

THE CONCEPTUAL CONTENT OF CONVERSATION

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This paper outlines a strategy for conversational analysis that utilizes multiple levels of information flow in order to characterize the conceptual content of a conversation. The role of predictive knowledge structures and contextual information is illustrated in an analysis of a sample conversation, along with a partial outline of conversational rules specific to particular levels of conversational analysis.

1. Introduction

A large portion of the conversational process takes place beneath the surface of the actual conversation. In trying to spell out the rules that people use in conversation, it is necessary to account for all this "hidden" communication; explanations that are limited to the surface interaction will not provide a sufficient perspective.

Consider the following conversation:

A1: Why were you out so late last night?
B1: I went bowling with the boys.

A2: I thought you hated bowling.
B2: It's ok when I have some company.

A3: Aren't I company?
B3: It's not the same.

A4: Sure, you can't pick up women at home.
B4: I don't pick up women at the bowling alley.

We can analyze any given conversation in terms of [1] the implicit information that is present underneath the surface of the conversation, or [2] the rules of conversation that are operating at various levels of interaction.

2. Contextual Knowledge

We will now consider the various types of knowledge that must be accessed in order to understand our husband/wife conversation.

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A1: Why were you out so late last night?

Because we know a woman is directing this question to her husband, we understand that she had an expectation about his arrival time which was violated. "So late" can only be interpreted in terms of her expectations. Married people expect to be with each other at night, and any deviation from this normative pattern deserves explanation. The same question would make far less sense in the context of a night clerk at a hotel confronting a registered guest.

Knowledge of goals and plans is needed to understand that

A4: Sure, you can't pick up women at home.

is in fact an accusation. Had she countered with, "Sure, you can't burn envelopes at home," it would be difficult to understand her rejoinder. (Why would anyone want to burn envelopes?) Picking up women on the other hand, is easily understood as a plan designed to satisfy the cyclic satisfaction goal of S-sex [1] But the fact that picking up women makes sense is not sufficient for this to be an accusation. It is an accusation only because we know that the marriage role theme assumes a goal subsumption strategy for S-sex which furthermore precludes all other behavior directed towards the satisfaction of that goal. An admission of such behavior is a rejection of his marital agreement. With such a major role theme at stake, we are not surprised to hear his denial.

3. Levels of Conversation

We have thus far detected twelve distinct levels of conversational interaction:

TWELVE LEVELS OF CONVERSATION

1. Direct Q-A: This is the explicit surface level of communication where "literal" content is processed.
2. Knowledge State: Statements here address the knowledge state of the hearer.
3. Dominance Games: At this level a speaker tries to get the upper hand in an adversary type conversation.
4. Emotions of A: Many statements can be interpreted as expressions of how the speaker is feeling at the moment.
5. Emotions of B: This is the same as the one above it, except that it refers to the emotions of the other speaker.
6. Relationship of A and B: This is the level at which implicit or explicit statements are made about the relationship between the participants.
7. Argument strategy: This level describes strategic exchanges when the conversation seeks to resolve some disagreement.
8. Import: This level of analysis identifies and tracks the most significant or compelling aspect of conversational interactions.
9. Implicit Beliefs: Personal beliefs are most often present as presuppositions.
10. Points: The ultimate goal of a conversation can often be about something other than what it seems to be about.
11. Topic Shifts: Statements such as 'Don't change the topic' are surface realizations of this level. Topics themselves are tracked and can be discussed.
12. Truth and trust: The truth, believability, or trust of the other participant are constantly monitored.

The twelve levels of conversation each carries a set of rules which control responses at that level. We shall now consider what the rules are like for a few of the levels. We will examine our example sentence A1: "Why were you out so late last night?" and we will consider the conceptual content of this question at various levels of conversational analysis. To begin we will look at level 3:

CATEGORY: level 3: Dominance Games

INPUT ANALYSIS: "You are going to be on the defensive now!"

HOW WE KNOW: 'Why questions' are candidates for level 3 analysis. If the reason being asked for addresses a role theme violation (or other potential inadequacy on the part of the hearer), then the above analysis applies.

WHY WE LOOKED THERE: A sufficient condition for a level 3 analysis is an inadequacy or failure to conform to expectations.

RESPONSE REQUIREMENTS: Level 3 responses are almost always under the surface. When one is put on the defensive, one has the choice of either returning the fire or accepting the defensive. The decision is based on the emotional relationship and power relationship of the participants. Once the choice has been made it affects the form and content of the response.

HOW WE KNOW WHAT TO SELECT: A consistency check on any presuppositions is needed to determine whether the attack is valid. Thus, we need to check facts that exist in memory.

Our sample conversation can be viewed many ways, one of which is as a kind of battle. In this conversation A is attacking B. B is on the defensive initially, but B fires back in B2 by saying "It's (bowling) okay when I have company". Now this statement says many things, but on the level of dominance games, it is a covert attack on A's value as company. A responds explicitly to the attack but not to the dominance game. An explicit response to the dominance game might have been, "Don't attack me just when I've got you!".

A retakes the offensive in A4 by averring that B is picking up women at the bowling alley, which is presumably an agreed upon bad thing. This puts B back on the defensive again in B4.

Another conversational level is level 4:

CATEGORY: level 4: emotions of A

INPUT ANALYSIS: "You don't love me anymore"

HOW WE KNOW: Violations of themes are always checked. A violation implies that thematic preconditions are no longer valid.

RESPONSE REQUIREMENTS: Assure, sympathize, ignore, etc.

WHERE FROM: What to do is determined by the hearer's emotional responses.

HOW WE KNOW WHAT TO SELECT: The appropriateness of an explicit response on this level is dependent on the current emotional relationship and the desires of the speaker.

In our sample conversation A3 ("Aren't I company?") can be considered to be a statement at level 4 meaning 'You don't love me, do you?' B's response to that, ("It's not the same"), can be understood as explicitly ignoring the issue which in a sense, is a qualified assent. This analysis can be seen as part of the reason for the escalation of matters by A in A4. At this point she goes directly on the attack, stating her suspicions overtly. This is consistent with B's previous refusal to discuss the level 4 aspect of the conversation. That is, B has rejected A by not reassuring her. To see how level 4 can actually appear on the surface, we need only change response B3 to "I still love you." Such a response would make no sense at any other level of conversational analysis or with any other rules of continuity. Yet it is nevertheless an appropriate response here because level 4 has been implicitly brought up by A and can therefore be explicitly addressed by B if he so chooses.

At level 9 rules about beliefs drive the interaction. When beliefs are presented by a speaker the hearer either (1) implicitly acknowledges their validity by responding on other levels or (2) contradicts them by an explicit rejection.

CATEGORY: level 9: beliefs

INPUT ANALYSIS: "Husbands are supposed to be home with their wives at night"

"Husbands should tell wives what they do"

HOW WE KNOW: Checking the husband role theme.

Statements that implicitly refer to a role theme violation covertly assert one's belief in that role theme.

WHY WE LOOKED THERE: Beliefs about husbands' behavior are relevant when a wife is talking to a husband. The husband role theme thus constitutes a background against which inputs are checked.

RESPONSE REQUIREMENTS: To ignore this level is to accept covert beliefs. A belief must be countered if it is not shared.

WHERE FROM: To do this, one must consult one's own beliefs.

HOW WE KNOW WHAT TO SELECT: Contradictory beliefs are selected to be explicitly output if they exist. Thus if B does not share A's belief he can tell her "Being married shouldn't be a jail sentence."

4. Conclusions

Our final example is intended to illustrate the complexity of this problem by examining possible responses to an admission by B later on in the conversation.

All right. I was at Joe's house. We had a few beers and smoked some dope. I didn't want to tell you because I know you can't stand Joe.

This can be responded to on each level as follows:

1. Direct Q-A: How can you stand Joe?
2. Knowledge State: Why didn't you tell me that in the first place? I really like Joe, I just never told you about my change of heart about him.
3. Dominance Games: Well I've got news for you. I've been seeing Joe when you actually do go bowling.
4. Emotions of A: I can't love a person who lies to me like that.
5. Emotions of B: You couldn't love me and be friends with him.
6. Relationship of A and B: I want a divorce.
7. Argument strategy: You mean you created this giant argument out of just that little thing?
8. Import: That's what you were worried about? I don't care about that.
9. Implicit Beliefs: You were smoking dope? That's immoral. I won't stand for it.
10. Points: That's my point exactly. You are a liar.
11. Topic Shifts: (The topic has not been shifted so this is also inappropriate.)
12. Truth and trust: How can I trust you after you lied to me like that?

In addition to what we have listed above, it is also possible to combine many of the levels in one response. (Indeed it is quite difficult to avoid such consolations.)

To effectively model conversation then, it is necessary to find the levels at which people communicate, the rules people use to relate inputs to these levels, the methods of response generation at each of these levels, and the rules people use to select from alternative responses. When we have understood how to do all this, we will have made a start at analyzing the process of conversation and will then be ready to attempt the construction of an automated conversationalist.

References

- [1] Schank, R.C. and Abelson, R.P. (1977). Scripts, Plans, Goals and Understanding: An Inquiry Into Human Knowledge Structures, Lawrence Erlbaum Associates, Hillsdale, New Jersey. New Haven, Conn.