

THE INDUSTRIALISATION OF TRANSLATION

- WILL IT WORK?

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1. Industrialization & Translation

The title of this paper brings together two concepts that most people here would probably consider incompatible. On the one hand we have *industrialization*, which people in the area of the humanities tend to regard as a ‘bad thing’, something that de-humanises us all and has been responsible for propelling us from some idyllic pastoral past into an uncertain urban future. On the other hand, we have *translation*, which most of us regard as a very positive contribution towards communication and understanding between people and cultures and, therefore, a ‘good thing’.

However, as in so many areas of our lives, technology is now affecting the world of translation. For those who have to provide translation at a political, economic, industrial and business level, anything that will speed up a slow, time-consuming process and rationalise resources is regarded as highly positive. For those whose livelihood depends on translation, it is only natural that technology should be regarded with deep suspicion.

2. Washing and Translation

In order to explain how technology can help translation, I have chosen to compare the mechanisation of washing to that of translation, with washing and translation being the processes applied to the objects - clothes and texts - by people who profess to be experienced in these areas. Before I go on, however, I should first like to point out that when I presented this paper, this attempt at a metaphor was understood very well by those in the audience who were aware of the whole process of laundering (largely the women).

Those who still expect their clothes to appear in immaculate condition, without taking into account the human intervention required, found the comparison less easy to follow.

In the pre-industrial process of washing there were no machines and, if people did not do their own washing, it was done by washerwomen who learnt their trade from their predecessors and experience¹. Clothes were washed by individuals for individuals and they were made from natural fibres like wool, linen, silk and cotton. Similarly, in the pre-industrial phase, translators were people with no training beyond experience and an ability to understand more than one language, who translated texts by individuals for individuals or restricted groups, and the texts came largely from a less technical and scientific world, which were not necessarily easier, just different.

In the pre-industrial age, the pace of life was slower, there was less preoccupation with personal hygiene and the demand for washing was more limited. Some fabrics were easy to wash, but any attempt to wash delicate fabrics could produce disastrous results even when carried out by an expert. Translation, too, was less in demand in the days when contact with other languages was restricted. Some texts were easy to translate, but the translation of others was difficult when not tackled by an expert in the subject.

However, as standards of living rise, standards of hygiene improve, people receive better instruction in washing and there are more sophisticated washing products and techniques. As more contact with the outside world created a greater need for translation, some attempt was made to train translators, and more sophisticated dictionaries and translating techniques appeared.

When the first washing machines appeared, most people who relied on others for their washing reacted to this solution to the growing piles of washing with delight, but the workers regarded it with dismay. However, for some time, washerwomen were still cheaper, just as translators are still cheaper, in the short run, than the mechanisation of

¹ In a Portuguese context, the older generation will still remember these people, who often washed the clothes in rivers or specially constructed large water tanks. Washing is still done in this fashion in rural parts of Portugal, but mechanisation has taken over rapidly in most places.

translation. Besides, the early results of mechanisation in both cases were often very poor, except with the most resistant fabrics – or the simplest texts. Delicate fabrics - and more complex texts – suffered badly from mechanical treatment, and so the technicians had to work on improving their machines, while the older washerwomen – and translators - expressed their relief by levelling strong criticism at the machines.

In the meantime, technology improved and the machines became more efficient. The housewife and the modern laundry could rely increasingly on their machines and, when clothes were not suitable for washing, they could resort to other processes, like dry cleaning. Machine translation improved but other technologies developed in the form of computer-assisted translation and other translation aids.

While technicians were working on the machines, others were focussing on fabrics and clothes. The quality of the raw materials used rose, textile and clothing manufacturers had to work with the help of scientists towards higher standards, and new easy care and drip-dry fabrics were invented. Few of us now buy clothes without looking at the label that tells us whether they are suitable for washing, ironing or dry cleaning.

Despite the lamentations of the older generation that young people can no longer write their own language, the fact is that producers of publicly available texts are becoming increasingly aware of the need to write well and clearly. Those studying text and genre analysis have helped here, and this work is often combined with that of psychologists and sociologists. Technical Writing – a discipline in which writers are formally trained to write good technical texts – is popular in the USA, and Controlled Writing is a development of this that aims at producing standardised texts that can, in turn be mechanically translated.

Nowadays we expect clothes and the materials they are made from to be of good quality, and we hope that our everyday wear, at least, will be resistant to machine washing. However, it is interesting to note that, far from opting entirely for the drip-dry materials first produced twenty or thirty years ago, the public now accepts that quality clothes may

well be made of materials that cannot be washed and need expert cleaning. Some materials, like hand-painted silk, are still uncleanable by all but experts in renovation techniques.

A similar comparison can be made of translation techniques. It should be obvious that improper use of translation tools will produce disastrous results. Many texts will always need expert human translating, and we must hope that the public will eventually accept that it has to pay for this as it now pays for expert cleaning. Most of us would agree that poetry, like hand-painted silk, should only be entrusted to a very few – if at all.

Textile technology has become highly sophisticated and, although some phases can still be entrusted to less skilled labour, highly trained experts are required to work in teams at the crucial stages of preparation. Factories that rely on basic technology can only survive in societies that accept the employment of very cheap labour.

Text production and translation, too, are becoming increasingly sophisticated. As with the textile industry, there will always be a place for the under paid and under qualified translator turning out shoddy translation, but it is now recognised that good translators need training at university level. These professionals need to know how to make the best use of technology, and must increasingly work in teams that combine different types of expertise. They must also know how to be flexible and how to adapt to new situations.

3. Technology and Translation

Technology offers a variety of different possibilities to the translator. We shall be discussing Machine Translation (MT), and Computer Assisted Translation (CAT) – in the form of Translation Memories (TMs) and Terminology databases (TDs); Desk Top Publishing (DTP), which provide ways of speeding up the production process; as well as Information Retrieval, or using the Internet, multimedia and corpora to find the type of solution to problems, linguistic and otherwise, that translators have always faced.

3.1 Machine Translation

Machine translation is the Holy Grail of linguistic research and it is linked to that other Holy Grail, Artificial Intelligence. The present state-of-the art is that it can work in carefully controlled circumstances in restricted subject areas, like weather reports. It can also provide quick and easy translations suitable for general understanding of the contents of a text. For those of a more philosophical bent, there is an excellent explanation of its possibilities and limitations in Melby (1995). Arnold et Al (1994) will provide a more practical introduction to the theme and, for those who want easily accessible ideas on the problem, Paul Schmidt explained the position in his presentation *Machine Translation - Is It Useful?* at AsTra-FLUP's II Encontros, 24-25 March, 2000².

As far as industrialisation is concerned, MT is used by in certain circumstances quite successfully. There is the well-known Taum Meteo in Canada, a system for translating weather forecasts from English to French and vice versa. There is PATRANS³, which describes itself as 'the only commercial post-Eurotra MT system. It currently translates patent texts from English into Danish'. It claims it 'saves around 50% of the translation costs' but it produces a raw version of the translation', which means that 'human revisers will always check and possibly edit the text to obtain a final version'.

Then there is the KANT project, at Carnegie Mellon University (CMU), which is 'designed for multilingual document production', and 'has been applied to the domains of electric power utility management, heavy equipment technical documentation, medical records, car manuals, and TV captions'.⁴ Several large companies use tailor-made MT systems - like Daimler-Chrysler, banks, and insurance companies. The European Commission has a version of the SYSTRAN MT system that produces translations that,

² Available at <http://www.lettras.up.pt/translat/PS.ppt>

³ See: <http://www.cst.ku.dk/patrans/uk/>

⁴ See: <http://www.lti.cs.cmu.edu/Research/Kant/>

while imperfect, are good enough to tell someone unable to understand the original whether the text is of enough interest to deserve proper translating or not.

The important thing to notice here is that the MT systems only work with restricted areas. For this, the original texts need to be standardised as to subject matter and terminology and, after the process, the result still needs human revision. With the washing machine, one still has to select what goes in, and dry and iron what comes out. However, both types of machine speed up the processes, which can mean a big saving in time and money

3.2 Computer Aided Translation

Few organisations need, or can afford, to create tailor-made MT systems and require something more flexible. For this we have the type of software designed by DÉJÀ VU, SDLX, STAR, TRADOS⁵, and others. This software works on much the same principles as a relational database. Although it is empty of information when one buys it, it is structured in a way that allows easy access to information that is processed into and stored in the database.

For this we have Translation Memories (TMs), which store and re-use texts and their translations. A translator will work inside these programmes, both using sentences and phrases from previous translations, and adding to the memory with the work in hand. Should someone buy one of these programmes and wish to use texts and translations done previously, they can use alignment programmes to create TMs by aligning existing texts and translations. The objective with a TM is to store all texts on a particular subject and their translations. If one is working in the car industry, therefore, one might create one memory for texts dealing with vehicle instructions and another for commercial correspondence.

Translation software also usually includes a terminology database (TD) for the organisation and storing of terminology. To use the example of the car industry, a translator working for such an enterprise would cooperate with the technicians to produce

⁵ See: links to presentations by Toni Badia, and representatives of TRADOS, TRANSIT and DÉJÀ VU at http://www.lettras.up.pt/translat/i_enc2.html.

multi-lingual TDs with the company's approved terminology for vehicle parts and on the one hand, and accepted commercial phraseology on the other.

The websites of the different software companies emphasise different aspects of their work and clients. TRADOS⁶ will draw attention to their big commercial clients – like Volkswagen, Microsoft, Siemens Nixdorf, Coopers & Lybrand, the international institutions they work with – like UNO, NATO, the EU, the IMF and International Red Cross, as well as translation agencies like Berlitz, Euroscript and Bowne, and financial entities – like Deutsche Bank, Bank of Spain, Credit Suisse. TRANSIT⁷ works with the automotive industry - BMW, DaimlerChrysler, Honda, and Mazda, mechanical engineering - like ABB, Heidelberg Press, and Siemens, soft- and hardware vendors – like Corel, Hewlett-Packard, Rockwell, SAS Institute, and organizations and universities like UNO, IULA-UPF Barcelona, and Saarbrücken Universität. On the other hand, DÉJÀ VU⁸ and SDLX⁹ emphasise their relationship and accessibility to the professional translator, translation agencies, and international co-operation at the level of the profession.

It should be clear by now that such software is only useful for translators, or groups of translators, who specialise in certain areas and do a lot of repetitive work for the same client. Anyone who works as a professional translator will recognise the fact that this sort of work may not be very inspiring, but it tends to be the most stable and lucrative. If a translator can get this sort of work, they should be more than interested in acquiring the software that could give them a competitive edge.

3.3 Desk Top Publishing

When a graduate of FLUP was accepted for an 'estágio' in translation at the European Commission no more than fourteen years ago, she was expected to work with a pencil and paper and pass on this work to a typist. Nowadays, simple typing is already

⁶ See: <http://www.trados.com>.

⁷ See: <http://www.star-ag.com>

⁸ See: <http://www.atril.com>

⁹ See: <http://www.sdlintl.com>

outdated, anyone looking for a job involving text production must be able to use a word processing programme. Word processing increasingly implies rather more than simplified typing. The more sophisticated uses of the programmes permits Desk Top Publishing (DTP), or the ability to produce texts ready for printing. Rather than pay one person to translate a text ready for printing in the original, and another to re-process it for printing, employers now want the translator to work inside the programme, adapting the translation to fit the restriction of space as necessary. Translators therefore need to know how to use a wide variety of DTP programmes if they are to provide a complete and competitive service.

Most of us have come to rely on our spelling and grammar checkers in our word processors, but few stop to think of the technology behind it. If one does, however, one will realise that behind the green and red lines that appear beneath our word-processed texts are whole dictionaries of words and a considerable knowledge of syntax. We may not like some of the ‘corrections’ made – for example, Microsoft Word’s objection to the passive voice and insistence on ‘that’ where one may want to use ‘which’ – but we are grateful when it draws our attention to spelling mistakes. These checkers are most useful for doing some of the reviser’s more obvious chores. Then there are the other useful facets of the word processor, such as is its ability to track corrections and speed up the whole process of revising documents.

The LETRAC report¹⁰ found that all employers now expect translators to be able to word process at a certain level of sophistication. It also found that the more successful translators were fully acquainted with more complex programmes, worked with e-mail and the Internet and considered all this technology a given for their work. Those still receiving and returning texts in paper form and using the technology of the fax machine were much less successful.

¹⁰ See: <http://www.uni-sb.de/letrac/letrac.html>

3.4 Information Retrieval

Up till now we have spoken of the technology that helps speed up translation by mechanising certain processes. However, perhaps the most important aspect of electronic technology today is the way it helps the translator find information for translation. Information retrieval is now made far easier with the advent of the Internet. One may claim that paper dictionaries are still quicker to consult than on-line ones and that the CD-ROM ones are simply electronic versions of the paper ones, but few will argue the same for encyclopedias, whose hypertext format makes looking things up much easier than physically handling several large volumes.

However, dictionaries and encyclopedias represent only a small part of the material that can be consulted on-line. Apart from numerous specialised glossaries of varying quality, one now has EURODICAUTOM and other databases for reference. This makes it easier – and more essential - to find internationally standardised terminology when it is available.

Besides having easier access to ‘the right word’, one can also study whole texts and learn more about the conventions of text and sentence structure – not to mention the subject matter. Collections of texts have been made for the purpose of studying language in various ways. They are called corpora and can be searched using software that produces concordances, or all the examples of the linguistic phenomenon you are looking for in the corpus. All this technology means that translators can no longer restrict themselves to dictionaries and locally acquired knowledge.

4 The Industrialisation of Translation

Computer technology was expected to lead to the paper-less office, and in some ways it has, perhaps, reduced the quantity of certain types of paper used in offices - such as the files needed to file away the information now put into databases, and many of the more repetitive tasks have been taken over by templates on the computer. The office typist may be an endangered species, but her successor has to be able to word-process and must possess a variety of more sophisticated skills that make her/him useful in the office.

However, the ease with which computers allow one to produce text has led to another trend – that of more people producing more texts. The amount of information available in written form today exceeds anything anyone dreamt of in the past, to the extent where we now talk of the ‘information society’. Much of this ends up in paper form – and a lot of it needs translating.

MT has always been feared as a competitor by translators, but it is opening up the possibility of understanding texts in a foreign language to people who never contemplated such a possibility before. For example, English medical students are not expected to study in German. With MT, however, they and their professors can at least find out about research in German and then, as a result, they may feel the need for real translation.

MT and CAT will also help provide the incentive to maintain multilingual policies, by speeding up the process and reducing costs. Although the EC Translation Service points out rather bitterly that the amount of money spent on maintaining this service costs every European only the price of a cup of coffee per year, there is a strong lobby to reduce the number of official languages to, at maximum, English, French and German. When one then considers the lobby for English to be adopted as an obligatory international language, one realises that these pressure groups are a far bigger danger to the translation profession than any technology.

Globalisation provokes riots because so many people are experiencing the negative influence of dominance by multi-nationals and the American culture and language. The world of information technology (IT) uses two other terms that hold out some hope that not everyone believes we can or should adapt entirely to this global world. One is ‘internationalisation’, which is understood in IT circles as the need to prepare both hardware and software so that it can be subsequently ‘localised’, or made acceptable in different languages and cultural environments. The process of ‘localisation’ is meant not just to provide translations of the instructions given in the software, but also to adapt it as regards measurements of time and money, dates and other local features. It should, in

theory, go further, and adapt the colours, icons, and other items to ones that are more suited to the target culture.

On a wider scale, the world of commerce often has to learn, sometimes the hard way, to internationalise and localize their products. The protesters against globalisation – despite their violent methods – have made an important point. Not everyone wishes to succumb to the domination of the current global culture.

5. Conclusions

Translators have an important role to play in maintaining not just multi-lingualism, but also multi-culturalism. For this, they need all the help they can get. They must learn to work with MT and CAT, and for this they will need special training. This is particularly true if they are working for employers who use these technologies, but they will find that the technology will improve and become more widespread and simpler to use as time goes by.

They will also have to accept the fact that they will be required to do more than just translate. Not only must they learn to work with different software programmes, but they must also learn how to make the best of terminology management programmes and other translation aids. And, most important of all, they must learn to exploit the enormous amount of information now at their disposal in order to produce better translation.

When we talk of translation, we should not forget that a lot of everyday translation is boring and repetitive - just like washing. Some people like doing boring and repetitive work, you may say. In which case, let them do it, but they will have to accept the fact that it is poorly paid. Those of us who want more out of life will usually admit that the positive side of industrialisation is that it works with repetitive boring tasks. It also brings quality control and higher standards.

We live in a post-industrial society. Where the need for industrialisation exists, most of us will agree that it has to work. Mechanisation will affect the translating profession negatively and positively. In their own interest, translators need to be trained to adapt.

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