Translators and Machines — Can they Cooperate?

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Despite early fears and thirty years of work on machine translation, very few human translators have been replaced by computers. The METEO system (Chandioux, 1976), one of the most successful machine translation efforts, still uses humans to translate problem sentences. The computer translates only the straightforward portions of daily weather forecasts, which become extremely boring work for human translators.

The time has finally come when translators and machines can call a truce and begin an era of significant cooperation. Machines can become servants rather than ennemies.

This article is divided into five sections : 1) Some fundamental questions about the nature of machine translation, 2) a brief history of machine translation, 3) a description of an experiment in cooperative translation called ITS (Interactive Translation System), 4) a prediction of the future of ITS, and 5) a few suggestions to translators who want to prepare for the future.

1. SOME FUNDAMENTAL QUESTIONS

There are three fundamental questions that need to be considered by anyone working in machine translation.

Question one : Is there an essential difference between humans and machines? This may not seem to be an issue to some because the answer is so obvious. The trouble is that to some there is obviously an essential difference and to some there is obviously not. The author assumes that most linguists and translators, being basically humanists, believe humans and machines to be fundamentally different and that computers cannot think and will never do so. The following two quotations from respected scientists reveal a viewpoint which does not clearly distinguish humans and machines.

George Miller, a psychologist, has written :

> Many psychologists have come to take for granted in recent years... that men and computers are merely two different species of a more abstract genus called 'information processing systems'. The concepts that describe abstract information processing systems must, perforce, describe any particular examples of such systems (Miller, 1972).

Simon and Newell, researchers in Artificial Intelligence, claimed over twenty years ago :

> There are now in the world machines that think, that learn and that create. Moreover, their ability to do these things is going to increase rapidly