The relationship between translation and terminology has been addressed by various authors both in the field of translation and terminology. From the point of view of translation, terminology is considered a tool to solve particular problems, while in terminology, translated documents may serve as a source for extracting terms when there are no original texts on the subject in the target language.

In this paper we present the relations between translation and terminology in detail from the perspective of specialized translation and analyze the terminological problems translators face and the most appropriate strategies and resources to solve them. Finally, we present the different degrees of terminology involvement translators may have.

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1. The relations between terminology and translation

Terminology and translation present a series of coincidences. Firstly, terminology and translation are characterized by their long tradition as applied subjects, in contrast to their recently established character as disciplines. Terminology and translation arose from the practical activity caused by the need to express specialized thought or to solve comprehension problems.

Second, due to their relatively recent scientific recognition, both translation and terminology try to advance in the reaffirmation of their status as disciplines by placing emphasis on the features that distinguish them from other subjects and adhering to theories which sustain their autonomous nature as fields of knowledge.

Thirdly, terminology and translation are interdisciplinary fields having a cognitive, linguistic and communicative basis. As a result, their foundation principles come from the cognitive, language and communication sciences. Besides, both subjects are information and communication areas which have knowledge categories and units expressing them that are projected on communicative acts immersed in particular social contexts.

Last but not least, language is the essence of both disciplines. Language is the expression system that reflects speakers’ conception of reality and allows individuals to interact and express their ideas and thoughts.
Despite their similarities, translation and terminology are different fields of knowledge that focus on two different objects: translation deals with the study of the translation process and the analysis of the translated text, and terminology focuses on the lexical form and content nodes representing knowledge as structured in the experts’ mind.

Terminology and translation are also explicitly distinguished by their purposes. Translation is concerned with expressing in a language a semantic-pragmatic structure originally produced in another language. Terminology aims at collecting specialized terms to compile them and produce terminological resources (glossaries, dictionaries, vocabularies or databases) intended to be readily accessible and useful to translation experts, among other professionals.

Finally, translation and terminology bear an asymmetrical relationship. Specialized translation inevitably needs terminology to produce an adequate text. This is so because experts use terms for their texts. In practical terminological work terms are gathered from texts produced by specialists in real communicative situations. On the other hand, in the process of elaboration of glossaries, term extraction from original texts instead of translated texts is a priority. Only in situations where there is no discourse on a subject in a given language, are translated texts used as terminological source.

2. Terminology as a field of knowledge

Terminology, as a field of knowledge, deals with the study of terms. Like any subject, terminology has its applied side, which can be found basically in the collection, analysis and, in some cases, standardizing of terminological units in glossaries or databases.

Terminological units are the object of study of terminology as a field of knowledge and can be described from three different perspectives. Linguistically, terms are lexical units of language that activate a specialized value when used in certain pragmatic and discursive contexts. The special value results in a precise meaning recognized and stabilized within expert communities in each field.

From the cognitive point of view, terms constitute conceptual units representing nodes of knowledge which are necessary and relevant in the content structure of a field of specialty and which are projected linguistically through lexical units. All the conceptual nodes together constitute the conceptual structure of a field. For specialists, the concept is the starting point for terminology work, while for translators the concept is the intermediate point between the original term and its equivalent. The first function of terms, therefore, is the representation of specialized knowledge.

Thirdly, from the communicative perspective, terms are discourse units that identify individuals as members of a professional group and allow them not only to communicate and interact, but also to transfer their knowledge with a didactic purpose to train new experts, or simply spread special knowledge as information to the general public willing to
learn about a subject. The terminological density of texts varies according to their level of specialization: while more specialized the text, the more the terminology it will have. Thus, the second function of terms is the transfer of specialized knowledge.

The linguistic, cognitive and communicative perspectives are inseparable for a holistic description of terms; however, the three approaches are treated separately for scientific purposes.

The communication situations in which terms appear are essentially specialized situations pragmatically restricted as to the characteristics of the participants (mainly the emitter, who is an expert in the subject), the topic, purpose and language function.

Apart from the aspects that may be of interest to a particular professional group, terminology is a field of knowledge centred on terms. Its descriptive and theoretical perspectives aim at describing terms and the way they work, while its applied side deals with the collection of terms in order to develop glossaries as tools intended to be useful for professional needs.

Terminological units are all the lexicalized units used in special fields. Within these units, those of nominal category with referential and denominative value are the prototypical terms. But specialized knowledge can also be expressed by units of other lexical categories (verbs, adjectives and phrases) or other types of units: supralexical (specialized phraseology and fixed sequences) or infralexical (specialized formants).

3. **The translation perspective on terminology**

From the standpoint of translation as an activity, terminology is conceived as an instrument for translation. Terminology resources provide to translators the information needed to solve their doubts, that is, to find an equivalent in the target language, learn the meaning of a term in the source language or select the best option among several alternative terms.

But beyond its instrumental function, terminology also serves translators as a means for acquiring knowledge about a special domain. The terms of any specialty, interrelated by different types of relationships (generic-specific, cause-effect, part-whole, anterior-posterior, material-object, function-instrument, etc.), constitute knowledge structures. Thus, knowing the terminology of a field implies acquiring knowledge of it. In this sense, terminology has a metacognitive function as it helps translators to organize their knowledge on the subject, and provides them the lexical units (terms) to express the specialized knowledge units of the field adequately.

4. **Terminological problems of translation**

In the relationship between terminology and translation two situations, implying two different kinds of needs, can be distinguished. On the one hand, the terminology
requirements of any translation (terminology in translation) and, on the other, the translators’ terminology needs (terminology for translation).

In the first case the terminology work to be carried out by the translator is ad hoc terminology, while in the second, the aim is to develop glossaries useful to translators, and the method is that of systematic terminology work.

When translating, translators face a diversity of problems posed either by the text to be translated or the different contexts of production and reception of the original and the translated text, among which only a few are terminological problems. Translators need to recognize when a problem is related to terminology in order to solve it with a terminological method.

A translation problem is terminological only when it affects terms, i.e. lexical units with a precise meaning in a given special field. A terminological problem may be related to term understanding and the term pragmatic properties in the original text, or to the search for equivalents. The following are situations all translators may acknowledge having been involved in:

- Not knowing all or part of a term, its meaning, its grammatical use or pragmatic value in the source language.
- Not knowing if in the target language there is a lexicalized unit semantically and pragmatically equivalent to the term used in the original text.
- Doubting whether a given unit of the target language is the most appropriate equivalent among the alternatives found.
- Ignoring or having doubts about the phraseology used in a particular field of speciality.

In order to solve the problems encountered in the understanding of the source text, translators use reference books to learn the meaning of units or their grammatical and pragmatic conditions of use. These reference works are often reduced to monolingual specialized dictionaries in the original language or bilingual and multilingual terminological databases. Translators expect to find the information they need to fully comprehend the text to translate, and may also consult experts with competence in the source language.

In the translation phase, translators must fundamentally solve equivalence problems, i.e. finding an equivalent or selecting the most appropriate equivalent. Unlike the logic of translation, solving terminological problems is not about finding a strategy to ensure equivalence, but finding an equivalent term.

In some cases terminological resources do not resolve translators’ doubts. Sometimes this is due to the lack of reference terminology in the language of translation, but most of the time the cause is attributable to the lack of updated glossaries or their inadequacy for the specific needs of translation.
Among the problems caused by the inexistence of terminology which reference works left unresolved, we can find the following cases related to the target language:

- It is not possible to find a lexicalized unit (term) because specialists do not use this language to communicate on the subject.
- There is no lexicalized unit satisfactory from the linguistic point of view because specialists make systematic use of the loan.
- There is no standard unit agreed upon by the specialists or sanctioned by standardization or normalization bodies.

In the quest for equivalents, translators start, at least in principle, from the assumption that all terminological units in the source text will have an equivalent terminological unit in the target language. If the search is unsuccessful and no equivalent is found (a situation that only occurs when the topic at issue has never been dealt with in the target language) translators may propose a solution, i.e. a new term, which should be accordingly acknowledged with a footnote.

It is clear that to be able to propose a term translators must have acquired a sound knowledge of lexical morphology, lexicology, sociolinguistics and pragmatics. Besides, some degree of feasibility of use of the suggested term is required.

When confronted with different alternative terms, to decide between choosing one possibility or coining a new term is not an easy task. It implies considering all the possibilities and means of resolution for each type of problem and act accordingly. Broadly speaking, translators must consider other proposals and neological criteria established by standardization bodies, the general structure of language and lexical resources available (including loan and possible adaptations) and the grammatical possibilities to form new terms, the characteristics of the specialized area term system the new terminological unit will form part of and the linguistic viability of the proposed term, and the chances of being accepted and used by the expert group.

Once all the possibilities have been considered, the translator must make a decision and choose the term to be used in the translation. This term must be sufficiently documented so as to avoid the proliferation of terms coined by translators, as individual translators are not sources of consolidated reference terminology.

It is not always clear which position should be adopted before denominative variation. Given the presence of numerous equivalents, translators may consider the convenience and adequacy of formal diversity in the target text with respect to the original text, the relevance of formal diversity in relation to the area of knowledge, and the characteristics of each lexical variant in order to decide one of the following options:

- Respect the denominative variation of the original text and use all the variants indiscriminately, as if they all were completely interchangeable.
- Use the variants discriminatingly, selecting one or another for different uses.
- Select one or more variants as systematic forms of reference.
In any case, in order to maintain or reduce the variants the translator must take into account some general linguistic variation aspects related to the geographic scope of a language and its diversification, the levels of geolectal variation and willingness to maintain it, the pragmatic diversity of the lexical variants, the criteria for language and terminology planning, if applicable, the scope of the domain, its interdisciplinarity, its relation with the fields of technology and natural, social or human sciences, etc., and the level of precision of the text and its pragmatic context.

5. Terminology resources for translators

To solve the terminological problems that arise in the translation phase, all involving the search for an equivalent or the selection of the most appropriate equivalent, translators make use of three main types of resources:

- Monolingual textual documentation resources: specialized texts on the subject, preferably in digital format, usually via the Internet.
- Terminological documentation resources: bilingual and multilingual dictionaries, terminology and knowledge databases.
- Bilingual or multilingual textual resources: parallel or multilingual comparable corpus.

5.1 Textual resources

To acquire general information about a subject translators may make direct consultations to specialists or consult general and monographic works (manuals, monographs and articles), as well as encyclopaedias and tools for documentary work, such as hierarchical classifications, subject indices or thesauri, which also provide, to a greater or lesser degree, information about the conceptual structure of the subject through terms.

Currently most of the queries profit from the advanced search engines available on the Internet. These engines allow searching for terminological information in specialized textual corpora. Automatic searches provide not only terms but also concordances, i.e. linguistic contexts containing the term being sought.

As already known, the criteria used to assess specialized texts are the same as those used for general texts. In the latter, expressiveness, variety and originality prevail over other features, while in specialized texts conciseness, accuracy and adequacy are the most relevant criteria.

5.2 Terminological resources

To resolve translation issues related to equivalents, in addition to the textual documentation just mentioned, translators also use dictionaries, vocabularies or specialized lexicons, terminology standards and terminological databases.
Lexicographical works – general or specialized and online, digital or paper format – are a good source for obtaining and cross-checking knowledge on a given subject, and they are even more useful when the subject is approached from the point of view of the user’s interests.

Aligned parallel corpora provide translators terminological equivalents in context.

Besides this type of material, in order to increase the efficiency of their searches translators must also take into account the value and reliability of the documents consulted and their sources. According to this criterion, it must be distinguished between informative or descriptive documents from texts having an instructive or standardization purpose. Included in this second category are international and national standards as well as those standards elaborated by institutions with authority on terminology, and all compilations of terms directly or indirectly standardized by authorized institutions.

Terminology banks have played an important role in the information society. As they were originally conceived as instruments for translation, they were basically bilingual or multilingual, and focused more on forms of designations than on the conceptual aspects of terms. Later, when terminology focused on the standardization processes of minority languages, monolingual banks (with or without equivalents) allowed studying content-related aspects further.

The primary advantage of terminology banks in relation to traditional glossaries is the possibility to be continuously updated, as well as their capacity to store a large number of terms and term-related information, which allows oriented and selected data retrieval.

Initially, the purpose of translation-oriented terminology banks was facilitating translators the search work by providing a lot of information in one work. The underlying idea was that the needs leading translators to search a terminology bank were similar to those that drove them to consult dictionaries (spelling of a term, meaning, grammatical information, area of use, equivalents pragmatic or normative adequacy of variants, etc.). However, this information was often blurred by the importance given to the concept-term relationship and standard forms in terminology theory, which rested importance to other type of data highly necessary for translators, such as contexts of use, grammar and variants.

To fill these gaps and optimize the efficiency of specialized banks of information, current terminology data banks, as foreseen by Sager in 1990, are in fact knowledge data banks, as they:

- Integrate various related databases: textual, terminological, documentary and factographic, plus a domain ontology.
- Contain a wide variety of data such as nomenclatures, specialized terms, collocations and phraseology, with the information necessary to identify all those units.
- Can be used as monolingual, bilingual or multilingual dictionaries indistinctively.
- Allow online access.
- Can be used as the basis for the production of dictionaries.
A database of these characteristics is not only a tool for consultation, but rather a basic tool for dictionary editing and knowledge transfer. Thus, from being no more than an automated version of a dictionary aimed for restricted use, databases became multifunctional and flexible instruments catering for the search needs and interests of different user groups.

In brief, from one and isolated database we are heading today towards a system environment, from which access to remote information contained in various databanks is provided. This is possible thanks to intelligent search engines, which, given a query, gather and offer all the information about it found in different individual banks.

5.3 Bilingual textual resources

It should be mentioned that, for translators, parallel corpus (containing original texts and their translations) are very useful. While working, through translation memories translators progressively create parallel corpus they can use and profit from later on.

6. Translators’ terminological involvement

When confronted with a terminological problem, translators may adopt four different degrees of terminology involvement.

At the first level of involvement, in order to solve a terminological problem translators basically consult dictionaries and specialized databases and, if they cannot find a solution, they resort to terminology consultation services. If the problem is not solved, translators may simply write the original term with quotation marks or explain the concept through a paraphrase. In this first level, translators are completely passive in terminology as they only need lists of consultation centres, data banks and specialized dictionaries, together with some adequate training to consult them properly.

The second level of terminology involvement occurs when translators cannot find an official solution for the terminological problem and draw on their general linguistic competence to fill the gap with a neological term, which must be documented in a footnote. In this way, the translation process is unblocked by proposing a well-formed unit in the target language. As in the first level, the translator does not participate in terminology work in this case, as the resolution of the terminological problem is approached from the logic of lexicology, and not from terminology.

It is at the third level of involvement that, in order to find an equivalent, the translator acts as a terminologist from the methodological point of view: once the problem is located in the conceptual structure of the field, the terminological gap is filled by means of a new term proposal, which is done based on the observation of the patterns of term-formation in the field of specialty, and pondered regarding its viability of use. In this case, the translator starts to be minimally active in terminology and acts as ad hoc terminologist.
At the fourth level of involvement, translators resolve terminological problems and cover denominative gaps by drawing on terminological information from their own databases, which contain the terms as well as the term proposals from prior translations. Besides, at this level translators edit the terms in a glossary, so that it can be useful to other translators working on the same topic. By doing this, the translator acts as system 
term 
terminologist, and must know the correct methodology for systematic monolingual and multilingual terminology search.

To be able to act as systematic terminologist, translators should also learn some of the basic principles of terminology, as the following:

- Terminology should not be confused with translation; terminology work consists in finding terminological equivalents (i.e. lexical units used by experts in the target language).
- Neither must terminology be confused with systematic neological work. Neologisms are used when all the possibilities of finding a real term have been exhausted.
- Terms are lexical units of languages, thus lexical formation rules and tendencies for word combination in discourse should be respected.
- Terms are indivisible units with form and content; thus, terms can not be reduced neither to a concept, regardless of its form in a specific language, nor to a designation dissociated from its content.
- The form and content of terminological units are doubly systematic: first of all in relation to the general language, and more specifically, in relation to the field of expertise to which they belong.
- The form and content of a term are thematically specific; consequently, a lexical unit is a term only if it is associated to a field of expertise.
- All terminological data must have a real source. This means that terms in monolingual terminology works are collected from real specialized discourse produced by experts; in the case of a neological proposal, the source is the author who suggests the neologism.

References


**Further reading**