

MACHINE TRANSLATION AND/OR AN INTERNATIONAL LANGUAGE?

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1. INTRODUCTION

One of the biggest problems of to-day is that of language. The language barrier separates the nations and prevents peace and understanding between peoples. Furthermore, language barriers impede free communication of the latest scientific results, so that the same work and discoveries must be repeated in other countries because of the scientists' insufficient ability to read papers in foreign languages.

During the last 10 years a completely new science has developed, namely mechanical translation of languages intended, in particular, to remedy the latter problem. Mechanical translation aims at a faster translation of larger quantities of literature at a lower price than is possible by human effort alone. In this connection, one of the questions which has been asked is whether the number of translation programmes might not be reduced, if all translations between the different languages passed through a common intermediate language.

Another question arises, however. Suppose that we are able to solve all the technical, logical and practical problems which are at present involved in satisfactory mechanical translation of languages, and that within this field we are able to replace the human interpreter. Nevertheless, we must agree that the problem of free human communication has not really been solved. Have we not pushed the essence of the problem aside, and only tried to mitigate some of its effects?

Here I shall just point out the great problem with which many scientists are struggling, who do not have one of the world languages as their native language. This is very often seen at international congresses where, for example, the English and Americans have the advantage of expressing themselves without difficulty directly in their own native language. On the other hand, the person who speaks English as a foreign language has the greatest difficulty. Very often he may feel this difficulty so much that he dare not participate in the discussion. Therefore, it may happen that the person who really possesses the greatest knowledge of the subject and can make the most important contributions, cannot make himself heard because of his lack of knowledge of the language.

2. AN INTERNATIONAL LANGUAGE

The question is then, whether we should spend our time and money in seeking the best possible solution. The most radical and effective solution would, of course, be agreement on an international language, which everyone should learn as a common second

language and which should be used in all international communications. In the course of time, the demand for such a language has often been raised and a great number of proposals have been made. However, most of them never left the desk of their author. A few of them have been used internationally, but the only one that really got international backing and acknowledgement on a large scale was Esperanto.

We are not going to discuss here the quality of Esperanto compared with other possible auxiliary languages. In my opinion, however, the thing most to the credit of Esperanto is that, once and for all, it has proved to a doubting world that it is possible to construct an international language which is capable of expressing all the linguistic variants of everyday life and of science, at least as well as, if not better than the existing national languages. This possibility is shown by its extensive literature and by its practical use at a number of international congresses. However, I believe that the choice need not be exclusively between mechanical translation and an international language.

The theoretical and practical research into machine translation should be continued, not least because the research results obtained will have great linguistic value in themselves, independent of their practical utility. Parallel to this, the question of a common international language should be investigated¹⁾. I shall mention here just a few of the qualities which such artificial auxiliary languages should have and in which they will differ from the regular national languages. Such a logically constructed language would be free from most of the typical inconsistencies and irrational constructions with which most languages are burdened. It would be learned in a fraction of the time required for most national languages. It would not be politically biased and would be impartial to all nations. Besides this, it could have great importance as a basic language for the different symbolic *computer* languages, and at the same time be used directly in scientific communication within the computer-related sciences. In addition, it is feasible that smaller countries with little economic possibility of their own M.T. project, could join a project for translation into the international language. Such a research project will soon be established in Scandinavia, and we shall be pleased to co-operate with other countries in this respect. The possibility also exists, that the regular languages will be translated mechanically into the international language, and will be read without any further translation by all who know the international language, or if desired, will be retranslated into another

language. I assume that the next development would be that scientific literature would be published and read directly in the international language without any further translation.

Finally, the importance of language as a means of mental communication must be emphasized. Development is continually going forward in means of human transportation where it is a question of how to reach the destination in the shortest possible time, in the best possible way, and at the lowest price. Is it not natural that our means of mental communication should be worth similar attention? In this case it is a question of how to transfer information between people in the most effective and rational way, but in this field the development has made very little progress. We are still troubled with linguistic constructions which belong to the past, which are irrational and which act like a drag on the wheels. To keep these constructions is, in reality, just as reactionary as

if, in the old days, one had demanded that people should for ever travel on horseback.

3. CONCLUSIONS

A peculiar development has taken place in our time. Linguistic analysis is no longer confined to pure linguists, but is also handled by philosophers, logicians, mathematicians, and other computer people. My hope rests in the latter group, as there we have always the demand for the utmost efficiency. The final solution of this language barrier problem will be of the greatest importance, not only for the computer-related sciences, but also for the whole of mankind.

4. REFERENCE

- 1) Sellin, K.: Formal Structure of an International Language. (Copenhagen 1962).