TRANSLATING TECHNICAL SERVICE PROSE

*Brig J. H. Picard. SM

In the writing of reports, memoranda, evaluations, orders etc. the staff officer is compelled to draw heavily upon the technical and specialist knowledge of others. He need not himself be an expert, but he should be able to incorporate the relevant data in the staff document in such a way that it supports or illustrates the message. This implies a fluent command of at least the two official languages, and an understanding of what he is trying to communicate.

Technical writing is difficult, but translating it is even more so. For translation requires, in addition to communicative ability and knowledge, the ability to interpret a complex technical text and translate it in such a way that it makes sense to readers in the other (receptor) language.

The Application of Technical Service Prose

To form a good idea of the application of technical service prose, one has to look beyond the Military and the Public Service. The following types of enterprises serve the public in the technical field: Consulting engineers; patent agents; attorneys; manufacturers of machinery, tools, vehicles, equipment; technical servicing organizations; oil companies; mining companies; suppliers of spare parts; tender and specification committees in the central or local Government, nuclear and electronic plants, power stations; technical periodicals and publishers of technical literature; advertising agencies dealing with clients in the technical fields, workshops, gasworks, etc.

All these technical organizations need to communicate with their publics in both languages. They all receive publications, articles, write-ups and specifications in foreign languages, such as German, French, etc. Consequently they are all at one time or another compelled to translate.

Brig. J. H. Pickard. SM. MA (UNISA) CIS is Director of the SADF Language Services. He is also a sworn translator of the SA Supreme Court since 1966.

Two types of translation spring to mind immediately: *informative translation*, which is required to provide the experts with the latest technical information, and *selling copy translation* which is used to sell a product or service to members of the public who use the second official language. A third type of translation could be described as *research text translation*, which is used by experts to obtain full technical details from an original foreign language source.

A fourth type of translation, *legal-technical translation*, deals with the legal obligations underlying patent legislation, submission of tenders, and the submission of specifications, etc. to obtain Government and/or official contract approval.

Each of these four types (or levels) of translation sets its own requirements.

a. *Informative Translation*
   This type of translation does not set high prose standards, since the object is to glean information from overseas documents. Very often paraphrased texts or free translations are acceptable, provided no essential information is left out. For example, a motor engineer who has received a pamphlet from the Renault plant in France concerning a new range of sedan cars, and wants to have a rough idea of its contents, passes it on to the translation section.

b. *Selling Copy Translation*
   Translating selling copy is difficult because the translation must not only be accurate, but must also be stylish and effective. The difficulty lies in the different levels or registers. There are as many registers as there are publics reading your copy. Whether lorries are being sold to industrialists, limousines to managing directors and executives, mini-cars to housewives, sedans to taxicab proprietors, coupés to fashion designers or station wagons to farmers and university professors, the message should fit in with the sociolect of the intended public. To write *why be cent wise and rand foolish* would

be the correct approach to the industrialist, not to the housewife.

The message 'piping, industrial waste, or computers — it's all the same' would be meaningless to the farmer wanting a station wagon or bakkie on a farm. When selling a coupé to the fashion model, don't elaborate on engine statistics — rather expound on the sleek stylish lines, design, the fashionable comfort and the appearance linked to reliability. The registers differ, and the translator must bear this in mind. He does more than translate, incidentally: he *transculturates* the message from the culture of the manufacturer into the culture where a demand for the product of the former is to be created. *Transculturating* is a softer word than 'selling' and a better word than 'translation'.

c. *Research Text Translation*
Often scientists, technicians and engineers require exact details of technical or scientific processes, assembly procedures, etc. These may have to be translated from a foreign language, eg French, Italian or Spanish, into one of the official languages. While the stylistic aspect — so important in selling copy — is not emphasized here, accuracy and conceptual transfer are vital. Any mistakes made could cost lives. In this particular domain, translators must have a sound technical background and a clear picture of the subject matter they are translating. Remember, they are translating for experts in the subject fields of experts.

d. *Legal-technical Translation*
Legal-technical translation has legal implications. Mistakes in a specification tender or contract could cost a contract, a job or even lives. Think of the many pilots who will be sent to their deaths if a slip upon an aircraft's vital statistics is made! Here you move on the dangerously thin ice of patent agents and attorneys, Government contracts, fidelity insurance, and under the constantly threatening cloud of litigation. Beware!

Terminology

The technical text is characterized by a particular, specialized language, a *technolect*, according to Wüster. This language is characterized largely by a specialized terminology. The higher the proportion of this terminology in the text concerned, the higher its translatability.

In the European Common Market, as in Germany, Belgium and France, translators have access to computer terminals, which provide them with screen or printout facilities concerning translations for specialized technical terminologies in the 5 main European languages. This enables them to undertake highly complex technical translations (containing a high percentage of terms) in half the usual time.

Jargon

In addition to the terminological content, technical, scientific and professional texts contain much of what Peter Wright terms 'professional jargon'. Jargon and slang fit different contexts. In the RAF *aircraftsman* is the jargon for a certain rank but *erk* the slang word; *control column* is a technical term but *joystick* its slang equivalent. In the RAF during the last war, according to Wright[1], landings were *pancakes*, aircraft on fire after being shot up were *flames*, bombs were *eggs* which were *laid*, good was *whizzo* and a successful operation was a *wizard prang*, *kite* is still a plane and *buzzing* another aircraft means 'flying very fast and close to it in a threatening way'.

In addition to terminology, jargon and slang, technical texts are characterized by a particular style. An American manual of hand-to-hand fighting published during the Second World War contained the following instructions:

'Eye-gouging	: Best accomplished by placing a thumb on the inside of the eye-socket next to the nose and flicking the eyeball out towards the edge of the cheek.
Lip-tearing	: Hook your thumb in the corner of the mouth and tear towards the corner of the jaw.
Kicks to kill	: After your opponent has been downed, the kill can be made with a kick . . . It is best to be wearing heavy boots.'

What is so peculiarly sinister, says Kenneth Hudson[2], is the degree to which the language of the manual of hand-to-hand fighting resembles that of St John's First Aid Manual: 'Using the left hand for the right artery, and vice versa, grasp the neck low down, placing the fingers behind the

shoulder and the thumb on pressure point 5 immediately above and behind the collarbone in the hollow between the muscles attached to the bone. Press the thumb down deeply against the first rib, which is beneath the collar-bone at this spot'.

Modern warfare, says Hudson[3], seems to have a two-fold and contradictory influence on English. One form of pressure has driven it in search of the soothing, veiling phrase: 'Light losses' (20 soldiers killed), 'saturation bombing' (i.e. general slaughter), 'neutralization' (i.e destruction); the other has driven it towards stating the bald, gouging-out-the-eyeballs kind of truth. The first way of writing is intended to allay the fears of members of the population who are frightened of death, the second is directed towards instilling a fighting spirit in the combatants.

On the strategy and planning level, military power jargon uses words such as *trip-wire strategy, counter-city*; verbs are made to serve as nouns, and hyphenated nouns such as *para-military, test-ban, arms-escalation* are coined to convey specific new meanings.

Terminology is defined as 'institutionalized words for professional and technical purposes'[4]. Many disciplines take ordinary words from the standard language and give them a new and specific meaning in the new scientific, technical or professional context: *monkey wrench* is a tool, *bugs* are electronic devices, etc.

These semantic antics involve five levels of language change according to Wright[5]:

a. *Internationalization*: Taking a word from another language and often, in doing so, changing its meaning.

   The words *shunt* (railways); *output* (steel industry) from 'computer output'; *hardware* for computer hardware, and the use of Latin, Greek and French affixes:

Prefixes

super- *supercharge*
mini- *mini-skirt*
maxi- *maxi-skirt*, etc.

Suffixes

-*cade* for spectacles in motion *(aquacade, motorcade)*
-*ex* in trade names : *Sanitex*
-*ette* meaning small : *laundrette, majorette*

-*ique boutique, bootique*
-*matic* for mechanical appliances — *automatic, Hoovermatic*

b. **Elevation** by which unstandard language (technolect, colloquial words, slang or dialect) becomes standard: *sputnik* (Russian); *cellophane* (trade names) *nylon, cellotape, T-shirt, commuter, jumbo-set, work-to-rule*, etc.

c. **Degradation**: Here a word is relegated from Standard English to the lower division of dialect or technolect: *lug* for *ear, meat* for *food*, etc.

d. **Narrowing** where a general word becomes particularized: *warden — prison warden, air raid warden, traffic warden.*

e. **Extension** where the original word-sense gathers additional meanings: *earthing* a terminal, *shoddy* (waste from a carding machine), *cable* — for a crab-boat.

Sometimes some quite humorous spoonerisms are encountered: *din-opposed tweezle* for *twin-opposed diesel*; corruption helped by folk etymology: *screwmatics : rheumatics*; malapropisms: 'We're working in collision'; 'when he decided to retire, they gave him a momentum', 'our Sally's quite uninhabited', 'I was left-handed but now I am ambiquous', etc.

Why is terminology so important?

Because human industry continues to grow in 'girth' and complexity in the world, and because the ordinary language is not sufficiently accurate to immediately provide the words or terms required by science and technology to communicate new objects and concepts, certain ordinary words or phrases have had to be put into a new context and have often been adapted morphologically, syntactically and semantically.

Certain words, therefore, have had to be institutionalized as communication forms in certain institutions.

When scientists and technicians communicate nationally and internationally, they must agree on certain terms by which the meaning of the object or concept may be conveyed in the most effective manner.

Such conventions establish criteria which the new terminologies must satisfy. An example is the German DIN Standard 2330. After such norms

have been set and promulgated, the terms are regarded as having been standardized.

The translator must obviously ensure that he obtains not only the necessary technical dictionaries but also specifications and standards from the relative standard organization wherever any technical translating work is undertaken.

The Translation Process

It is clear that most valid communication is essentially directed towards conveying a message to a public. It is also evident that no verbal communication is ever absolutely effective. Nida[6] states that an idea such as 'translation is impossible because it is not exact', is nonsense. Even within one language communication is seldom exact. There is always a measure of loss or distortion of content, due not only to physical or psychological noise but also to the fact that no two persons within any language community have exactly the same background experience through which they have acquired their conception of the language code.

As linguistic and cultural differences between the two language codes increase, the probability of communicative inadequacy increases.

The effectiveness of communication lies in the extent to which the intention of the message in the source language is understood by the receptor language public. According to Nida[7] the validity of any message can be judged only by the extent to which the intended recipient understands it. This becomes a criterion for Nida[8]: 'Receptors' cultural presuppositions greatly influence the manner in which they understand a message, and obviously, if the majority of persons for whom a translation has been prepared fail to understand it correctly, then clearly such a translation is not correct, regardless of how closely it may correspond to the original in lexical and grammatical structure'.

In the field of technical translation such a criterion would imply specialist subject knowledge. It is at this level that the translator often becomes a terminologist or documentalist.

TERMINOLOGY IN THE TRANSLATION PROCESS
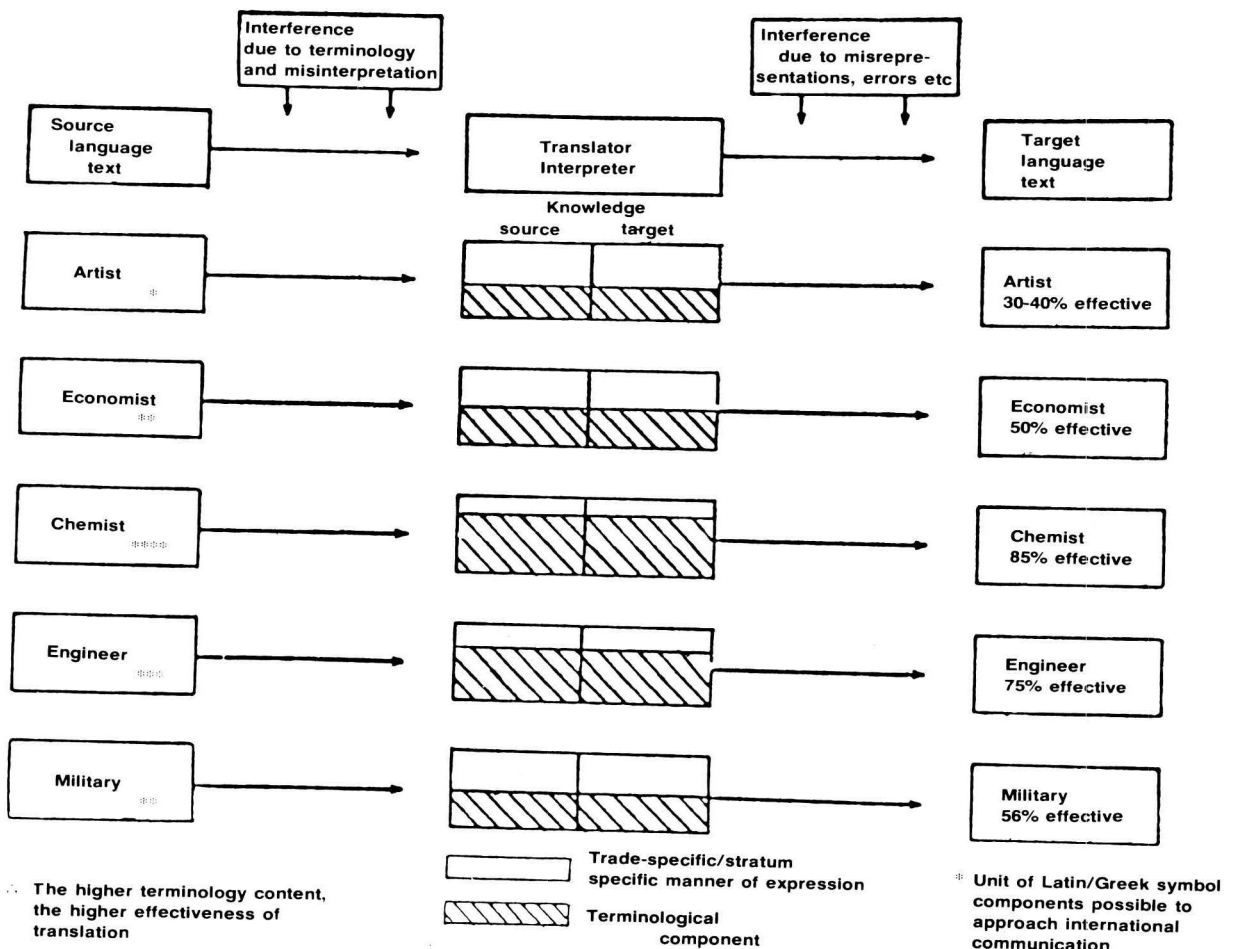
According to Sandor Karcsay[9] the intellectual activity of all translation is based on common linguistic, communication-theoretical and psychological factors. But apart from these factors, translation work is divided into literary and technical categories with a variety of grey areas in between: 'the main characteristic of a technical translation is its pragmatic nature and the appropriate use of a specified professional language'[10]. The components of such a *technolect* are terminology and a specific idiom. Within the field of specialized translations, one could further distinguish between technical-scientific and socio-cultural translations, the difference lying mainly in the variability of the inherent semantic contexts of the special terminology and way of expression. The cause of this variability is partially spatial — ie the result of structural and socio-cultural differences between contemporary societies — and partially temporal, ie arising from the historical textual levels of the source language.

The transfer of a message in the scientific and technical fields can often rely on a reasonably stable communication group: chemists remain chemists, be they Russian, Chinese or Afrikaans. This is not always the case concerning translations in the human sciences where, for instance, the marxist and capitalist views on an economic problem may widely diverge, thus colouring the final translation.

To summarize: the problems of scientific and technical translation arise from the temporal relations between the information explosion and the concomitant terminological back-log, but in the field of the human sciences the lack of conceptual comprehension between the cultures separating source and receptor language could lead to serious translation problems.

Imagine explaining the benefits of vaccination against diseases or the advantages of soil erosion prevention techniques to primitive Bushmen, or, on a different level, introducing collective methods to a fiercely competitive capitalist system. In military strategy there are the conflicting strategies of Clausewitz and Beaufre, and even in linguistics one finds diametrically opposed theories which often cloud the eyes of the intended publics. This creates a dilemma for translators: they must develop the habit of seeing both sides of the coin. Roger Roothaer[11] concludes: 'Translation is a reproduction in the target language of thinking contained in a source language'.

The implication of this definition is that translatory linguistics cannot exist without the study of the relationship between language and thought. Newmark[12] seems to endorse this view, thus challenging the primacy of the spoken language. He introduces the idea of a distinction between communicative and semantic translations. The latter, like thought, relates to the word or the word-group, while communicative translation, like speech, relates to the sentence. He advocates the following compromise: '. . . if the original (source text) is reasonably well written and is either extra-cultural or overlaps with the target language culture, there is no reason why it should not be translated communicatively and semantically at the same time'.

Simpson[13] also sees more in language than communication: '. . . Tout cela revient donc a dire que la langue est un instrument non seulement de communication, mais aussi de conceptualisation, l'expérience humaine s'analysant différemment dans chaque communauté'.

The implications for the technical translator are clear: he, too, must acquire a thorough knowledge of the technologies, socio-cultural background and customs of the source language speakers, linked to an extensive study of documentary sources. This presupposes the introduction of subjects such as socio-political geography (Ländeskunde), terminology and documentation into any course for translators and interpreters.

Translation Theory

Translators must be aware that one should not be dogmatic about different translation theories. Anton Popovič[14] stresses the fact that 'Translation theory has an interdisciplinary character and it is the product of interdisciplinary thinking. The results achieved in this field are very relevant; in the Soviet Union . . . there is interest in the psychological aspect. The communicational conception is the product of intervention of the theory of information. Sociology has stimulated the origin of translation praxeology, successfully developed in Czeschoslovakia. It incorporates the analysis of translators' programmes and enterprises, criticism, the work of the editor of the translation text, the history of translators' in-situations, the training of translators, the tools of translators (dictionaries, handbooks). The perspectives of translation studies lie in interdisciplinary character and this helps the theoreticians in arriving at new findings'.

'If we summarize the contemporary state of translation theory and practice', Popovič concludes, 'we must conclude that it is in a state of growth. Translation theory is paying back what it has borrowed methodologically from linguistics, stylistics, the theory of literature, and other disciplines that have helped its evolution. There are nevertheless flaws and reserves; there is still a dearth of exchange of scientific information. The natural sciences could not afford the luxury of studying — and in translation studies too. There is still much methodological exhibition in the theoretical works. The interest in translation problems often has its origin in an effort merely to illustrate the different methods of linguistics. Time will show the validity of the different approaches.'

The Production of the Translation

According to Nida (1978 : 115), the traditional procedure for producing translations, especially of semi-technical material, has called for a specialist to produce the basic draft which would then be submitted to a stylist to polish the language. This method has proved unsatisfactory. The specialist in a technical field is often a poor stylist and, in addition, is so familiar with the subject matter and its jargon that he fails to communicate the contents of a technical text to non-specialists.

Accordingly, in many translation bureaux a specialist produces the first draft and submits this for stylistic revision to a trained general translator 'who can correct lexical usage and add such marginal notes as may be essential for adequate comprehension.'

The Method of Production

Today, as opposed to the single operator or the committee (which can never work in any case), the principle of translation teams is being adopted to an increasing extent.

For example the head of a translation bureau receives the following instruction from the director of the organisation to which he is attached:

a. In October 19... (in 6 months' time) an international congress is to be held on aerospace medicine at the Carlton Hotel for 600 delegates from Britain, the RSA, Belgium, W Germany, Italy, Spain, the Netherlands and Luxembourg. The following topics will be discussed:

   i. Space medicine;
   ii. Altitude diseases;
   iii. Space pathology;
   iv. Ejection at high speeds;
   v. Food for prolonged space journeys;
   vi. First-aid at 30 000 ft;
   vii. Surgery in space.

b. Organise the translation of all the papers; 10 of which (in 4 fields) have been received.

c. Organize interpreter services in French, German and English.

On receiving such an instruction, several questions have to be asked: duration of the conference, total number of papers and the latest date on which these may be expected (at least 2 months before the conference), the choice of interpreters with the necessary background, the need for outside help, qualifications of and remuneration for such interpreters, equipment and hall available, and auxiliary services and aids such as dictionaries, computer facilities, periodicals, handbooks, textbooks, etc.

Assuming the source documentation is received in good time, the first step to be taken is to correlate all the papers and classify them into subjects: space pathology, aircraft disasters, high velocity haematology, etc. For this the help of experts is needed. This is where documentation plays a vital role. A list of all the medical institutes and research bodies, the available dictionaries and glossaries, the necessary periodicals and textbooks is needed. Contacts with these institutions for on-the-spot discussions and consultations must be built up.

Having done all this spadework, translators with the necessary subject knowledge or background must be selected, preferably one senior translator per classification. Allocate assistants to them as follows: each senior translator will be assisted by a language editor for the final editing, a subject specialist (preferably a physician *au fait* with aerospace matters), and two good translators.

Having all the resources at hand, the teams seclude themselves with all their allocated documents and the senior works out a programme.

He will hand out tasks to each translator and after each piece of text is translated, it will be checked by the specialist for content and terminology,

14

and finally checked language-wise by the linguistic expert. The group will then form a syndicate under the chairmanship of the senior to finalize the contents of the papers in the languages required. Obviously one would work language-wise, the translators and editors preferably being mother-tongue speakers of the target language, and being rotated for each language in the group.

This team concept of translation is really the most effective way of undertaking the job and this should avoid placing too much of the responsibility on individuals who can't possibly act as 'jacks of all trades'.

Foot-notes

1. P. Wright: *The Language of British Industry*, p. 5.
2. K. Hudson: *The Jargons of the Professions*, p. 51.
3. *Ibid*, p. 53.
4. J. H. Picard: *Die Probleem van Normering in die Afrikaanse Vakterminologie*, p. 1.
5. P. Wright: *op cit*, pp. 41-42.
6. E. A. Nida: The Nature of Dynamic Equivalence in Translating, (*Babel*, Vol 23, 1977, p. 98.).
7. *Ibid*, p. 99.
8. E. A. Nida: The Setting of Communication, (*Babel*, Vol 24, 1978, p. 116).
9. S. Karcksay: Theoretical and Methodological Difference of Sociological and Technical-scientific translating, (*Babel*, Vol 23, 1977, p. 119).
10. *Ibid*, p. 106.
11. R. Roothaer: Language, Thought and Translation, (*Babel*, Vol 24, 1978, pp. 134-135).
12. P. Newmark: Thought, Speech and Translation, (*Babel*, Vol 24, 1977, pp. 127-129).
13. E. Simpson: A propos de deux points controversés en traductologie, (*Babel*, Vol 24, 1978, p. 119).
14. A. Popovič: The Contemporary State of the Theory of Literary Translation, (*Babel*, Vol 24, 1978, p. 113).
15. E. A. Nida: The Setting of Communication, p. 115.

Bibliography

1. Arntz: Die Studienkomponente Termonologielehre in der Ausbildung von übersetzen und Dolmetschen (*Lebende Sprachen*, vol 24: 1/1979, 1979).
2. Hudson: *The Jargons of the Professions*, London, 1978.
3. Karcksay: Theoretical and methodological difference of sociological and technical-scientific translating *(Babel, vol 23, 1977)*.
4. Newmark, P.: Thought, speech and translation, (*Babel* vol 24, 1978).
5. Nida, E. A.: The nature of synamic equivalence in translating (*Babel* vol 23, 1977).
6. Nida, E. A.: The setting of communication (*Babel* vol 24, 1978).
7. Picard, J. H.: *Die Probleem van normering in die Afrikaanse Vakterminologie*. Unpublished Doctoral Thesis. Pretoria : UNISA, 1979.
8. Roothaer: Language, thought and translation (*Babel* vol 24, 1978).
9. Simpson, E.: A propos de deux points controversés en traductologie (*Babel* vol 24, 1978).
10. Popovič, A.: The contemporary state of the theory of literary translation (*Babel* vol 24, 1978).
11. Wright, P.: *The Language of British Industry*. London, 1978.
12. Wüster, E.: Der Allgemeine Terminologielehre. (*Linguistics* vol 119, 1977).