MEANING NEGOTIATION IN DIALOGUE

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For the sake of effective communication of man-machine type, what seems necessary is to find means to deal with complex language problems in ways that would guarantee its correct analysis and synthesis. Such problems can be better understood when language is viewed not as a static product of interaction but as a dynamic, meaning producing process in action. The importance of looking at ongoing communication in order to achieve a fuller understanding of the numerous linguistic and nonlinguistic devices employed in the process of human communication has been recently emphasized by many authors. (Clark and Clark '68, Haliday and Hasan '76, Garfinkel '72, Churchill '78).

The meaning of an utterance can be considered to be a complex that consists of the semantic level at the assumption of some idealization of data, the pragmatic level, elicited by the context and represented as a set of rules of language use, as well as the material referring to the knowledge of the world.

A correct analysis of language texts should make it possible to perform the closest recovery both of what was said and of what was talked about. The information required to interpret and reproduce an utterance is not fully and unambiguously encoded in the speech signal, but is completed by the material contained in sets of constraints familiar to each of the interlocutors. If the relations between the signal and the

content correspond to generally accepted rules (syntactic, semantic, pragmatic), furthermore, if the relations intended by the sender are identical to those apprehended by the receiver, the communication is conventional (Allwood'76). Conversation, and most explicitly, dialogue, is a continuous recovering of the above relations. The issue of whether those factors are entirely or partly identical or different to the participants is being established in the process of the whole interaction. Hence, meaning of an utterance is not a constant but a variable the value of which is negotiated in the course of interaction. Applying Minsky's terms (Minsky '75) what takes place there is the process of filling in "default" values in prototypes, understood here as hierarchically organized data structures, representing partial but "constant" knowledge, with the variable defaults, empty, prior to the concrete act of perception. This, in turn, leads either to activating familiar conventional or stereotypical conceptual frames or stimulates instantiating new data structures if the higher "constant" nodes in the structure are replaced. A number of man-machine communication systems (FRL-Roberts, Goldstein, KRL - Bobrow, Winograd, Norman, Kay - cf. Jirků '81 for details) work according to similar schemes, which makes it possible for them to include sets of inference rules in their systems.

Inference rules underlying human as well as man-machine communication can be represented in terms of data structure reconfigurations according to known typological criteria such as hyponymy, quantification, deletions, additions, etc. Such changes can be perceived as opaque by participants due to the lack of transparency in the linguistic form of the utterance. Another problem in this connection is that even in the simplest forms of dialogue, question answering, the chain maxim, i.e. responding with a direct answer to the question, is

strictly followed in only a small percentage of cases (12 - 24 % of cases - Churchill op. cit.). Other responses exhibit a number of forms and patterns ranging from most conventional (conforming) to most deviant. Deviations from the direct patterns can be hierarchically classified according to breaches of conversational maxims.

In order then, to correctly analyse such and similar dialogues as the following (after Churchil op.cit.; 103):

Speaker$_1$: Why are we going way out in the middle?
I'll get sunburned
Speaker$_2$: What's the difference whether you're in the middle or not?
Speaker$_1$: You get more reflection in the middle
Speaker$_2$: Oh.

A system is proposed in the present paper, combining different typological criteria underlying inferences in frame terms with hierarchical patterning of conversational deviations.

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