

CENTRO DI CIBERNETICA DI MILANO PRESENTATION

operations; moreover, the problem at hand could be reduced to two questions that confront the investigator: (1) What is the structure of our thought? and (2) How are we to put a link between our language and our thought?

He attempted to clarify his hypothesis further by drawing several diagrams on the blackboard, first presenting the thought process as a product of what he termed the "correlator" and the "correlation", and second, drawing several examples from simple English and Italian phrases, and analyzing them in terms of his thought process box diagram.

Dr. Ceccato continued to elaborate on the function of the "correlator", adding parenthetically, that while some languages relied upon form (declension and inflection), others relied upon order (context). But he explained that it was not the language that changed; rather, it was the thought, and for us the correlation is done by the machine.

After some remarks about his two levels of language, i.e., the language itself, and those things that operate the language, Dr. Ceccato invited the group to gather around him as he presented and explained graphical data, including coding material and charts.

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Wednesday, 20 July, 2:00-3:15 p.m.

ZIEHE

Mr. Ziehe began the session by discussing the RAND handout Available RAND Linguistic Data. In discussing the text and dictionary he defined:

- (a) an occurrence as an instance of a form in text
- (b) a form as a unique sequence of alphabetic characters that is preceded and followed in text by either spaces and/or punctuation
- (c) a word as the collection of forms that constitute a paradigm

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Mr. Ziehe also discussed the information carried by "special codes" - for equivalent inflection and idiom participation.

A tape dictionary is being developed at RAND. The entry for each form will consist of a number of variable length items. The number of items can be easily increased or decreased. He then discussed syntactic rules embodied in the RAND Dependency Table. He noted that the constructions not covered by the table are low frequency occurrences.

HARPER

Dr. Harper briefly mentioned recent publications describing the RAND sentence-structure determination system and the results of syntactic analysis. A handout showed the variety of existing analytic reports in which are recorded the syntactic combinations that have occurred in text processed to date. These reports are still being used for retrieval and coding of syntactic information. An example given was the identification of modals that are dependent upon the infinitive, and an indication of their relative position.

Dr. Harper then branched into a discussion of distributional semantics, and its relation to MT. In this approach, structurally related items are considered in terms of individual words; distributional classes may be formed on the basis of a) morphology, b) a priori considerations, or c) syntactic relationship to other distributional classes. Large samples of text will be required for the building of these classes.

The presentation was followed by open discussion and questions addressed to Mr. Ziehe and Dr. Harper.