

Paola Faini

TERMINOLOGY MANAGEMENT  
AND THE TRANSLATOR

*From Project Planning to Database Creation*

12

Intersezioni/Intersections  
Collana di anglistica

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# Introduction

## Special languages and terminology

Specialist areas have been subject to intensive development and updating in recent decades, affecting specialist knowledge and specialist communication within and across national and language boundaries. This increasing specialization has motivated, and continues to motivate, the implementation of a given “code” and, consequently, the development of special languages<sup>1</sup> that make the transfer of specialist knowledge possible.

Notwithstanding their crucial role, special languages tend to constitute “islands” of competence where the interaction between the various domains and users is sometimes complex and does not always fulfil communication objectives satisfactorily. In fact, while peer-to-peer specialized communication has evidenced an improvement in precision due to the unequivocal designation of facts and objects belonging to the specific domain, excessive specialization may make transversal communication and transposition into ordinary language less immediate and more difficult to obtain. In response to these problems, the set of activities carried out in terminology management aims at ensuring a consistent use of correct terms<sup>2</sup> in specific domains and is thus an invaluable support in communication and standardisation work<sup>3</sup>, translation/localization, various corporate activities, customer docu-

<sup>1</sup> According to the EU Terminology Database definition, a special language is the language «used in a subject field and characterized by the use of specific linguistic means of expression» (ISO 1087-1:2000.) ISO/IEC 15944-8:2012 adds the specification of «language for special purposes (LSP)». These means of expression always «include subject-specific terminology and phraseology and may also cover stylistic or syntactic features» (ISO 1087-1:2000).

<sup>2</sup> In ISO/TS 19104:2008 and ISO 12620:2009, a term is defined as a «verbal designation of a general concept in a specific subject field.»

<sup>3</sup> This activity normally indicates not only the coinage of neologisms, but also the elimination of synonymy and the reduction of polysemy/homonymy. Consequently, terminologists can play a role in regulating a special language, whereas lexicographers describe words in general use.

mentation, etc. These considerations contribute in accounting for the efforts of terminology planning in view to studying those terminological features (mostly specialized lexical items) for which a consensus within the domain has been reached and thus enable the transfer of knowledge.

While the study of terms is seen as a question of application by terminologists, it is also of primary interest to translators depending on their area of expertise. Good terminology management, in fact, reduces translation time, helps produce good quality consistent translations, and cuts localization costs. Last but not least, it is also an excellent way of acquiring specialist skills, and this results in greatly increasing the quality of the translator's professional life. These skills can be developed at an early stage if terminology training is given an appropriate role in translator training programs: language competence and translation skills can certainly benefit from the balanced and consistent frame of mind that terminology helps to create.

It is with this methodological intent that the case study outlined in this book has been conceived. The topic is presented from an application-oriented perspective and thus with particular focus on the various phases in the development of a descriptive terminology project.

# 1. Theoretical Framework<sup>4</sup>

## 1.1 An overview of the theoretical grounding of the project

The theoretical premises of the project developed within this case study, though inspired by Wüster's<sup>5</sup> pragmatic model, have more in common with Cabré's Communicative Theory. This sees terminology «not an end in itself» but a way to address «social needs and [...] optimize communication» (Cabré 1999:10) through a set of practices intended to provide answers to the questions posed by such needs.

Wüster's model, usually referred to as the “General theory of terminology”, was actually never defined as such by Wüster himself. On the contrary, he spoke of *Terminologielehre*, thus implying «practical guidelines rather than a purely theoretical approach» (Cabré 2003:165). At the time his approach seemed to respond to the question of setting clear technical standards and avoiding the diversification of terminology. The need for sound principles for naming technical concepts was particularly apparent in industrially advanced countries and for this reason termi-

<sup>4</sup>It is not within the scope of this study to provide a theoretical discussion on the origins and developments of terminological studies. In this specific context, it seems preferable to touch upon the theoretical principles underlying the project itself, i.e. with a view to applications only.

<sup>5</sup>The Austrian industrialist Eugen Wüster (1898-1977), commonly regarded as the founder of modern terminology, set out the basis for a scientific approach to terminological issues and gave terminology the status of a science. In the early 1950s a terminology center was set up in Wieselburg (Austria) as part of his engineering enterprise, and it was in this period that he developed what was later defined the General Theory of Terminology. His seminal work remains *The Machine Tool. An Interlingual Dictionary of Basic Concepts; comprising an alphabetical dictionary and a classified vocabulary with definitions and illustrations* (1968), a systematic French and English dictionary of standardized terms that was meant to be a model for future technical dictionaries. Three classical schools of terminology later developed, namely the Vienna school (of which Wüster was the main representative), the Prague School and the Soviet School.

nology was mainly considered from a functional point of view, i.e. providing an «information service» (Sager 1990:9) that could link the design of a product to the needs of users.

In an effort to develop sound principles, Wüster focused on «the nature of concepts, conceptual relations, the relationships between terms and concepts», and assigned «terms to concepts» (Cabré 1999:7) on the basis of univocity, that is, it is linguistic use or the specialist's decision that creates the link between concept<sup>6</sup> and term. Moreover, it is the need for a language sufficiently equipped to function in various roles that motivates the creation of new terms to define new concepts. These principles highlight the importance of language creation and term standardization with the intention of producing «a single language for scientific and technical communication» (Cabré 2003:167), where standardization (embodying the prescriptive aspect of terminology, being the establishment and approval of terminology standards as in ISO/TR 22134:2007) plays a key role in the attempt to avoid miscommunication by reducing polysemy or homonymy and eliminating synonymy. The priority of concept over designation<sup>7</sup> tends to restrict Wüster's methodology to the onomasiological approach (Cabré 2003:168). This is based on the assumption that terminology necessarily starts with the concept, i.e. a conceptual structure underlying language, that is not connected to any particular language. Traditional terminology, therefore, sees concepts as elements of a system in which:

- the place of each concept depends on its relationships with other concepts;
- a definition<sup>8</sup> is the description of a concept by means of known concepts within the same concept system (i.e. a set

<sup>6</sup> In ISO (International Organization for Standardization) TS 19104:2008 a concept is «a unit of knowledge created by a unique combination of characteristics.»

<sup>7</sup> Designations or terms include formulae, drawings, symbols, etc. and may also refer to the process of naming an object or a concept (Bessé/Nkwenti-Azeh/Sager 1997:129). These inclusions allow for a broad interpretation of the definition of terms as «verbal designations» (ISO 1087-1:2000, ISO/TS 19104:2008 and ISO 12620:2009), where the lexicon is a «set of symbols and terms» (ISO 18629-14:2006).

<sup>8</sup> In ISO/TS 19104:2008 a definition is the «representation of a concept by a descriptive statement which serves to differentiate it from related concepts». Therefore, a definition describes a concept and not a term or other designation.

- of concepts structured according to the relations between them, ISO/TS 19104:2008);
- a designation is the term permanently assigned to the concept i.e. the representation of a concept by a sign which denotes it (ISO/TS 19104:2008).

Sager 1990 confirms the relationship between the lexicon of a special subject language and the organizational characteristics of the discipline, but he notes that the lexicon, besides containing a large number of technicalities (terms), also contains items of general reference (words) which do not seem to be specifically linked to a discipline and are characterized by vague or generalized properties. Sager, in particular, «emphasized a communicative perspective, informed by translation and aspects of linguistics» and «highlighted the methods and practice of standards at the time» (Rogers/Wright 2006:108). A pragmatic approach lies behind his emphasis on the conflict between the theoretical aspects of terminology and the practice of terminological work, of which terminography, i.e. the «recording and presentation of terminological data» (ISO 22128:2008) is a part. Topics that are of primary interest to theorists «have, however, found little echo in the discussion» (Sager 1990:9) among those who are directly concerned with terminology processing, an applied field where real progress has generally been made by computational linguistics and developments in information science. From this point of view, the independent nature of terminology relates directly to its function, i.e. «the provision of an information service» in that

it is the users of terminological services who, to a large extent, determine the nature of the discipline by specifying what information about terms they want (...). From a needs analysis, the terminologist can then decide how to structure a database.

(Sager 1990:9)

Bearing in mind these perspectives, and sharing Sager's communicative approach, Cabré adds to the debate by focusing on the significance of the representational and communicative function

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The ultimate objective is to relate only one term to one concept and only one concept to one term (ISO 10241).

of terms: insofar as they are the association of a concept and a name, terms can reveal the conceptual structure of each subject domain, i.e. the fields of knowledge (Desmet/Boutayeb 1994) or the «zones of vocabulary» (Chueca Moncayo 2005) associated with the scientific and technical knowledge shared by a community of experts.

Cabré starts from the principle that the ultimate aim of any theory, including the theory of terminology, is «to describe real data», which also implies that a theory «must be internally consistent and have the potential of being predictive» (Cabré 2003:178). On this basis she discusses the limits of both the traditional theory and the «extended general theory» (Cabré 2003:176)<sup>9</sup> developed by Wüster's followers, and proposes that terminological data should be observed not only in the idealised entries in standardized dictionaries, but in the more realistic, natural environment of discourse. This perspective broadens the previous theoretical premises, increasing the scope of the new discipline and presenting it as a field of knowledge where comparison and interaction between disciplines is essential.

Cabré's identification of the ultimate theoretical and practical objective of terminology as the description of real data in their natural environment calls for a «pragmatic, applied view of terminology» undoubtedly

more attuned to the requirements of contemporary society where epistemologic reflections have given way to more pragmatic attitudes.

(Cabré 1999:10)

Her terminological units are simultaneously units of language, of knowledge, and of communication. Therefore, any description of

<sup>9</sup>This is what Wüster's followers chose to call the original theory implemented, with some further contributions, in an attempt «to obviate the critiques made of the model» (Cabré 2003:167). The features of this extended theory are summarized by Myking (2001:61) in four points, namely: a theoretical platform characterized by eclecticism; independent concepts; an onomasiological method; standardization, i.e. a defined set of problems. Consequently, terminology becomes an aspect of language planning, controlled synonymy is admitted, phraseology is added to the study of terminological units, conceptual structures are not necessarily hierarchically ordered, and the formation process of new terms (neologisms) is described.

them should cover the concept, the term, and the components of the situation, presenting «the complexity of specialized knowledge units from a social, linguistic, and cognitive perspective» (Faber 2012:15). From this point of view, concepts are «sets of interrelated characteristics that describe a class of objects of the real worlds» (Cabr  1999:99). Terms, in turn, can be considered as «parts of sets» and not «isolated units occurring outside a specific context» (Cabr  1999:99). On the contrary, they «occur in a concrete environment corresponding to a specific field of specialization» (Cabr  1999:99).

## 1.2 Conceptual organization of the field of knowledge

Within the context presented in 1.1, terminology is not just seen as a question of meaning conveyed by specialized lexical items (terms), but as a question of concepts that find their medium in linguistic form within a specific field of knowledge. It thus ensues that terminologies contain terms that map out an area of specialist knowledge and that the relations between the concepts which the terms represent are the main organizing principles of terminographical work. At the same time, the manner of presentation must be taken into consideration with a view to the user of the terminology.

Given the interrelation between disciplinarity and knowledge organization systems, most of which are primarily structured according to disciplines, the concepts of a given field or domain are organized in order to make knowledge an instrument for particular purposes (Kiel 1994).

Wright/Budin's pragmatic suggestion to structure «term list [s] into concept systems» (1997:215) is in line with Sager's vision of terminology and information science as «applicable sciences» in which «theories are evolved with a view to applications only» (Sager 1990:5). Both terminology and information science, in Sager's view, serve «the purpose of facilitating communication in special languages» by collecting, structuring and organizing information according to «the words, terms and expressions needed in special communication» (Sager 1990:6). As an applied field of study, terminology can certainly benefit from being appli-

cation-driven, and new theoretical insights «can be gained from observation, modelling and generalisation» (Sager 1990:10).

Besides being a theoretical field of studies, however, terminology in its intrinsic relation to a specific topic is also «a group of terms [...] belonging to the same domain» (Cabr  1999:80), i.e. a set of terms in a specialized area. These terms are elements of a specialized linguistic system and together they represent the lexical system of the field in question. At the same time, though, the «constant flow of terms between disciplines» (Cabr  1999:80) justifies the distinction between terms «belonging to a special subject field» and terms «used in a special subject field» (Cabr  1999:80). Terms, in fact, can belong to several subfields of a given principal field, and they can also be used in many other fields, suggesting that potential vocabulary items can be activated in documents with varying selection criteria.

These potential variations produce a web of lexical relationships and, at the same time, they establish correspondence with the cognitive level of the conceptual system, generally based on hierarchical or logical relations (e. g. synonymy, reference, hyperonymy). The external evidence offered by linguistic markers (Daille's 2003 morphological and syntagmatic variations) usually allows for the detection of these relations (Cort s/Cabr  2002), and the same thing can happen with the internal evidence offered by the structure of complex terms (the multiword terms in Hamon/Nazarenko 2001).

Lexical and conceptual relationships can be better understood if a conceptual system is applied in order to classify knowledge of various degrees of complexity depending on how the concepts are interrelated and organized to communicate specific information. Starting from the basic level of generic and partitive relationships, these categories can be implemented (as in Sager 1990) with the introduction of «complex relationships» such as, to name but a few, cause-effect; material-property (and also material-product, or material-state); process-product (or process-instrument, process-method, process-patient); object-material (and also object-quality, object-operation, object-characteristic, object-form, object-place).

The term-concept relationship, which represents a basic issue in terminology, thus acquires greater specificity and each term (and concept) is allocated according to the specific needs and

aims of a given terminology project. This confirms the idea that systems are created «for the specific purpose of assisting communication» (Sager 1990:29). A set of terms will therefore represent «the system of concepts of a particular field» (ISO/TR 14292:2012), where the system or set of concepts is «structured according to the relations among them» (ISO/TS 22789:2010).

### 1.3 Variations in the communicative setting

Language and field experts, be they individuals or professional associations, take on terminological work and in carrying it out they also contribute to structuring a network where specific terms are linked to conventionally accepted concepts that have been agreed upon in each subject field. Their joint work in the elaboration of special terminology is usually carried out on the basis of the ISO norm stating that «technical terms should have the same meaning for everyone who uses them» (ISO/R 860 1968:5 in Pearson 1998:38). This includes field experts and non-experts<sup>10</sup> with language mediators and terminology experts in particular among the latter category.

Language mediators such as translators and interpreters, notwithstanding their more circumscribed role, can also contribute in transferring knowledge to experts of different language communities. Even though the language of science has increasingly switched to an English-only format in recent decades, it remains evident that researchers in any field of science need to acquire a common language expressing a common set of concepts, and professional translators can actively help them to become the linguistic mediators of their own work. Besides such high-level collaboration, translators can also act as mediators in the popularization of science and technology for target-language non-experts. In specific communication environments, in fact, functional variants of specialized terms (including phrasemes)

<sup>10</sup>The definition of non-experts can apply to various types of users. In the present case regarding the medical domain, non-experts may include patients and prospective patients, medical students and staff, technical/specialized translators and language mediators.