{x \text{ is better than } y}{x \text{ is unavailable}} \therefore \text{choose } y!$$

The topoi (8), (9) and (10) can be combined to instantiate the enthymeme

$$(11) \frac{\text{cardboard boxes were unavailable}}{\therefore \text{I got plastic boxes}}$$

The function of the premise “I couldn’t get cardboard ones” is, as in (4) to offer an explana-

tion to, or perhaps more correctly, a justification for, the first, problematic, proposition that plastic boxes had been purchased.

The other enthymeme in (6) is different in that the first half of (6)v, that is elicited by the CR, constitutes the conclusion of the argument rather than a premise, and (6)v does not offer an explanation to (6)iii, but expresses a consequence of (6). The argument could draw on the following topoi:

$$(12) \quad \frac{x \text{ is made of } y}{y \text{ is bad}} \\ \therefore x \text{ is bad}$$

$$(13) \quad \frac{x \text{ is bad}}{\therefore x \text{ makes people disappointed}}$$

The enthymeme in (6) is an instantiation of the combination of (12) and (13).

$$(14) \quad \frac{a \text{ is made of plastic}}{\therefore a \text{ makes people disappointed}}$$

4 Conclusions

We have argued that enthymemes may have a function in enabling the interpretation of dialogue contributions in cases where the relevance, adequacy, or suitability, of an utterance proposition in a particular situation is being questioned, and that clarification requests may have the effect of eliciting explicit reference to enthymemes. To support this, we have used examples drawn from the BNC. In the examples discussed, we looked at how a set of possible topoi make up a resource from which an agent could choose and combine different topoi that could be used to work out the enthymeme.

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A Computational Model for Gossip Initiation

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Abstract

We are interested in creating non-player characters (NPCs) in games that are capable of engaging in gossip conversations. Gossip could for instance be used to spread news, manipulate, and create tension between characters in the game, so it can have a functional as well as a social purpose. To accomplish this we need a computational model of gossip and such a model does not yet exist. As a first step in that direction we therefore present a model for initiating gossip that calculates whether it is appropriate for the NPC to start a gossip conversation based on the following factors: The (perceived) relationship between the NPC and the player character (PC); the relationship between each of the participants and the potential target; the news value of the gossip story; and how sensitive the story is.

1 Introduction

We are interested in creating non-player characters (NPCs) with the ability to engage in socially oriented interactions. In order for this to happen, the NPCs need (among other things) social awareness and the ability engage in casual conversations, that is, conversations that are motivated by “interpersonal needs” (Eggins and Slade, 1997). One such type of conversation is gossip, broadly defined as *evaluative talk about an absent third person*. Gossip could for instance be used to spread news, manipulate, and create tension between characters in the game, so it can have a functional as well as a social purpose. For this to be possible we need a computational model of gossip and such a model does not yet exist. As a first step to accomplish this, we here propose a model for initiating gossip using Harel statecharts (Harel, 1987). The model calculates whether it is appropriate for the NPC to start a gossip conversation based on the following factors: The (perceived) relationship between the NPC and the player character (PC); the relationship between each of the participants and the po-

tential target; the news value of the gossip story; and how sensitive the story is.

We have combined the theory of politeness (Brown and Levinson, 1987) with research on gossip structure (e.g. Eder and Enke, 1991; Eggins and Slade, 1997) applied on gossip conversations occurring in screenplays. In addition, we have used insights gained from conducting two surveys concerning the identification of gossip.

2 Background

In every social interaction the participants put a great amount of effort in face management actions, i.e., actions that serve to protect one’s own and the other participants’ public self-image that they want to claim for themselves (Goffman, 1967; Brown and Levinson, 1987). Gossip has been described as containing “morally contaminated information...” which can damage the initiator’s reputation (Bergmann, 1993). Because of this, the initiator must make sure that the recipient is willing to gossip (Bergmann, 1993) and that the relationship is sufficiently good to minimize the threat to face.

Brown and Levinson (1987) suggest that the threat to face a certain action has in a particular situation is dependent on three socially determined variables: the social distance (SD) between the speaker (S) and the hearer (H); the hearer’s power over the speaker (P); and the extent to which the act is rated an imposition in that culture (i.e., the degree to which the act interferes with an agent’s wants of self-determination or of approval) (I): $Threat = SD(S, H) + P(H, S) + I$. They furthermore propose that the value of SD and P , respectively, is an integer between 1 and n , “where n is some small number” (p. 76).

Their description of I is too general to be useful for our purposes and does not take into account the participants’ relationship to the gossip target, for example; a factor that we mean is essential for determining whether it is appropriate to start gossiping at all. Therefore, we start by exploring the *preconditions* for S (the NPC) to even consider a gossip initiation by calculating

the interpersonal relationship (abbreviated to ρ) between S and H : $\rho = SD(S, H) + P(H, S)$, where SD and P , respectively, is an integer between 0 and 3 (thus slightly different from Brown and Levinson's suggestion). A low ρ value means that the relationship is sufficiently good for initiating a gossip conversation. In section 4 we will discuss the additional factors that need to be considered before introducing a specific gossip story.

Previous studies (e.g. Bergmann, 1993; Eder and Enke, 1991; Eggins and Slade, 1997; Hallett et al., 2009) have shown that gossip is built around two key elements: **An absent third person in focus** (henceforth referred to as F) and **An evaluation of F 's deviant behavior or of F as a person**. There are some reservations concerning F :

- F must not be emotionally attached to S or H , since that would make F “virtually” (Bergmann, 1993) or “symbolically” (Goodwin, 1980) present.
- F is unambiguously the person in focus. F must for example not play a sub-ordinate role as part of a confrontation, self-disclosure, or an insult.

In addition, explanations are commonly (or *always*, according to Eggins and Slade (1997)) used in gossip conversations to motivate the negative evaluations – they *substantiate* the gossip.

3 Harel Statecharts

The model is presented using statechart notation (Harel, 1987), which is a visual formalism for describing reactive behavior. Statecharts are really extended finite state machines that allow us to cluster and refine states by organizing them hierarchically. States can also run in parallel, independently of each other but capable of communicating through broadcast communication. It is also possible to return to a previous configuration by use of a history state. Within a statechart, data can be stored and updated using a datamodel (a.k.a. “extended state variables”).

How to read the statechart: The rounded boxes represent states, and states that contain another statechart represent hierarchical states (compound states). The directed arrows denote possible transitions between the states. Labels connected to transitions represent events and/or conditions that trigger the transition. A transition can also be “empty” (ϵ), such that it will be taken

as soon as the state's possible on-entry and on-exit scripts have been executed. An arrow starting from a black dot points to the default start state.

4 Initiating Gossip

Bree: Tisha. Tisha. Oh, I can tell by that look on your face you've got something good. Now, come on, don't be selfish.

Tisha: Well, first off, you're not friends with Maisey Gibbons, are you?

Bree: No.

Tisha: Thank god, because this is too good. Maisey was arrested. While Harold was at work, she was having sex with men in her house for money. Can you imagine?

Bree: No, I can't.

Tisha: And that's not even the best part. Word is, she had a little black book with all her clients' names.

Rex: So, uh...you think that'll get out?

Tisha: Of course. These things always do. Nancy, wait up. I can't wait to tell you this. Wait, wait.

The dialogue above is retrieved from *Desperate Housewives*¹ and is an example of a typical gossip dialogue. It has a third person focus (Maisey), an evaluation (“this is too good”), and a story in which Maisey's deviant behavior is central (she has been arrested for having sex with men in her house for money while her husband was at work). Notice also that before Tisha initiates the gossip she makes sure that the social distance between the target and the recipients is sufficiently high (“you're not friends with...?”).

In the model we propose it is always the NPC that initiates the gossip, assuming that the information may have a gameplay value for the player.

In order to qualify as gossip, the story must have a news value (see for example Bergmann, 1993), which in our model is stored as a parameter, `NewsVal`, with a value ranging between 0 (“common knowledge”) and 2 (“recently gained information”). However, if it is indifferent for the subject that the information is revealed or if the behavior is generally acceptable within that culture (e.g. within the group, community, or society) it is unlikely that it will be regarded as gossip. In order to account for this, we have added a `sensitivity` value for the propositional content of the gossip story. `Sensitivity` is here specified to be an integer between 0 and 3, where 0 indicates a generally acceptable

¹ Touchstone Television.

behavior. We assume that the value of `sensitivity` and `NewsVal` decreases over time.

We propose that the social distance (SD) can have one of the following values (with approximate correspondences): 0 for intimate relationships; 1 for friends; 2 for acquaintances; and 3 for strangers. The target is then selected on basis of the following factors assuming that there is an NPC (S) who is talking to the player character (PC) (H):

- S perceives that the risk of losing face (ρ) is low in the interaction with H , i.e., the social distance between S and H is (perceived to be) low and there is a (perceived) symmetric power relationship between them ($\rho < 3$).
- S has new, sensitive information about F .
- S knows F and believes that H knows, or is acquainted with, F too, i.e. $SD(S, F) < 3$ and $SD(H, F) < 3$.
- S does not have an intimate relationship with F , and believes that the same holds for H , i.e., $SD(S, F) > 0$ and $SD(H, F) > 0$.
- S believes that F cannot hear the conversation.

The model (see figure 1) works as follows: S and H are engaged in a conversation. If $\rho < 3$, a transition to the state `InitiateGossip` is triggered (The source state is unspecified, but we can assume that the participants have greeted

each other and perhaps small talked for a while before gossip is initiated).

S starts by searching for a potential gossip target (T) in the database (`Get(T, DB)`) according to the specification presented previously, which is performed on entry of the state `SelectTarget`. The story must not be about S him/herself or about H (OP in the graph stands for Other Participants, in this case $OP=H$). If such a target exists in the database (DB), i.e., $T \neq \text{void}$ (and assuming that $T=F$), a transition from `SelectTarget` to `EstablishGossip` is activated. If there is no target that fulfills the initial criteria, the gossip is cancelled (never initiated).

The default start state in `EstablishGossip` is `GetGossipStory`, in which a search for a story about $T=F$ is conducted. The search has two possible outcomes: there is a story about F that fulfills the criteria ($NewsVal=2$ and $Sensitivity > 0$), or it fails to find such a story. If a story is found, the next step is to establish H and F 's relationship. If S is uncertain of their relationship, a transition is taken to the state `EstablishId`, in which S requests a clarification that will help to establish the social distance between H and F , for instance as a question: "Do you know F ?" or "Have you heard about F ". If H responds with a request for clarification of who F is, then S can provide more information about F , which is handled in `ExpandId`. If S believes that $SD(H, F)=0$, i.e., that they are intimately related, S will choose to back away from the gos-

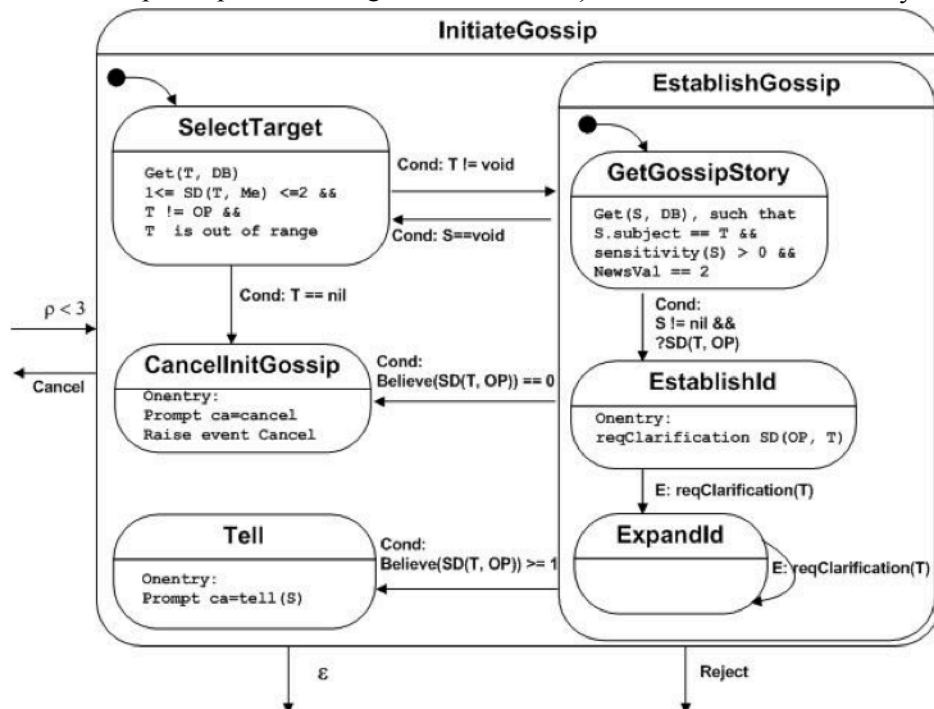


Figure 1. Model for initiating a gossip conversation.

sip and the gossip is cancelled (which corresponds to a transition to `CancelInitGossip`). Otherwise, *S* will spread the gossip (which is performed in the state `Tell`). If no story exists that fulfills the criteria, *S* will attempt to find a new target.

5 Discussion

One of the most important factors of gossip initiation is the status of the relationship between the gossipers and between them and the target. We therefore suggest that the following factors determine whether the NPC can introduce gossip at all: The (perceived) relationship between the NPC and the PC; the relationship between each of the participants and the potential target; the news value of the gossip story; and how sensitive the story is (culturally and personally). More specifically this means that the target must not be intimately related to any of the participants and that the participants must be friends or acquaintances. We have no restrictions concerning gossip between closely related participants, even if it is unclear whether it should be considered gossip (see e.g. Bergmann, 1993). Such a restriction would be unnecessary since it just means that the risk of losing face is very low.

There are many different forms of gossip (see for example Gilmore (1978)) and many forms in which gossip can be initiated. In the model we propose here we have delimited the gossip to be sensitive news about an absent game character. The target is selected first (either by being mentioned in the previous discourse or by searching the database on entry of `SelectTarget`), but it could equally well be the story that is chosen first. There are a number of reasons why we chose the former alternative: First, even if it is the behavior that is being evaluated, it is always a person that (at least) implicitly is being judged and thereby can be damaged by the gossip. Second, the target may already be in focus or mentioned (for instance in a pre-sequence, see Bergmann (1993)), as in the following example, where the actual gossip is initiated when Jerry² expresses his opinion in line 3 (we have removed a sequence in which the participants try to establish the identity of the target):

1. **Jerry:** Hey, by the way, did you ever call that guy from the health club?
2. **Elaine:** Oh yeah! Jimmy.
[...]

3. **Jerry:** Can't believe your going out with him...
4. **Elaine:** Why?
5. **Jerry:** I dunno. He's so strange.
[...]

Third, if the initiator misinterprets the target's relation to the addressee(s), it is the initiator that is considered to behave inappropriately. Hence, by making a mistake in the selection of the target the initiator face the risk that the gossip gets back at him or her.

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² From Seinfeld, Castle Rock Entertainment.