COMPREHENSION IN NS-NNS CONVERSATION

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Information processing theories provide strong support for the hypothesis that language merely provides a blueprint for the creation of meaning in discourse processing. This signifies that meaning does not reside in the linguistic representation but must be enriched to conform with the understander's prior world knowledge and other contextual knowledge. (See eg. Bartlett 1932; van Dijk & Kintsch 1983; Rumelhart 1980; Spiro 1980.)

Although there is agreement about discourse comprehension being an inferential process, this is only a first stepping stone towards the understanding of what is involved in language comprehension in context. Many questions remain, eg., how is the relevant world knowledge activated? what is the role of the linguistic representation in discourse processing? how does it influence the comprehension process if your or your partner's command of the linguistic code is restricted? These were among the questions that I posed in a study into interlanguage comprehension (Nikko 1991), and they are also the questions that I will discuss in this paper.

The data consisted of telephone conversations between advanced learners and native speakers of Swedish. In these, adult Finns living in Sweden were talking to Swedish officials. The data is part of the extensive material gathered and used by the Gothenburg research group in the international EALA project (see eg. Allwood et al. 1983). In four of the eight conversations, the non-native speakers called the public library to get information on how to borrow books; in the other four the same persons called the police station to ask what to do as they had lost their wallet. The conversations were authentic to the extent that the native speakers were unaware of the conversations being taped for research purposes. The comprehension process was analysed in accordance with relevance theory by Sperber and Wilson (1986). I will describe the analysis and the main results in the light of a few examples.

In the first example, K, a non-native speaker,is talking to A, an officer working at the police station. After the opening phase, the discussion continues as follows (I have tried to follow the Swedish original in the translations):

Example 1.

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K1
05      K: e::h + I'm lost wallet + and:: ?how does one eh + do + does one have
        to report it?
        (A: yes)
06      A: yes ?what/ is it a long time ago?
07      K: well it was yesterday
08      A: yesterday
09      K: I lost it + the tram
10      A: hm /.../ )
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My interpretation, on the basis of the listener's reactions, is that A and K have no problems in identifying each others' intentions. According to Sperber and Wilson, the comprehension process is guided by the principle of relevance. If, say, you are an officer working at a police station and somebody calls and says what K does in Turn 05, you rely, in identifying the caller's intention, in the first place, on the fact that the caller has something relevant to say. The identification of the speaker's intention, thus, depends on whether you find the utterance relevant. An utterance is relevant if it has contextual effect, which again presupposes information that can be connected to the assumptions manifest in your cognitive environment. These consist either of your world knowledge or the assumptions made previously in the discourse. In this example it is easy to infer that at least two assumptions are manifest in A's cognitive environment: 1) having lost one's wallet is a good reason to call the police; 2) a person who has lost his wallet calls the police in order to get help in finding it. Once the speaker and listener have managed to find a mutual cognitive environment, the same assumptions are manifest to them and the comprehension process is facilitated. In interpreting Turn 06, K's initial context contains the assumption that A has identified his intention. A's question concerning the time is relevant in this context and, therefore, makes A's intention easy to infer even though the utterance is referential and contains a false start. Thus, what makes the assumption of time manifest in both A's and K's cognitive environment are similar schematic expectations. This becomes more evident if we compare this example with extracts from other conversations:

Example 2.

N2
03   N: well this is naimi virtanen hello I'd like to ask what does one do
      when one has lost one's wallet
04   A: yes ?when was this?
05   N: well today
06   A: ?"whereabouts"?
07   N: e::h here i in town + in the center by the center

Example 3.

T2
03   T: the question is that e::h + I've lost my wallet
04   A: yes + ?when did you do this?
05   T: it was e::h + yesterday
06   A: aha + ?in town?
07   T: ?what?
08   A: ?in town + here in town?
09   T: e::h + it was + maybe e::h on my way eh home from e::h the work

In three of the four conversations with police officers (Examples 1-3), the officer's first question concerns the time and the second the whereabouts of the loss. My interpretation is that the comprehension process is facilitated by the fact that similar schematic expectations are manifest to both participants.

In Example 4 something goes wrong:

Example 4.

J2
10   J: well ?I wonder what can one do when I have lost my wallet?
11   B: ?your wallet?
12   J: hm-m
13   B: well + ?what did you have "in" it then?
14   J: in the avenue*
15   B: ?what did you say?
16   J: I lost somewhere in the avenue
17   B: avenue yes ?but what did you have "in" the wallet?
18   J: yes yes + ih in the pocket
19   B: yes ?but what did you have "in" the wallet did you have money in the
      wallet + I mean
20   J:
                              (yes a little + not so
          much

* 'Aveny' is the main street in Gothenburg.

According to my interpretation, J's reactions in Turns 14, 16 and 18 show that he has misunderstood A's intention in Turn 13. B's reaction in Turn 15 demonstrates that he has not been able to construct any representation at all of J's response in Turn 14. It would appear that there are at least two reasons for the problem: First, J perceives a very vague representation of B's utterance; second, the speaker's and listener's schematic expectations differ from each other. For B, the most relevant question to pose to one who has lost his wallet obviously is whether it contained much money. J, due to his restricted linguistic competence, does not perceive B's utterance; the only word he identifies is "in", which he, guided by the reliance on the speaker saying something relevant, manages to elaborate. In his cognitive environment, the most relevant elaboration of "in" is the assumption that the officer wants to know where he has lost his wallet. Aided by this, he manages to construct a representation of A's utterance; unfortunately this is not the one intended by A. In interpreting J's intention in Turn 14, B's initial context consists of the assumption that he has posed a question concerning the contents of the lost wallet. The hypothesis manifest to B is that he will receive an answer to this question in J's next turn. J's utterance does not make manifest any assumptions that would make it a relevant reaction to B's question and, consequently, B does not comprehend J's intention.

This example confirms that successful discourse processing is neither purely inferential nor purely linguistic decoding. Over-reliance on top-down processing causes J's problems; for B a mere bottom-up representation does not result in comprehension.

But what exactly is the role of linguistic decoding in the comprehension process? Some light on this is shed by Example 5, which is from a discussion between K and a library official:

Example 5.

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K1
05    K: I want to borrow some "books" ?how does that matter work?
06    A: well ?what kind of literature do you mean you wanna know if they're
      in?
07    K: ?what?
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08   A: well you wanna know if they're in + if they are here
09   K: (takes a deep breath)
10   A: ?or + or are you going to come and borrow and you're wondering how to go about it?
11   K: yes yes /.../

After the opening phase, K says in Turn 05: "I want to borrow some "books" how does that matter work? " /Ja vill låna nåkra "böcker" hu hur 'fungerad:: de saken?" We know that K's intention is to ask how to get a library card because this is what the task stipulates. The official reacts by asking: "well what kind of literature do you mean you wanna know if they're in?". The reaction shows that A has misunderstood K's intention. K's reaction in Turn 07 also reveals that he has not comprehended A's intention at all. Again, it can be assumed that the official's comprehension process is, in the first place, guided by reliance on the relevance of the caller's utterance. According to Sperber and Wilson, reliance on relevance also implies that the listener expects the speaker to produce his utterance in such a way that his intention is easy to infer. Thus, the listener expects the speaker to emphasize the assumption which the listener is to elaborate. In this example, 'books' is an attractive cue for the listener for several reasons. It is emphasized not only prosodically but also with the indefinite 'some'. Expressions of indefinition are, according to Sperber and Wilson, good hints for the listener as to where to elaborate. It is also attractive because it is easy to elaborate. Given the official's world knowledge, asking about the availability of a certain book is a good reason to call the library and this makes it easy for him to infer K's intention. However, this is not what K had in mind. Consequently, A's utterance fails to make manifest any assumptions that would make it a relevant reaction in terms of K's intention and as a result K does not comprehend. The communication breakdown is caused by the fact that K's utterance makes overtly manifest assumptions which are irrelevant from the point of view of his intention.

In conclusion, even if a mutual cognitive environment facilitates comprehension, as was shown by Examples 1 to 3, the inferential comprehension processes in transactional communication have to be preceded by linguistic decoding. This was illustrated by Examples 4 and 5. According to relevance theory, the listener does not, however, construct a representation of the whole linguistic expression. Guided by the principle of relevance, he expects the speaker to show him where to "attack". This means that instead of elaborating all the possible assumptions

made manifest by the linguistic utterance, he only elaborates the most manifest ones. The interaction between linguistic decoding and the inferential processes is one of the most problematic issues in discourse processing. The hypothesis suggested by relevance theory that the context is not given, but chosen by the person engaged in comprehension, is a big step towards a more explicit theory of discourse processing.

On the whole, communication proceeds smoothly in the conversations studied. This has to do with the fact that the communication situation is of a kind that promotes the creation of a mutual cognitive environment. On some occasions, the listener, native or non-native, fails to perceive enough cues from the linguistic expression, due either to the speaker's or the listener's restricted linguistic competence. Yet, relying on the speaker being relevant and assisted by schematic expectations, he often manages to interpret the intention in spite of the difficulties. Sometimes the listener's schematic expectations differ, however, from those of the speaker and this leads to comprehension problems. There appears to be a difference between natives and non-natives as regards linguistic decoding. Native speakers seem to rely on linguistic expressions, as was seen in Example 5, whereas at least less advanced non-natives appear more inclined to top-down processing, as Example 4 demonstrates.

The activity of the listener has been emphasized especially in the connection of second language teaching and learning (eg. Hatch 1978). This study suggests that the speaker's contribution is also of central importance. One of the main reasons for comprehension problems was the non-native speakers' inability to express themselves in a way which would have helped the native listeners to infer their intentions.

A major advantage of relevance theory is that it defines comprehension within the framework of a communication theory. As a final remark I would like to point out a general aspect of comprehension in communication which this study made me aware of. Comprehension problems of the type that have been discussed in this paper may disturb the fluent flow of communication, but they are not fatal as they are overt and cleared up as a result of an interactive repair process. Most of them should, in fact, be considered an inevitable part of human communication. If communication is based on the participants' cognitive assumptions, problems predictably occur; more amazing is that the participants

so often manage to comprehend each other. Identifying the listener's interpretation when his reaction is very minimal and fails to reveal his interpretation is more problematic not only for the analyst but also for the speaker. This may lead to possibly much more serious problems as they are more difficult to locate at a later stage.

BIBLIOGRAPHY

Allwood, J., S. Strömqvist & K. Voionmaa 1983. *Ecology of adult language acquisition*. University of Gothenburg. Papers in Theoretical Linguistics 45.

Bartlett, F. C. 1932. *Remembering*. London: Cambridge University Press.

van Dijk, T. A. & W. Kintsch 1983. *Strategies of discourse comprehension*. London: Academic Press.

Hatch, E. 1978. Discourse analysis and second language acquisition, in E. Hatch (ed.), *Second language acquisition*, Rowley, Mass.: Newbury House.

Nikko, T. 1991. Kognitiivinen lähestymistapa vieraan kielen ymmärtämiseen. Ymmärtäminen vieraan kielen puhujan ja natiivin puhelinkeskustelussa. (A cognitive approach to second language comprehension. Comprehension in native-speaker - non-native-speaker telephone conversation.) An unpublished licentiate thesis in Applied Linguistics. University of Jyväskylä. Department of Communication.

Rumelhart, D. E. 1980. Schemata: the building blocks of cognition, in R. J. Spiro, B. C. Bruce & W. E. Brewer (eds.), *Theoretical issues in reading comprehension*, Hillsdale, New Jersey: Lawrence Erlbaum.

Sperber, D. & D. Wilson 1986. *Relevance: communication and cognition*. Oxford: Basil Blackwell.

Spiro, R. J. 1980. Constructive processes in prose comprehension and recall, in R. J. Spiro, B. C. Bruce & W. E. Brewer (eds.), *Theoretical issues in reading comprehension*, Hillsdale, New Jersey: Lawrence Erlbaum.