

**CONTRASTIVE TERMINOLOGY: SEMITIC, ANGLO-GERMANIC AND
LATIN CONCEPT BUILDING THROUGH COMPLEX TERMS. (AVOIDING
ONE-WAY METHOD PROCEDURES IN TRANSLATION)**

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Abstract

This paper aims to present a contrastive approach between three different ways of building concepts after proving the similar syntactic possibilities that coexist in terms. However, from the semantic point of view we can see that each language family has a different distribution in meaning. But the most important point we try to show is that the differences found in the psychological process when communicating concepts should guide the translator and the terminologist in the target text production and the terminology planning process. Differences between languages in the information transmission process are due to the different roles the different types of knowledge play. We distinguish here the analytic-descriptive knowledge and the analogical knowledge among others. We also state that none of them is the best when determining the correctness of a term, but there has to be adequacy criteria in the selection process. This concept building or term building success is important when looking at the linguistic map of the information society.

1. Terminological collocations

One of the most useful ways of creating new terms when naming a new reality is to build a compound or what we call a terminological collocation¹.

In any language or sub-language, one can find a great number of these terminological collocations. In fact, there is approximately the same number of complex terms as simple terms or concepts. The most frequent collocations are binomials, that is, terminology collocations constituted by a two-concept-phrase with a nucleus or head and a modifier.

We make a distinction between terminological collocations and what we call *attributive collocations*² and *idiomatic collocations*³. Focusing only on the first class, terminological collocations have a set of well-known morphosyntactic, semantic and conceptual properties that undergo few variations whether we talk about one language or another. So we have started a contrastive approach between some languages that belong to different families to analyse this set of grammatical and conceptual properties in order to indicate how close the procedures are to correctness. The chosen languages belong to Anglo-Germanic (English, German), Latin (Catalan, Spanish) and Semitic (Arabic) families⁴. They would represent three North-South classified families and also three different levels with respect of technology production and, thus, terminology production.

From the linguistic point of view there is a great difference between an Anglo-Germanic language, a Latin language and a Semitic language. This gives us a wide perspective to analyse the possibility of thinking about a universal way of building concepts and, on the other hand, about particular styles of doing it in order to achieve the optimal level of utility and satisfaction.

2. Syntactic properties of terminological collocations

¹ Created by Firth (1957) within the British contextualism tradition, the term 'collocation' has a long flow in lexical semantic studies.

² Those that can be quantified: en. fresh bread, very fresh bread / ca. pa tendre, pa molt tendre

³ Those with a high level of opacity or non-compositionality: en. blue joke / es. chiste verde

⁴ According to the International Standard Organization (ISO) we are going to use the following codes for the languages: en. for English, de. for German or Deutch, ar. for Arabic, ca. for Catalan, es. for Spanish.

Concerning the syntactic properties of terminological collocations it is important to talk about syntactic rigidity because it implies a subset of behavioural features:

1. *Modifiers within (compound nouns) terminological collocations can be referred to other entities or processes within a nominal phrase and an adjectival phrase. Latin languages can also have a prepositional phrase as a modifier.*

N + n

ca. taula escriptori, en. desk table

de. Stuhlbein, en. chair leg

ar.

رأس مال ← رأس + مال en. capital sum

phrase head: رأس ca. cap, en. head

phrase modifier: مال ca. diner, en. money

N + adj.

ca. manta elèctrica, en. electric blanket

de. Rotwein, Weißwein, en. red wine, white wine

ar.

هندسة معمارية ← هندسة + معمارية en, architecture

phrase head: هندسة ca. enginyeria, en. engineering

phrase modifier: معمارية ca. arquitectònica, en. architectonic

N + np (Latin languages)

ca. sala d'espera, en. waiting room

es. mesa de billar, en. billiard table

2. *It is possible to make a quantification or modification of the complex term in its entirety, but it is not possible to do so with respect to one of the components.*

ar.

قرص صلب سريع

(ca. disc dur ràpid, en. fast hard disk)

قرص سريع صلب

(ca. *disc ràpid dur, en. *hard fast disk)

es. cuchillo de cocina, en. kitchen knife

cuchillo de cocina afilado, en. sharp kitchen knife

*cuchillo afilado de cocina, en. *kitchen sharp knife

de. Verkehrsmittel, en. means of transport

schnelles Verkehrsmittel, en. fast means of transport

Verkehrs (schnell) mittel

3. *Including a modifier determination (defined or undefined article) implies a change in the meaning. (However this does not apply in the case of Arabic).*

ca. ganivet de *la* cuina

(this means not a type of knife but a knife located in the kitchen)

ar.

شهادة منلاد es. partida de nacimiento

شهادة الميلاد
es. partida de(l) nacimiento

4. *There cannot be any change on topicalization.*

ca. enginyer electrònic, en. electronic engineer

*l'electronicitat de l'enginyer, en *the electronicity of the engineer

(but, ca. vestit blanc, en. white dress -> ca. la blancor del vestit, en. the whiteness of the dress -> *attributive collocations*)

ar.

مهندس معماري (en. architect – *architectonic engineer*)

*معمارية المهندس
(*en. engineer architectonicity)

3. Semantic features of terminological collocations

From a semantic point of view, terminological collocations are typifications or specifications of other concepts that have a more extensive denomination (al. *Topf* with respect to *Blumentopf*). It seems important for us to point out that there is a different distribution of information within complex terms for the three languages considered. That is what the Prague school called *theme* and *rheme*. If we consider the head position in terminological collocations we find that the information or theme already known is topicalized in Spanish, but not in German. As we will see, this has some conceptual implications (see 4.).

When talking about Arabic we can see the theme/rheme questions have a relation to predicative questions. When meaning **process**, modifiers are usually only predicative nouns, not verbs. These kinds of nouns are called *Masdar*, and cannot be topicalized. In the following examples we can see the difference between a), where the predicative noun *protector* is topicalized in Catalan (*protector de pantalla*, *screen saver*) but not in Arabic, and b), where the nominal concept *element* is topicalized in both languages.

a) شاشة

ca. pantalla, en. screen

شاشة التوقف

ca. protector de pantalla, en. screen saver

b) عنصر

عنصر الصورة

ca. element, en. element

ca. element de dibuix, en. sketching element

The issue of order when modifying in Latin and Semitic languages becomes quite predictable if we consider that normally the head or nucleus goes in the first place, but it is possible to build some concepts while inverting their usual positions:

ca. alta tensió, en. high tension -> alta: modifier

ar. (ápteros, miriápodos)

It is also worthwhile to note that terminological collocations usually have a high degree of transparency in reference to what Ullmann states (when a collocation is split up, individual elements maintain the most standard sense at any level of abstraction). (With regard to terminology, we must always speak about some specialised sub-language and sense). This transparency criteria makes a difference between idiomatic and terminological collocations while they both have coincidences with respect to syntactic rigidity, for example. Semantic transparency is due to the referential function (cf. Jakobson) of these chunks within specialised communication. However we have to point out some cases of analogy with a loss of transparency (i.e. ca. *serp monetària* for the money curve on the market).

4. Conceptual questions on terminological collocations

In considering some conceptual aspects of complex terms, we see that concept complexity cannot always be extrapolated from one language to the other (al. *Blumentopf* -one concept, two subconcepts, vs. ca. *test* (one concept, one subconcept). This is the same for the Arabic example seen before about ‘capital’, with two subconcepts referred to ‘head’ and ‘money’.

In addition to this, we can see how contradicting the natural tendency to binomials, there is an increasing number of collocations with more than two elements in Latin languages and Arabic as a consequence of calque and loan translations:

ar.

نقطة نسيجية ضوئية ← نقطة + نسيجية + ضوئية

es. juegos fotorealistas, en. photorealistic games

ar.

مضخة + نقاط + ضوئية ← مضخة نقاط ضوئية

es. bomba de píxels, en. pixel charge

This is a destabilising factor for these languages. A term like the Spanish *carretilla hidráulica de elevación de horquilla* is the conclusion of the loan-translation from the German *hydraulischer Gabelhubwagen*, and a very difficult term in the real world of communication.

The term length is only one of the problems. The most important is the meaning given in decodification due to the over-generation of meaning related to the preposition 'de' in Latin languages like Catalan or Spanish. This preposition can be used to introduce a genitive, an argument, a specific modifier or an explicative modifier (attributive, circumstantial):

Peter's car (genitive) -> es. el coche **de** Pedro

Power needs (argument) -> es. las necesidades **del** poder

Kitchen table (specific -type of- modifier) -> es. mesa **de** cocina

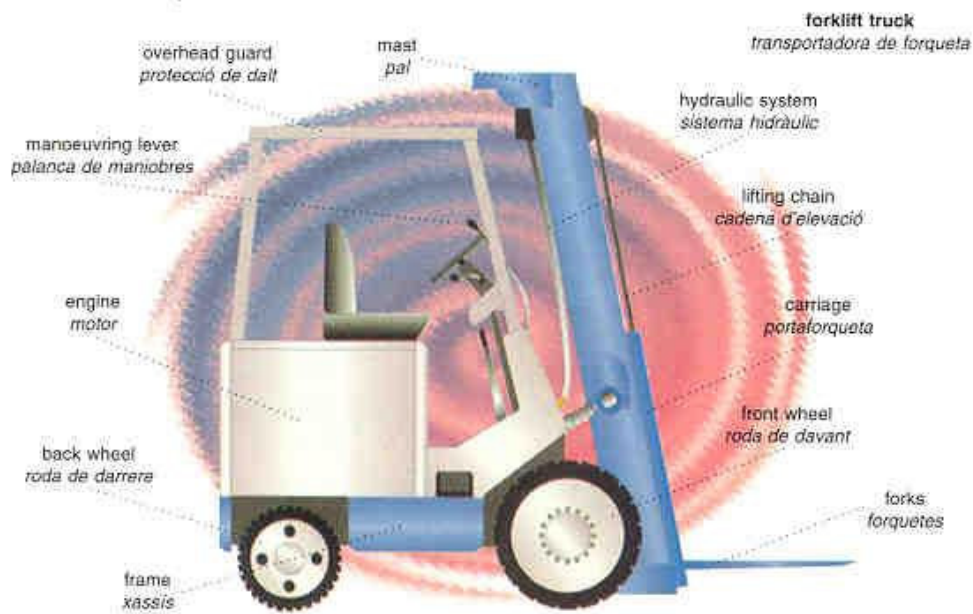
The kitchen table (place) -> la mesa **de** la cocina

So, if we use this preposition several times within a complex term the possibilities and the ambiguity become multiplied.

When we look at the problem from the Prague theme/rheme perspective, we observe furthermore that in the non Anglo-Germanic languages, the string of modifiers (rheme) grows after the head (theme) has been enunciated; this makes the communication process become boring to the speakers in addition to causing ambiguity because of the different possibilities of the prepositional phrase attachment. While in English or German the listener has to pay attention until the end of the expression to understand the theme expressed in the last word or head, in Latin languages, the speaker has enunciated the theme at the beginning, so the listener's attention steadily decreases.

These sometimes long terms become binomial within a simple process of key information deletion (de. hydraulischer Gabelhubwagen -> *carretó hidràulic*; de

elevación de horquilla is missing). This is what happens when translating from German. The resulting term is different when translating from English. Then the English term *forklift truck* for the same concept is translated into Catalan as *transportadora de forqueta*:



In the real working world, people dealing daily with these kinds of concepts usually reject the more or less odd translations and try to find a functional solution based on analogy. In this case, for instance they call this machine *es. toro* -bull. We can also find *es. oruga* (caterpillar) for a continuous mining machine or *es. girafa* for the studio television microphones.

This phenomena has been studied from the social-terminologist's point of view as a matter of a difference and a coexistence of different registers (cf. Corbeil). What we are saying, is that although register differences exist (and they represent a problem for the terminological univocity principle), some of the differences are partly due to incorrect efforts in order to reproduce the analytical-descriptive way of building terms in Northern societies and Anglo-Germanic languages.

5. Conclusions on the contrastive approach

All this makes us think that the very different language families studied here have a similar procedure when compounding nouns and building new concepts held by terminological collocations. However, the different way of expressing modification makes the literal translation of the term structure not useful in some cases. This is one of the reasons why some machine translation efforts fail. We are referring to the Term Frame experience within the EUROTRA project. The main misconception assumed was the term argumental structure or frame would be able to be translated into all European languages without any difference. We have tried to prove that concerning complex term building, this is not possible for syntactic and semantic reasons. As a result of these linguistic characteristics, people using these languages employ different thought processes and different ways of expressing concepts. While Anglo-Germanic languages tend towards a descriptive-analytical process when compounding nouns, southern languages prefer to create new terms by using analogical processes of form and function or metonymies. This could be one of the reasons for a high lexematic production.

When trying to be faithful to the descriptive-analytic effort of Anglo-Germanic languages, terminological planificators and translators sometimes become ineffective because of the lack of adequacy.

Last but not least, we want to emphasise that there is not one concept building approach that is better than the others from a cognitive science point of view, and that, in any case, every approach has to be taken into account. If not, we are feeding a prejudice that confers some superiority to the descriptive-analytical way of knowledge. It is important to note that this kind of knowledge is not the only important factor in order to determine the utility and the satisfaction of speakers and readers. So, although it is very useful to enumerate the concept features when defining the concept through the denomination, this is not the only question when deciding the success level of a new term from a communicative point of view. Analogies, as a way to establish relations between different realities are a very important type of knowledge within science.

Using natural terminological words when speaking and writing a language is one of the aspects that can let southern countries deal with scientific progress and take part in the information society. The hypertext information world is changing traditional ways of thinking and giving more importance to links between reality and the associative concepts that can act as key bridges between logical spaces.

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