Specialized Bilingual Dictionaries for Translators (Some Considerations for a User-Oriented Approach)

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*In memory of Brian Hughes,
from whom I learned so much
and to whom I owe so much.*

ABSTRACT

Given the strong demand for multilingual communication aimed at the transfer of research and investigation results of any kind to the dissemination of technological progress on a worldwide scale, specialized bilingual dictionaries are the main tools at the disposal of translators. Although it is generally accepted that dictionaries are to be user-oriented, i.e. designed for specific users, the underlying implications of such an obvious statement are not always taken into consideration. The aim of this paper is thus to present a brief explanation of some aspects that must be considered when carrying out a terminological work designed for a specific user: the mediator of interlinguistic communication.

1. Introduction

We share with Atkins (2002) the opinion that "the ideal dictionary should be tailored, or at least tailorable, to one particular type of user". Therefore, and with the main aim of compiling and representing the appropriate information so that the terminological product

is adequate and coherent to a professional and social reality, we ought to identify the needs of our target user.

Any terminological product (a glossary, a dictionary or a database) dealing with any specific subject, must also take into account the audience for whom it is intended, because it is quite clear that a non-specialized public, for instance, with easy reference or reading needs, will not request the same kind of information as a specialized public with more specific informative needs. This statement is usually accepted by most terminographers, so all the decisions related to the quantity, the type of information, and its representation within the dictionary will have to take into account the needs of the target users[1].

The assumption of adequacy must hence guide and vertebrate the methodology of any terminological work. That means that the final product must be adequate and coherent to the objectives, needs and prospects of the profile of a prototype user, which in our case is the mediator of the interlinguistic communication, that is to say, the translator.

Translators as users of terminology (in the sense of a set of units of expression and communication which allow specialized knowledge transfer) and with linguistic and cognitive needs in the frame of communication and specialized information, are usually confronted with technical texts which belong to specific fields from different knowledge areas. Very often, translators cannot find specific reference material available for those specialized areas, being left no alternative but to do an *ad hoc* and text-driven terminological work, strongly marked and limited by short delivery deadlines. On other occasions, if they find reference materials, even in both the target and the source language, they may be inadequate either because they do not comply with the minimum conditions of adequacy, due to a lack of expert support from specialists in a given subject field (especially with regard to validity and currency of terminology, degree of specialization and available linguistic information), or because they do not consider the level of knowledge adequate for their professional needs.

The deficiencies and lack of adequacy in dictionaries, which do not frequently provide translators with terminological information appropriate and necessary to their professional activities, social needs and to their role of mediators within the process of specialized communication, make translators sometimes take wrong decisions that, inevitably, affect the intelligibility of the translated text. The result is often reflected in the consistency of the technical terminology, one of the main parameters established from the theory and professional practice of translation[2], to measure quality in technical translation, and without which the text can hardly reach an adequate level of intelligibility.

2. The dictionary as a problem-solving tool in specialized communication

The fact of using a dictionary often indicates a case of emergency: the user does not know a word or is not sure of the meaning of a word, he does not know how to express a concept, or does not understand the extension or the intension of a word, or he wants to verify something, etc. In these cases, the dictionary becomes a valuable tool orientated to solving

the specific problem of the user who reaches for it. Therefore, any user-oriented dictionary, like the translation-oriented dictionary, must not overlook that this problem-solving activity in fact involves at least three aspects (Martin and Al, 1988: 349):

- the knowledge of the user,
- his aims or needs,
- his search strategies.

Often, the terminological practice focuses on the second aspect, and often overlooks the former and the latter. The result is that dictionaries do not always comply with the assumption of adequacy, so they often fail to meet the sufficient and necessary requirements they are supposed to.

Before proceeding to the description of the main points implicit in each of the aforementioned aspects, it is essential to define, first of all, the profile of the translator as user of specialized bilingual dictionaries. Only through the identification of this professional profile could we design an adequate tool for solving translation problems, which will take into account the aims and needs of the translator. These needs will, in turn, determine how to tackle the subject field of the dictionary, an aspect which is intimately related to the presumed level of knowledge of the user, and finally, his search strategies in the dictionary.

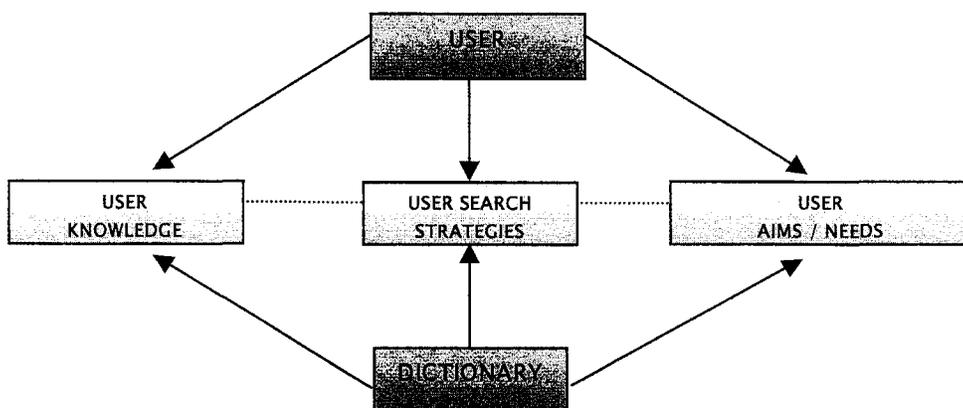The relationship of the dictionary with the user can be schematically represented as in

Figure 1. Relationship of the dictionary with the user in the problem-solving activity [adapted from Martin and Al, 1988]

2.1. The translator and the translation of specialized texts

The translator is the professional who occupies an intermediate position in the dynamic process of communication between the sender of a source text and those who turn out to be their receivers in a target language. Generally speaking, translation is a process that takes place in three stages: a) reception / comprehension; b) change of code; c) production / expression[3]. The objective of translation is, therefore, to guarantee communication between interlocutors who speak different languages (L_1 and L_2), hence creating for any source text in L_1 a target text in L_2.

Within the translator's professional tasks, the translation of specialized texts is one of the most important. That is due to, on the one hand, the transmission and exchange of knowledge on a worldwide scale, which has turned out to be a necessity on account of the vertiginous rhythm imposed by technological progress; on the other hand, there is an increasing need of normalisation and legislation of products when they have to cross frontiers, so manufacturers are required to order the translation of many documents, such as patents, norms, certificates, manuals, handbooks, etc; lastly, we should not forget the importance and influence of multinational companies in the globalized market, which often resort to translation of documents as a commercial strategy (Gamero, 2001).

"Specialized translation", a generic term which includes different varieties such as scientific translation, legal translation, economic translation, technical translation, administrative translation, etc., is defined as the translation of texts addressed to specialists in a subject field and belonging to the so-called special subject languages. In this respect, all specialized translations are characterized by the usage of a special language in the texts that requires the translator to possess a special knowledge of the subject field and a good command of the specific terminology of that field, among other things.

The use of special subject languages in translation implies that the translator must identify with the sender of the message, that is, the specialist, and must therefore assume his own competences and skills. So, in order to comply with his role as mediator of communication, the translator will have to understand and comprehend the specific subject matter he is translating and its cognitive specificity, as well as the lexical units which are characteristic of the field; he will also have to know how to express that knowledge, adequately and with precision, and all that with the spontaneity of a native speaker specialist (Cabré *et al.*, 2000: 168). Otherwise, the translated text will not achieve the minimum standards of quality. In view of that, if the translator wants his translated text to be –in relation to the source text– literal regarding content, grammatical in its expression, appropriate concerning its modalities, and stylistically adjusted, he will have to approach as closely as possible the lexical uses the producer of the text would have chosen if he had expressed himself in the target language (Cabré, 2000c).

From the above, it may be deduced that, in order to perform his function of mediator of the specialized communication and to solve all the problems derived from textual function, the translator must develop some competences parallel to those of the specialist who naturally communicates about the special subject matter:

(a) linguistic competence in both languages. This refers to phonetic or graphematic, morphemic or lexematic knowledge. It also covers the linguistic knowledge which reflects in the correct use of language through expressions adapted to a given communicative situation, in accordance with the conventions of social interaction;

(b) cognitive competence in a given subject field, i.e., a comprehension competence in the subject field which is being translated;

(c) competence in the terminology of a given subject field;

(d) good command of the conventions of textual genres in both languages. It also includes textual and discursive knowledge about the thematic progression in relation to previous and subsequent passages to the lexical unit, to the phrase or to the text.

Apart from these competences that allow the translator to acquire the expert knowledge he needs to perform his function within the communicative process, there are some other skills related to the practice of translation, and without which it is not possible to bring the translated text to a successful conclusion. We refer to:

(a) translative competence, which allows the translator to cover the transfer process from a text in an source language, to another text in a target language;

(b) competence in documentation, as a working tool which simultaneously serves the purpose of acquiring knowledge about the special subject matter, mastering its terminology and obtaining information about the textual conventions of the genre.
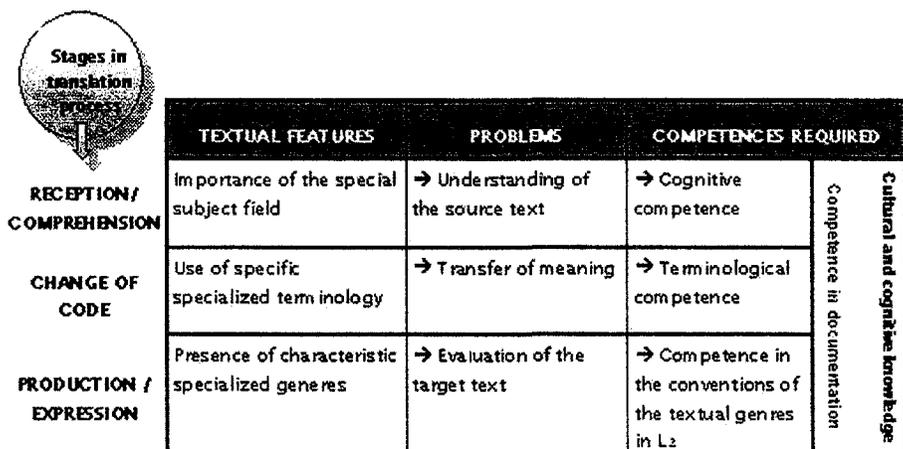
Stages in translation process	TEXTUAL FEATURES	PROBLEMS	COMPETENCES REQUIRED		
RECEPTION / COMPREHENSION	Importance of the special subject field	→ Understanding of the source text	→ Cognitive competence	Competence in documentation	Cultural and cognitive knowledge
CHANGE OF CODE	Use of specific specialized terminology	→ Transfer of meaning	→ Terminological competence		
PRODUCTION / EXPRESSION	Presence of characteristic specialized generes	→ Evaluation of the target text	→ Competence in the conventions of the textual genres in L2		

Figure 2: Diagram of the specialized translation process according to the textual features of texts, the problems derived therefrom, and the competences required

The way the translator can obtain the specific competences necessary to acquire knowledge about the special subject matter and about the terminology characteristic of the discourses produced in that field (especially in the target language), as well as the usual hurried nature of his professional activity, make him the main user of specialized dictionaries. In this respect, it is obvious that if a terminological product is intended for translators, the data included should be different from those required for a product conceived, for instance, for an expert in a given field[4].

Since dictionaries, whether specialized or not, serve the main function of covering the needs of their users (who use them with different aims), the kind of user will have methodological consequences of great significance, such as the selection of the corpus to be used as a textual resource, the word list to be included, the different data attached to terms, the organization of entries and subentries and even the way the data are presented.

3. The specialized dictionary and the user's needs

Defining who is going to be the end-user of a terminological product also implies thinking about its aims. In fact, when compiling a dictionary it is very difficult to make a distinction between these two criteria, so both must be dealt with jointly. Since any professional can carry out different activities, it is necessary to demarcate and limit two basic characteristics of the group for whom the dictionary is intended, which at the same time will entail some important decisions that later on will affect the macrostructure and microstructure of the dictionary. These two characteristics we make reference to are:

   (a)   the needs of the users;
   (b)   the professional aims of the users.

In our particular case, we have identified firstly the terminological needs of our user, the translator (interlinguistic oral and written communication, with different levels of specialization), and secondly, we have limited the possible professional activities of the translator to only one aim: interlinguistic mediation (translation and interpretation of specialized texts).

Even though there are different mechanisms for the translator to gain access to the specialized information he needs (databases, specialized printed or electronic texts...), the specialized bilingual dictionary is, as we said before, one of the main support tools he can count on for the translation of specialized texts. But, in order to help him efficiently in the translation process, the specialized bilingual dictionary must allow him to carry out two basic and complementary functions:

   (a)   the comprehension of texts;
   (b)   the production of texts.

The comprehension of texts implies the understanding of a specialized text in a given language, which can only be achieved through immersion in the corresponding knowledge area. For the specialized dictionary to assist the translator in the comprehension of the special knowledge, it must be orientated towards the conceptual universe of that special area, i.e., towards those notions that articulate the knowledge of that field, as well as those that, although belonging to different areas, are relevant to the said special field.

Production of texts involves the aim of generating texts in one or more languages, which necessarily requires a good command of the terminological units and their behaviour in the text on the part of the translator. The dictionary must thus provide information about those lexical units, hence allowing the translator to transfer them from a source linguistic system to a different target system, as well as to insert them in the text as accurately and precisely as the native expert would. These units are not static, but they change depending on parameters such as time, space, socioprofessional group, level of specialization, communicative intention, etc.. Furthermore, they do not appear isolated in the texts; rather, they combine with other units according to the grammar of the language they belong to and to the syntactic conventions given by the text type. Regarding the form of these units, translators not only need terms made up of one single element, but they also require syntagmatic compounds; pluriverbal units such as *grado de desviación máxima permisible en el control de calidad* -> acceptable quality level, or *solidez del color de materiales para el calzado a la luz* -> colour fastness to light of footwear materials, may seem transparent when they are found in a text and the translator has to decode them, but only rarely can he anticipate how these complex units are made up in order to encode them in the target language.

For that reason, the terminological units contained in a dictionary cannot be conceived as a mere classificatory instrument; rather, they represent by themselves working tools in the context of dynamic situations where the translator intervenes actively, in order to understand –on the one hand– a specialized text in a source language, and to produce –on the other hand– an equivalent text in a target language. Only if the dictionary facilitates these two functions, will the translator be able to perform his role of mediator within the communicative act in which he is intervening, and therefore carry out both the decoding (from L_1 to L_2) and encoding (from L_2 to L_1) tasks.

4. The specialized dictionary and the user's knowledge

Once we have defined the needs and aims of the users, the next factor we ought to take into account is the knowledge of the intended user, i.e., the knowledge representation system the user has at his disposal. This presumed knowledge will have consequences in two important ways:

   (a)   the perspective from which the specialized subject is going to be dealt with;

(b) the terminological information to be included.

Regarding the set of units which is going to determine the level of specialization of the dictionary (which in our case and, due to its aim, ranges from a medium to high level of specialization), we must take into consideration that the translator has to deal with texts which are subject to variables such as time, space, socioprofessional group, level of specialization, degree of formality, etc. Thus, the dictionary has to adequately assess this horizontal and vertical variation given in the specialized text and, consequently, in the linguistic units from which they are composed (García Palacios and Fuentes Morán, 2002). Concerning the level of specialization of the lexical units inventoried, it is necessary to create a model. In accordance with Alcaraz (2004), whenever we want to understand any aspect of reality, we will have to build a model, even if it is quite modest, a model that will be composed of categories. The vocabulary model we propose comprises three categories:

(a) the subject-specific terms, or highly technical terms: thimble hole, turnshoe, strap shoe, *ancón, chaira, desbravador, chinela, enfranque, chiruca,* etc.[5];
(b) the non-subject-specific specialized terms or non-technical terms (border terms between the special subject language and the general language): maker, last, filler, point, pattern, iron, *ajuste, acabado, desmoldeante, entretela,* etc.;
(c) general vocabulary of frequent use in the special subject field: model, test, rough, *ensayo, proceso,* etc.

Regarding the terminological information to be included in the dictionary, we must assess the special needs of the user and the main aim of the dictionary. Although at first sight it may seem advisable to include as much information as possible, it can certainly be unproductive, depending on the user and the purpose of the dictionary. For example, an expert may manage without semantic information such as the explanation or definition of a concept, or even the thematic field label. However, a translator who is not a specialist in the field may find that kind of information very useful, insofar as it assists him in the comprehension of the notions which articulate the knowledge of the special domain.
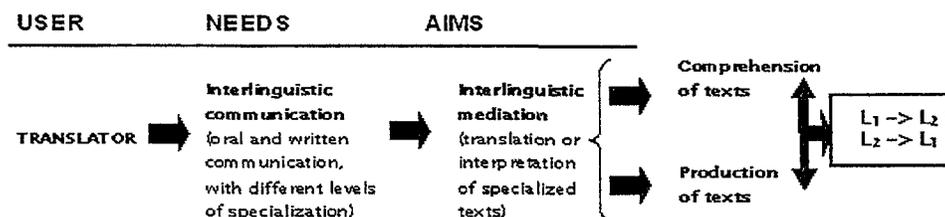

Figure 3. Dictionary aims according to the user and his needs.

In this respect, the translator-oriented dictionary must provide the information considered necessary for the translator to carry out both the comprehension and production tasks which are implicit in the interlinguistic mediation process. Thus, apart from the equivalent term, the translator-oriented specialized dictionary must provide the translator with extra information in order to facilitate the process of translation, taking into account the time limits imposed by this professional activity. The extra information we refer to is that linguistic information which may go beyond the limits of the strictly necessary and sufficient, as for instance, the definition (since it describes the concept which represents the meaning of a linguistic form or denomination); the thematic field (which allows the differentiation between different meanings of a terminological unit potentially polysemous, as well as its association with the most appropriate equivalent in the target language); the relationships between concepts; the grammatical category; contextually adequate expressions; synonyms, etc.

This information as a whole comprises what in lexicography and also in terminography is commonly called *microstructure* of the dictionary. The microstructure refers to the set of data that a terminological entry may contain, the way they are represented, i.e., their layout, as well as the order in which they appear.

As we have pointed out earlier, in order to understand the world and reality it is essential to build a model. Broadly speaking, the model we propound comprises four types of information:

(a) **contextual information**: illustrations of the terms as they are used in real specialized discourses;
(b) **semantic information**: definition, thematic field labels, equivalence, cross-reference;
(c) **grammatical information**: grammatical category of entries;
(d) **pragmatic information**: labels about the frequency of terms or their variation (diatopic, diachronic, diastratic, diaphasic or dianormative variation of terms).

From the above, it emerges that in order to achieve a minimal degree of adequacy, dictionaries must specialize according to aims, which in turn are determined by the type of needs of the users.

4. The specialized dictionary and user search strategies

Considering user search strategies implies taking a series of decisions regarding the macrostructure and microstructure of the dictionary. Since translation is an activity strongly marked by time limits and delivery deadlines, it is important that the printed[6] translator-oriented dictionary should be easily accessible and clear in its organization and internal distribution. In this respect, we ought to think about some essential points in order to build up an appropriate pattern. As Martin and Al argue (1988), the more this

pattern is in accordance with the user's intuitions, the more friendly it is.

Looking-up strategies in the dictionary determine some important aspects related to its macrostructure and microstructure. For obvious reasons of space, this paper does not attempt to go through each one of them, so for the time being we will restrict ourselves and just illustrate some of the parameters with examples taken from the *Dictionary of Terms of the Footwear and Allied Industries*:

(a) the order of the word list.
(b) the distribution of entries and subentries.

mechanical *a*: GRAL mecánico. [Exp: **mechanical abrasion** (CALIDAD abrasión mecánica ? *The removal of the flesh side of the leather by mechanical abrasion produces a suede effect*; V. *abrasion*), **mechanical adhesion** (ELAB adhesión mecánica; adhesión que se efectúa tras una acción mecánica como la fricción o el lijado por la que se crea una rugosidad que favorece el anclaje mecánico del adhesivo ? *?Surfaces must be sufficiently textured to assure good mechanical adhesion*; V. *mechanical bond*), **mechanical awl** (MAQ lezna mecánica V. *awl*), **mechanical damage** (CALIDAD/MTRLS daño mecánico ? *?Damage to a dark leather with a dark finish is often less obvious than a similar amount of mechanical damage on a light leather with a dark finish*)].

(c) the order of subentries within the entries.
(d) the representation of homographs.

filler[1] *n*: ELAB carga [del molde]. [Exp: **filler**[2] (MTRLS pernito, ahormado; tipo de horma que se introduce en el zapato para evitar que se deforme; V. *tree*), **filler**[3] (MTRLS relleno; material empleado para rellenar cualquier vacío entre la plantilla y suela ? *A board filler is often inserted into sandals, house slippers, etc. to give them a better shape*; V. *cushion; bottom filler*), **filler**[4] (MTRLS/PIEL rellenante; producto que tiende a depositarse en la capa más cercana al cuero, no produciendo por tanto efectos de luz, sino un mejor relleno y una superficie más lisa, corrigiendo algunos defectos de la flor ? *?Unless fillers, dyes or pigments are present, the coating solution is essentially water clear*), **filler rod** (V. *welding rod*), **filling**[1] (MTRLS relleno V. *heel filling piece*), **filling**[2] (MTRLS/PIEL tapaporos; V. *stopping*)].

(e) the distribution of the different terminological data contained in the microstructure, i.e., the layout.

   • *Contextual information:*

emery wheel *n*: MAQ disco de esmerilar ? *?The grain surface of the leather is lightly abraded with emery wheel or sandpaper.*

abedul *n*: MTRLS birch ? *?El revirón se fija a la palmilla con tacos de abedul, puesto que la madera es fácil de astillar longitudinalmente pero difícil de romper en dirección transversal.*

   • *Semantic information:*

   o *Definitions:*

French chalk *n*: MTRLS creta de España/Briançon; tipo de talco que se emplea como lubricante para facilitar

la entrada y salida del zapato de la horma.

oficial *n*: GEN clerk, craftsman, skilled/qualified worker, tradesman; the term *oficial* followed by the name of a particular trade or profession indicates that the worker concerned is fully trained, qualified, experienced and time-served but has not yet reached the rank of *maestro*, or "master".

    o *Cross-references:*

carpet slipper *n*: TXTL V. *albert*.
continental size *n*: MEDIDA V. *Paris point*.
NIF *abr*: MNGMNT S. *número de identificación fiscal*.

    • *Pragmatic information:*

pudding stone *col n*: PETRO pudinga *col* V. *conglomerate¹*
ocreas *obs n*: GRAL zapato.

    • *Grammatical information:*

a: adjetivo; *n:* sustantivo; *v:* verbo; *n/v:* sustantivo/verbo; *a/n:* adjetivo/sustantivo; *a/n/v:* adjetivo/sustantivo/verbo; *adv:* adverbio; *n pl:* sustantivo plural lexicalizado; *abr:* abreviatura [*abbr:* abbreviation]; *prep:* preposición; *pref:* prefijo; *suf:* sufijo; *fr:* frases o locuciones [*phr:* phrases].

The choice of an alphabetical order, the distribution of subentries in sections alphabetically ordered (whether the subentries are a graphic unit, two words joined by a dash, or two words separated) under the main entry, the representation of homographs by means of superscripts which distinguish one unit from the others, or even the choice of a certain typography, are some of the aspects which may facilitate the translator's access to terms, thus saving him going through tedious, time-and energy-consuming and possibly unproductive searches. Once more, we can see how the conditions of production and reception imposed by the dictionary user predetermine our decisions in the dictionary-making process, even those regarding the organization and presentation of the information in the dictionary.

5. Conclusion

Given the importance of the user in the design of any terminological product, in this paper we have examined some of the issues that should enter into consideration when creating a translation-oriented dictionary. Although it has not been our intention to deal with each of these issues exhaustively, we have tried to outline the main implications underlying the three aspects involved in the problem-solving activity of the dictionary, viz.: the knowledge of the user, his aims or needs and his search strategies. Based on the assumption of adequacy (an assumption which guides the whole terminological methodology), we have, first of all, identified the needs of the translator within the communicative act where he intervenes as a mediator, and then determined the conceptual

and terminological scope of the dictionary according to the level of specialization required. Finally, we have given a brief account of some of the criteria which should be considered regarding the organization and internal distribution of the information in the dictionary.

Notes

1. Sometimes it is not so easy to condition the configuration of the dictionary exclusively to users, because user typologies are quite complex and do not cover all the possible user profiles, or because it is very difficult to systematize the kind of users that may consult the dictionary, especially those dictionaries in electronic format and on-line access through the Internet. Moreover, basically on account of economic and commercial reasons *microspecialization* of dictionaries is not always the most desirable option. In order to overcome some of these limitations related to the adaptation of dictionaries to users, Gelpí (2004) proposes a distinction between *users* and *addressees*. So, while the latter refers to the group to which the dictionary is envisaged, the former alludes to any possible user of the dictionary, but not to its main consumer.

2. As Wright states (2001: 490), "the determination, documentation and effective application of terminology play a pivotal role in document production".

3. We are aware of the impossibility of reducing the translative process to a three-stage sketch. Actually, it is an integral process which does not follow a strict lineal order, so it is not easy to divide it from the psycholinguistic point of view. Methodologically, these stages are "intricately intertwined" (Neubert, 1997: 6), since there are constant swings between them, the expression straining and modifying the comprehension and vice versa.

4. Estopà (1999) demonstrates in her thesis that different users have a different notion of what a term is and, consequently, if they are requested to identify terms in a text in order to distinguish them from words of the general language, each user will provide different results.

5. All the examples are taken from the *Dictionary of Terms of the Footwear and Allied Industries*.

6. In this paper we only deal with printed dictionaries, and the implications of any other terminological product in a different format (i.e. electronic) are beyond the scope of this work.

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