## PRESENTATION AND DISCUSSION OF PAPER 32

## PRESENTATION BY MISS BARTON

THE fact that there were in many languages two articles representing the same antithesis suggested to Miss Barton that this antithesis was a part of common human thinking. It might be assumed that the antithesis was relevant also in texts written in languages that did not have articles (e.g. in Russian), but that the representation of it was more diffuse. Only familiarity with the concepts that lay behind the use of the articles could tell us what to look for.

## DISCUSSION

DR. EDMUNDSON thought that Miss Barton's suggestion represented the first appearance in MT of an attempt to analyse context outside the limits of the sentence. He pointed out that scientific articles often began with generalities, to become more specific in their reference later. In general there were two kinds of determinant in the choice of articles: (1) those internal to the sentence; (2) external determinants.

MISS BARTON agreed that the choice of articles often depended on external considerations.

PROF. OETTINGER declared that so far everything proposed for the solution of semantic problems in MT Involved feeding into the machine the structure of human experience. Was there any way of cutting into this problem?

MISS BARTON thought that a good deal of "background information" could quite well be fed into the machine.

PROF. JOOS pointed out that in translating from Russian to English many of the articles could be inserted according to syntactic rules, but many could not; and in some cases translation with or without the article was equally satisfactory. He reported an experiment of the Georgetown group, in which all the articles were omitted from a sample of newspaper English and forty native speakers were asked to put back articles where they felt they were required. There were a few cases of $100 \%$ agreement, some of $50 / 50$ balance and, more significantly, some instances of a twenty to one, or ten to one, majority for a given position. The Russian native speaker was not always obliged to draw the distinction represented by the articles in other languages; and the translator could not be expected to "read the mind" of the author. In some cases a correlation had been observed between a quite
different distinction in Russian (e.g., perfective/imperfective) and the applicability of the definite, rather than the indefinite, article in translation.

MISS BARTON, in a comment upon the experiment reported by Prof. Joos, observed that removal of the articles from an English text meant removal of all clues for the distinction she had described, whereas it was her assumption that the Russian text would have quite different clues.

PROF. ZARECHNAK reported a further observation of the Georgetown group: there was a consistent correlation between the occurrence of ЦЕЛЫЙ rather than BECb (in half a million words of running text that had been translated and studied) and English translation by means of the indefinite, rather than the definite article ("a whole"/"the whole"). This was encouraging, in that it did suggest that other clues of the kind might be found for the definite/indefinite distinction.

PROF. IRINA LYNCH was puzzled by Prof. Joos's remark about the reflection of the definite/indefinite distinction by aspectual distinctions in Russian. To her, a native speaker of Russian, there seemed to be no correspondence at all.

PROF. ZARECHNAK, replying to this at Joos's request, maintained that the correspondence suggested was one of statistical value and had been obtained from the study of actual texts. In some cases rules of this kind had a $90 \%$ validity.

PROF. JOOS added that the native speaker was notoriously unreliable in his estimations of frequencies. He cited the case of B СИЛУ/ B СИЛЕ in Russian: native informants had said that these two expressions were about equally common, whereas an actual count of their occurrence in texts had shown the one to be a hundred times more frequent than the other.

DR. HAYS pointed out that, while one rule might be $90 \%$ adequate, hundreds of additional rules might be required to handle the remaining $10 \%$ - and there might be a residue for which no rules could be found.

MRS. CLARKSON interrupted this discussion of statistics to enquire whether any work had been done on a comparative study of the English and German articles, observing that they did not exactly correspond in their application.

MISS BARTON replied that the same was true of English and Italian, though the same fundamental antithesis was represented in both languages.

MR. GLASERSFELD suggested that the articles might be applied slightly differently for stylistic purposes and cited Hemingway's use of the definite where normally the indefinite would have been used. He recalled an instance where Hemingway employed the phrase "the plane" at the first mention of the plane in the work.

MISS BARTON offered as the explanation of this Hemingway's desire to convey a note of predetermination in the appearance of the plane.

PROF. OETTINGER returned to the "90\% question" and pleaded for a cautious interpretation of percentages. "90\% success" for any one problem sounded very impressive, but, if there were a series of problems each solved to a degree of $90 \%$, the total resulting translation might be far from $90 \%$ accurate. The sights must be set high in MT, and there was no place for methodological argument on this point.

MR. SPIEGELTHAL considered that the idea that articles had to be put in sprang from a parochial attitude towards language. One might as well suggest that English was deficient in not marking gender in the article as did French.

PROF. CHATHAM queried the use of the term "intuition" in linguistic discussion and proposed instead the term "native reaction". The native speaker frequently sensed distinctions that were later formalized by the linguist.

PROF. OETTINGER had the last word. He reported his observation of the almost random distribution of articles in the English of Prof. Zarechnak and Prof. Irina Lynch (both native speakers of Russian). The practical import of this observation may not have been clear to all, but it seemed a good point on which to conclude the discussion.

## J. LYONS

