TACnology Corner

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How Soon is Soon?

The other day Isabel Leonard asked me two questions that made me realize how vital it is for translators to have clear answers about the future role of computers in their profession. Of course none of us know for sure what the ultimate answers will be, but some educated guesses are possible. While normally I prefer to avoid speculation, I have decided to break my silence for these particular questions because I believe that they are the issues which underlie all our exploration into the field of translation and computers. And the answers will help to set the stage for future columns in TACnology Corner.

First, Isabel asks, *How long will it be until machine translation takes over and the translator is obsolete?*

The interesting thing about this question is that translator obsolescence is inferred; only the time frame is in question. But is it *really* only a matter of time? I shuddered, and I saw clearly how important it is for ATA to provide translators with honest information so that they can guide their careers, as they may freely decide, either through or around the shoals of MT.

I should start by saying that I do not make the same inference that Isabel did. After concentrated immersion in MT for 16 years (not counting nearly as many more as a human translator), with much of that time spent on the postediting of raw MT output, I can say with conviction that I do not believe the day will ever come when translators are no longer needed. Nor do I believe that their numbers will decline. What I do think is going to take place is a gradual shift in the nature of translation requirements and in the roles of the translator as a professional: an increased demand for information-only translation, spurred by the easier availability of MT (improvements in hardware and software that will make MT cost-effective in many more environments than it now is); a parallel rise in demand for the kinds of translation that translators would least enjoy doing by traditional methods--for example, thousands of pages about the parts of a truck; and emerging new roles for translators as posteditors, dictionary-builders, and even linguistic problem-solvers. And parallel to all this, I am confident that there will still be an ample market for traditional translation as it is currently practiced by seasoned professionals.

To be sure, it is likely that for some applications consumers will learn to settle for unpolished "information-only" machine translations. This is a kind of translation that has not really existed before, since the human translator is incapable of producing

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comparable output. We know that the "raw" unedited MT product is already usable in certain circumstances. For example, in a survey conducted by Pat Newman at Sandia National Laboratories, scientists confronted for the first time with raw MT (German into English) found it acceptable for screening purposes--i.e. for the identification of texts to be translated more carefully--and only seven of 41 respondents thought that that it was unacceptable as a direct source of information (Newman 1988:181). Indeed, 10 years ago, in a survey of 58 specialists who were regular users of the original Georgetown Automatic Translation system (Russian into English), 91.4% felt that the quality of MT was "good" and "acceptable," and 87% indicated a preference for machine translation over human (Henisz-Dostert 1979).

At the same time, we are also seeing a new mode of work which may in fact address some of the market now being handled by translators--namely "partial postediting." This was presented by Dale Bostad in Albuquerque. In Dale's shop at the Air Force's Foreign Technology Division, only about 20% of machine-translated text is actually seen by human eyes; the rest is vetted automatically by EDITSYS, which scans the output to identify seven types of potential "trouble spots" and prompts the translator for manual intervention. Dale reports that the partially edited product "meets the standards of accuracy for the users of the product" (1987:437).

It is also possible to minimize human intervention by focusing on only a very small domain of knowledge This is the case of the weather reports translated by TAUM/Météo in Canada. Another possibility is to constrain the style and vocabulary of the input at the time it is prepared: at Xerox, for example, writers have been trained to use a customized form of English.

Admittedly, MT has reduced the size of the translation teams in the cases just described. But it should be remembered that these environments only became a reality after mammoth investments of human resources--including translator-power. As more and more large-scale MT operations come into being (because of improvements in OCR, the down-scaling of full-blown systems to smaller machines, the availability of more language combinations), there will be room for translator involvement in the development process, and those who understand the systems well are apt to be the ones hired for long-term postediting and dictionary enhancement. This process is already unfolding, and I see it as an expanding area for translators in the future.

I also happen to believe that widespread of use of raw information-only MT, will ultimately open up new markets for translators--because I believe that having information available fosters the desire for more. It has been found, for example, that people

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don't ask for technical translations from Japanese mainly because they have no idea what they want to have translated. The translations identified through either MT screening or wider availability of data bases will require human intervention.

These predictions fit with Van Slype's 1980 estimate that the demand for translation world-wide increases each year by 9 to 10 percent. Regarding the growth of MT in particular, in the "Ovum Report" Johnson (1985) forecasts that annual investments in MT sales and support should grow from 1.2 million dollars in 1984 to 42 million in 1989 and 84 million in 1995.

As far as translation for publication is concerned (and publications are doubling their volume in the world at ever-increasing intervals!), I feel absolutely certain that there will always be need for some degree of human intervention. I don't see this picture changing. Improvements in the quality of MT come very, very slowly. There will be no dramatic "breakthroughs." In the end, artificial intelligence will be just a fancier set of Band-Aids, and the many-to-many systems now being introduced will only be as good as their dictionaries, which will require intricate coding just as the best of the operational MT systems currently do.

At the same time, I also predict that there will be a market well into the next century for human translation in the less-frequent language combinations of the world for which there is little incentive to build large MT dictionaries.

As for the independent translator, the possibility of using MT on a home computer has existed since 1984, when Weidner's MicroCAT was announced. Other systems are rapidly reaching the market (see Shaefer 1988). The question is whether the process is cost-effective. For this to be the case, a number of conditions will need to be met: the MT system should be of sophisticated design and have large, amply coded dictionaries; the style and subject matter of the text should be compatible with the particular MT system; and the text should be directly inputtable by automatic means (disk, modem, or OCR). While OCRs are improving, the most versatile ones need to come down in price. This is probably also true of the MT systems themselves. These are areas in which positive developments can be anticipated within the next five years.

Which brings us to Isabel's second question: *How long will it be before the independent translator will have to buy a computer in order to stay in business?*

The answer here is much simpler. There is no longer room for speculation. If we view the situation not from the standpoint of translator effectiveness or economics but rather from the perspective of clients' needs, it becomes clear that this hypothetical day is already upon us. While it would be nice to choose the mode in which we commune with the Muse--be it word processing, dictation, typing, or old fashioned longhand--clients' requirements for input and output make other issues moot.

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Almost all agencies and major businesses would now prefer to receive input in machine-readable form. For JPRS, as we all know, it is already mandatory. With a modem and a fax machine, translators can expand their clientele and receive work from anywhere on the planet. A client can be sleeping on one side of the world while the translator works away, and the completed job will be waiting for him at the start of business the next day. These are hard facts. The trend is unmistakable, and the time is not far off when a free-lance translator will be completely out of the running without a computer--and without the keyboard skills to make it perform efficiently. I would say that this will come to pass within the next three years, five at an absolute outside.

In 1986, in a poll of translators conducted by Digital Equipment (Smith and Tyldesley 1986:19), 53% of all free lances, 59% of translators working in agencies, and 54% of staff translators in industry were found to be using computers or dedicated word processing on a regular basis. Those who have made the changeover report, without exception, much greater speed and ease in handling text. The increased facility makes it possible to produce more polished final output. Moreover, vocabulary can be stored, retrieved, and exchanged far more efficiently with a computer than with cards.

The Muse will not be disappointed. I have it on good authority that she loves to play around in word processing. In future columns, TACnology Corner will be providing basic information on all the topics discussed.

--Muriel Vasconcellos, Chair
Committee on Translation and Computers

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