

PRESENTATION AND DISCUSSION OF PAPER 8

PRESENTATION BY MRS. CHARNEY

Mrs. Charney discussed the variation in meaning of the English word "any", depending on its context, thus making its word-for-word translation into another language impossible. This meaning variation is not ambiguity, for we can be certain of its particular meaning in any given sentence. "Any" is a structural constant because it is the analogue of the concept of a free variable in logic theory. She gave five sentences containing "any":-

1. Any river flows to the sea.
2. If any student enters the library, he starts to study.
3. If any student enters the library, John starts to study.
4. John will not support the education bill unless any child can attend a non-segregated school.
5. Before John drank any milk, he went down town.

In 1, "any" is replaceable by "every" or "all", because the statement has been asserted for an arbitrary selection of an element out of a set, and hence is asserted for all members of the set. This is the law of generalisation. In 2, "if any he" is replaceable by "every ...who". In 3, "John" is the implicate and is independent of an arbitrary selection so "any" is here replaceable by "a" or " there is a" (it is here an existential quantifier). In 4, we have the logical constant "John", but also another logical constant in the connective "unless". Again, "any" has the meaning of "all". Finally, in 5, the use of "any" is allowed by the presence of "before". The action of "going down town" precedes the drinking of milk so the latter action can be open, i.e. an indefinite amount of milk can conceivably be drunk. "Any" could not have been used with "after", because this would have implied an indefinite amount of milk being drunk by John before he went down town and yet the drinking had been completed, so a definite amount ("some", "a little", "ten gallons") was involved.

DISCUSSION

DR. EDMUNDSON asked how confident Mrs. Charney was in using the model of sentential calculus for natural language.

MRS. CHARNEY was not very confident, except for what she said about the free variable, which will hold in any system, be it a modal logic or a probability logic. There is only one such device in any natural language.

DR. EDMUNDSON asked further if the author had worked with any of the six or seven modal logics to the same extent as she had with non-modal logic, and if she had been forced to use other operators besides the existential and universal operators.

MRS. CHARNEY had not worked with modal logics but has worked a little with probability logic. She emphasised that human beings, in their use of a language demonstrate that they are fully aware of the logical rules that apply. Their use of "any" indicates an understanding of the notion of arbitrary selection. She had used a selector operator but it was different from the free variable because it binds. There was much study still to be done; on "any", "ever" and "either", which all have the property of seeming to change in meaning.

DR. BROWN referred to the last sentence example (5) including "before", and asked if Mrs. Charney had considered the French use of "avant que" with the negative. Are they being logical?

MRS. CHARNEY. The same thing happens in Russian. It is possible to think of sentence 5 as a negative statement:- "He did not drink any milk before he went down town", though this loses the original implication that neither did he drink any while he was down there!

PROF. LAMB asked on what grounds did she assert that it was Reichenbach, as late as 1947, who first recognized this new grammatical category.

MRS. CHARNEY explained that no traditional grammarian gave words like "any" special treatment. They get called pronouns sometimes. Formal linguists certainly recognise them as different but do not attempt to interpret them or give them meaning. She had meant her statement to be applied to contrastive grammars only, and the category had to stand as a kind of model of all languages.

PROF. MEILE. This category is a linguistic one, not a category of thought and varies in expression with the language considered. In French, it is sometimes the subjunctive, the mood of the verb, which corresponds to "any". In other languages it may be the use of a generalising particle or an indefinite form such as an interrogative cancelled by a negative.

MRS. CHARNEY. The important thing to note is that if the category can be given one definition and there are rules for finding the semantically equivalent sentences, then we have understood the function of this particular linguistic device.

PROF. MEILE foresees difficulties when this category in different languages does not completely correspond.

PROF. JOSSELSOON could see that this category is useful in a contrastive situation between two languages, but what is the value of it beyond the discovery stage.

MRS. CHARNEY. The value is in enabling us to correlate rules of one language to rules of another. We are unlikely to use a logical interlingua in machine translation, but we can use these correlated rules to achieve sentence-by-sentence translation, which is what we must aim for when we have non-contiguous elements having influence on one another.

PROF. ZARECHNAK said that four Russian equivalents would be necessary to translate the "any's" of the five sample sentences:- ЛЮБОЙ, КАКОЙ ...НИ КАЖДЫЙ, НЕМНОЖКО. When in Russian, we have the nominative case as selector operator and negative is not involved, КАКОЙ ...НИ, must be used. If "any" in English functions as a quantifier (just a little bit), we have a governor structure in Russian and the noun takes the genitive. These contrastings combine structure and semantics, and this would perhaps add something to the logical system.

J. McDANIEL