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The Emotional Dimension in Terminological Variation: The Example of Transitivity of the Locative Complement in Fishing

Anne Condamines

You can have no idea of the depths of emotion felt by fishing clubs and anglers generally
Paul Torday (2007) *Salmon Fishing in the Yemen*. London: Phoenix,
p. 116.¹

The emotional dimension is generally considered to be unimportant in terminology. Real usage, however, shows that this may be erroneous. Some specialized domains, such as sport or hobbies, are concerned by emotion, and the way terminology functions may be affected by it. This chapter is based on the study of fishing in which, for French as other languages, it is possible, in some specific situations, to transitivity the locative complement. It presents data obtained from the Internet and describes the role of the nature of the websites. It proposes to take into account the emotional dimension from the perspective of embodied cognition. Finally, it discusses the practical difficulties of identification and representation that may arise when the emotional dimension is taken into account.

Keywords: emotional dimension, Internet as corpus, terminology variation, transitivity

1. Introduction

Generally speaking, studies of terms do not take the role of emotion into consideration. When building terminological databases to improve the clarity of communication, emotion is considered as a parasitic factor. As a result, even when variation is accounted for, it only concerns temporal, geographical, or diastatic parameters. Because most studies aim at working with consensual knowledge, the texts used in textual terminology mainly belong to genres devoid of any expression of emotion (handbooks, encyclopedias, didactic documents, etc.).

However, contrary to what is generally acknowledged, some situations in specialized fields may generate emotions, either because some extra-linguistic elements generate stress, or, on the contrary, enthusiasm, or because the field essentially requires emotional involvement, such as sports or hobbies. This contribution tackles the fact that when emotion is involved, it can impact the way terms work in discourse.

¹ I would like to thank E. Rowley-Jolivet for this quote.

The presentation draws upon the description of cases of transitivity of the locative complement in the field of fishing. Indeed, it is possible to find utterances in French such as *j'ai déjà pêché cette rivière* ('I've already fished this river') instead of *j'ai déjà pêché dans cette rivière* ('I've already fished in this river'). The initial hypothesis is that this kind of violation of the code is possible in situations in which anglers are emotionally involved in their activity.

In order to test this hypothesis, I used the Internet as a corpus and searched for all the occurrences of [pêcher (prep) (det) rivière]. I took into account the nature of the websites in which the different occurrences appear. After an overview of the issue (part 2), the results for French are presented (part 3). The phenomenon of transitivity is then analyzed in other languages (English, Spanish and Italian) and with other French verbs (part 4). Finally, general issues are addressed regarding the role of emotion in specialized situations and the link between terminology and embodied cognition (part 5). Theoretical and practical questions are raised such as the meaning of the verbs used (is it the same with or without a preposition before the locative complement?), the need to take such phenomena into account in terminological models, and the difficulty of detecting and characterizing them.

2. Overview of the issue

This part discusses the problem of the absence of the emotional dimension in terminology studies. This absence is mainly due to the purpose of traditional studies, i.e. to build terminologies in scientific or technical fields in order to improve communication within these fields (2.1). When building these terminologies, very few studies have included texts with an emotional dimension. In fact, only a few have examined specialized discourse belonging to sports or hobbies but very rarely from a terminological perspective (2.2).

2.1 The limits of textual terminology

Over the last few decades, Wüster's approach to terminology has been questioned. His General Theory of Terminology (GTT) (Wüster 1968) has been considered as too prescriptive and too remote from real usages. With the development of natural language processing (NLP), it soon became clear that, in many cases, the prescriptive approach underlying the GTT corresponded neither to the form nor to the meaning of real text usages. This led to the development of new approaches such as socioterminology (Guespin 1990), the Communicative Theory of Terminology (Cabr  1999) or Sociocognitive Terminology (Temmerman 2000).

All of these new approaches recommend taking real discourses into account in order to observe and describe terms in their natural linguistic setting. Furthermore, they can all be characterized as belonging to textual terminology, which claims that terms can only be analyzed in their real uses (Pearson 1998).

One of the most important problems tackled by textual terminology is to build terminologies from texts, either monolingual or multilingual. These terminologies are based on knowledge representation in the form of a network in which both the nodes and the links are labelled with linguistic elements. Building this kind of representation from texts has generated a large number of studies, methods and tools for spotting terms and conceptual relations within texts (see for example Bourigault et al. 2001; Buitelaar et al. 2005; Auger and Barrière 2008; Sierra et al. 2008). Even when the main objective is not to build such a network, it generally constitutes the first step of the study. In textual terminology, the texts included in the corpus are not everyday texts but rather texts considered as representative of the consensual knowledge in a scientific or technical field, and are therefore drawn from textual genres such as handbooks, general overviews, courses and so on. In order to build terminological networks, these kinds of texts are said to be rich in knowledge patterns (Bowker and Pearson 2002). This is not surprising because they all have a didactic purpose, in which defining terms is an important function. Another important characteristic of these texts is that they contain very few first-person pronouns or evaluative adjectives. Since the texts are considered to contain shared knowledge, the responsibility for the content does not lie with an individual writer but rather with a writer representing a “speech community” (Hymes 1967).

It is clear that the aim of defining terms has led researchers to focus only on certain textual genres that are devoid of emotion. This observation raises two kinds of questions. On the one hand, is it possible to combine terminology and emotional expression and on the other, if we accept that emotion can occur in specialized fields, to what extent may it lead to variation in how terms are described? In the rest of the chapter I show that these two questions are far from being marginal.

2.2 Variation and emotion in specialized discourses

Very few researchers have studied how terms work in specialized texts belonging to other fields than science or technology such as hobbies or sports, specifically in situations where speaker involvement in the discourse is high. Even when terminological variation is taken into account, the types of variation considered do not concern the emotional dimension but rather elements of time, degree of expertise or regional differences (Condamines 2010; Freixa 2006; Ibekwe et al. 2007). While studies on the discourse of sport exist (for example, Lavric et al. 2008), they do not analyze the terms in order to build a dictionary or to facilitate translation but rather to illustrate a cultural specificity.

The only studies focusing on variation linked to speech communities of professionals sharing the same motivations concern jargons. This denomination is always negatively connoted, however: “Jargons have been relegated to a lower level of language and have not received the scholarly attention they deserve” (Depecker 1994:736). They are very often considered as a way of

isolating a community from the rest of the world: “The reason that all these words [*argot*, *jargon*, *lingo*, and *slang*] have disparaging connotations is that outsiders dislike being outsiders” (Bernstein 1995:237).

Nevertheless, I contend that in specialized domains belonging to sports or hobbies, what appears as a jargon (in the sense of terms or usages far from those used in “neutral situations”) must be described and registered in a dictionary and, sometimes, may be explained directly by the subjective involvement of the speaker.

I shall illustrate this phenomenon with data from the domain of fishing. The starting point of the study was my surprise at hearing an angler say in French: “j’ai déjà pêché cette rivière” (‘I have already fished this river’). For a non-angler like myself, this sentence seems to be incorrect because the only object which can be fished is a fish (or a crustacean). As a linguist, my first hypothesis was that anglers allow themselves to infringe the rule concerning the nature of the object only in situations with a strong personal involvement. My second hypothesis was that this transitivity plays a particular role for anglers.²

Another specificity of this sentence is that the term concerned is a verb. The study of verbs in terminology is recent. It is generally considered that terms are nouns or noun groups in 70% of cases. Very few studies have been conducted on verbs. Nevertheless, recently, verbs have been considered interesting for spotting terms and even as terms (Condamines 1993; Condamines and Rebeyrolle 2001; L’Homme 2002 and 2012).

In order to explore the role of emotion in transitivity in the fishing domain, I decided to carry out a study on the only available corpus likely to contain enough occurrences of various communicative situations: the Internet.

3. The study on French

The study on French is presented in detail in (Condamines 2013), and the main results are summarized here. In 3.1, I present the results with the verbal form, *pêcher*. I then consider the derived adjective, *pêchable*. Finally, I show how other characteristics (syntactic or semantic) generally associated with transitivity are relevant for describing the examples in which *pêcher* and *rivière* are related without a preposition.

3.1 The verb *pêcher*

Using Google, I focused on the simultaneous occurrence of the two forms *pêcher* and *rivière(s)*. These two forms have the advantage of being non-

² Note that in the *Trésor de la langue française informatisé* (<http://atilf.atilf.fr/tlf.htm>), the only case in which the direct construction between ‘pêcher’ and ‘plan d’eau’ is used is in an example such as: Vider (un étang, une pièce d’eau) pour prendre les poissons, la vider de tous ses poissons.

ambiguous if they are contiguous; all the occurrences concern the infinitive form of the verb *pêcher* and the noun denominating the real object ‘river’.³ I focused only on the infinitive form of the verb because *pêche* would have been too ambiguous. In French, it corresponds to several persons of the present tense of the verb, to the nominalization and even to a fruit (a peach). In order to control the structures I wanted to study, I placed a bracket before and after the structures. Finally, I only searched for structures containing either a definite (la/les) or an indefinite determiner (une/des). The four search items were as follows: (1) pêcher dans DET rivière(s); (2) pêcher en rivière(s); (3) pêcher sur (DET) rivière(s); (4) pêcher DET rivière.

Examples:

- (1) *Nous mettons à votre disposition un bateau pour pêcher dans la rivière en bas du jardin.*
‘At the bottom of the garden there is a boat available for fishing in the river.’
- (2) *J’affectionne surtout de pêcher en rivière.*
‘I’m particularly fond of river fishing.’
- (3) *Je vais aller pêcher sur la rivière Yamaska à Granby samedi s’il ne pleut pas.*
‘I’m going to fish on the river Yamaska in Granby on Saturday if it isn’t raining.’
- (4) *Il nous proposa de pêcher la rivière Matane.*
‘He suggested we fish the river Matane.’

Note that some occurrences of the structures appear several times in exactly the same sentence. In this case, I counted only one occurrence. A total of 1474 occurrences were found. Table 1 summarizes the results obtained for the four French structures in all the websites.

Table 1. Distribution of the four French structures in all the websites (in percentages)

Pêcher dans DET rivière(s)	Pêcher en rivière(s)	Pêcher sur (DET) rivière(s)	Pêcher DET rivière(s)
45.6	27.5	9.2	17.7

From these initial results, two remarks can be made: the supposedly transgressive form (without a preposition) is far from rare, it accounts for 17.7% of all the occurrences; the allegedly most regular structure, with the preposition *dans*, concerns only 45.6% of the occurrences. Even if the Internet

³ Even if *pêcher* has two meanings, only one of them can take an object.

cannot be considered as a representative corpus, it seems that the direct construction is relatively frequent. In order to test the hypothesis of the role of emotion in transitivity, I next characterized the nature of the websites containing simultaneously *pêcher* and *rivière*.

The categorization of the websites in which the occurrences were found was relatively easy. I identified ten types of websites: forum, blog, story, press, book, travel, regulations, translation, dictionary, varia. Note that no site corresponded to commercial fishing. This is probably due to the fact that to fish in a river (contrary to fish in an ocean for example) is not a commercial activity.

These websites are not specifically dedicated to angling, so, in order to refine my hypothesis, I focused on occurrences in websites that met two criteria: the site was devoted to angling, and it contained markers of subjective involvement (most of the forums and the blogs) such as first-person pronouns or an emotional lexicon. A total of 516 occurrences (35%) corresponded to these two criteria. Table 2 summarizes the distribution of the constructions in angling websites that have an emotional dimension.

Table 2. Distribution of the four French constructions in angling websites that have an emotional dimension (percentages)

Pêcher dans DET rivière(s)	Pêcher en rivière(s)	Pêcher sur (DET) rivière(s)	Pêcher DET rivière(s)
36	21.7	4	38.2

It is clear that in these kinds of websites, the most frequently used structure is the direct construction. This point demonstrates that the hypothesis was relevant: anglers, when speaking to each other, tend to use the direct construction. Other clues point to the same conclusion.

3.2 Analysis of other elements characterizing the objects

In this part, I examine three kinds of phenomena generally considered characteristic of objects in sentences. The first one concerns the adjective derived from the verb: *pêchable* ('fishable'), generally considered as linked to the object of the verb. The following two concerns syntactic and semantic aspects.

3.2.1 The case of *pêchable*

In relation with the verb *pêcher*, I also examined the adjective "*pêchable*"⁴ (fishable). Generally speaking, *-able* adjectives are considered as more often attributable to the object of the verb from which they are derived. This is the case, for example, in:

⁴ As noted by Hathout et al. (2003), *pêchable* is not identified by the TLFi.

- (5) *Block purchasable: this block is available to advertise on it*

The underlying utterance is: *You can purchase the block*, in which *block* is the object.

I identified 583 occurrences of *pêchable*, among which 458 are associated with water courses or water bodies and only 125 with a fish or a crustacean. So, in 78% of the cases, the noun with which *pêchable* is associated does not belong to the category of the expected object of the verb, namely fish or crustacean.

- (6) *Le gave de Pau redevient pêchable après une fonte des neiges très précoce cette année*
'The Gave de Pau stream has become fishable again after the very early snowmelt this year'

Another interesting point is that when *pêchable* concerns water courses or water bodies, it is most often modified, as in:

- (7) *La pluie qui tombe chaque jour conduit à voir des rivières difficilement pêchables*
'The daily rainfall makes the rivers difficult to fish'
- (8) *La mer est en train de tomber et devient plus pêchable.*
'The sea level is falling, making the sea more fishable.'

This gradation in "fishability", more often attributed to the water than to the fish, seems to confirm a strong link between the angler and the water.

3.2.2 Syntactic tests

Two tests are generally considered useful to characterize the object function: the possibility of pronominalizing and of passivating the object in sentences (ref). A few occurrences on the Internet seem to confirm the possibility of these two transformations for *rivière*:

- (9) *La Loire, je la pêche du bord*
'The Loire, I fish it from the river bank'

In (9), it is the river—here, La Loire—that is pronominalized.

- (10) *La rivière est pêchée tous les jours depuis un mois.*
'The river has been fished every day for the last month'.

In (10), *rivière* appears in subject position in the passive voice.

3.2.3 “Semantic” tests

Most semanticists accept the hypothesis of a gradation in transitivity (Lakoff 1977; Dowty 1991). In their paper, Hopper and Thompson (1980) propose ten semantic elements that are useful for evaluating the transitivity of a sentence: *participants, kinesis, aspect, punctuality, volitionality, affirmation, mode, agency, affectedness of O, individuation of O*. Depending on the number of elements concerned and the degree of their relevance, the sentences are considered as more or less transitive.

Concerning the case of *pêcher la rivière*, the two elements that are perhaps the least relevant are affectedness of O and particularly individuation of O. They are defined as follows: “The degree to which an action is transferred to a patient is a function of how completely that patient is affected [...]. The component of individuation, however, refers both to the distinctness of the patient from the A [agent] and to the distinctness from its own background” (Hopper and Thompson 1980:253). While the individuation of a river is perhaps difficult to grasp, its affectedness is not impossible to demonstrate. In several examples, the river is presented as affected by the fishing process and even as a person:

- (11) *Je vais également en profiter pour ressortir ma canne à toc, mais également pêcher la rivière qui a connu mes premiers lancés*
‘I’m going to take the opportunity to get out my fly-fishing rod and to fish the river that witnessed my first casts’
- (12) *Je décide donc de pêcher une rivière qui ne m’a pas revu depuis un petit moment déjà*
‘So I’ve decided to fish a river that hasn’t seen me for quite a while’

For semanticists, “[w]hen analyzing transitivity the focus is on how events and processes are connected (or not connected) with subjects and objects” (Jørgensen and Phillips 2002:83).

Taking into account the syntactic or semantic elements I have examined, we can say that for anglers, the “connection” with the river itself is probably more important than with the fish.

4. Other languages, other verbs

To extend the analysis of transitivity of the locative complement, I explored the same phenomenon in other languages and other fields.

4.1 Other languages

In view of these surprising results for French, I decided to consider the issue for three other languages: English, Spanish and Italian.

4.1.1 Preparation of the studies

I hired three linguistics students in order to constitute the data;⁵ each one speaks one of the three languages considered. As I did for French, they used the Internet as a corpus and focused on all the structures involving the verb corresponding to “pêcher” in each language (to fish/pescar/pescare) and the noun corresponding to “rivière” (river/río/fiume). As I did for French also, two categories of determiners were considered between the verb and the noun: definite and indefinite. Here are the structures selected for the three languages.

English

Four structures were searched for with Google: (1) to fish in (DET) river(s); (2) to fish on (DET) river(s); (3) to fish within (DET) river(s); (4) to fish (DET) river(s). The determiners used were *a* and *the*. There were 2202 occurrences of sentences containing one of the four structures. Example (13) shows the direct construction (structure 4):

- (13) *If I was going to fish a river this time of year, I would only have two options [...].*

Spanish

For Spanish, three kinds of structures were searched for with Google, and a total of 1610 occurrences were found. The structures were: (1) pescar en (DET) río(s); (2) pescar sobre (DET) río(s); (3) pescar (DET) río(s). The determiners used were *el*, *un*, and *los*. Example (14) shows an occurrence without a preposition:

- (14) *Por eso es que necesito saber come se debe pescar un río de aguas claras.*
'Therefore I need to know how to fish a river with clear waters.'

Italian

Three structures were examined in Italian: (1) pescare in (DET) fiume/I; (2) pescare su (DET) fiume/I; (3) pescare DET fiume/i. The determiners used were *un*, *il*, *dei* and *i*. These structures occurred in 986 different sentences. Since prepositions and determiners can be contracted in Italian, the following structures were searched for: pescar + (in un fiume, in dei fiume, nei fiumi, su un fiume, su dei fiumi, sul fiume, sui fiumi, in fiume, in fiumi, un fiume, dei fiumi, il fiume, i fiumi). Here is an example without a preposition:

- (15) *Intanto le trote sono diventate nervose decidiamo di iniziare a pescare il fiume*

⁵ I am very grateful to H. Chatelier, C. Orihuela and M. Cagliani for their help in this study.

‘Meanwhile the trout became restless and we decide to start fishing the river’

As I did for French, each website in which the structures occurred was characterized according to two criteria: the domain (devoted to angling or not) and with or without subjective involvement. Note that the geographical origin of the websites (France or Quebec, Spain or Latin America, Great Britain or the USA) was not taken into account. This element may play a role in the use of the direct construction but, at this stage of the study, it is too difficult to examine. Concerning the acceptability of the direct structure by dictionaries, note that Spanish and Italian dictionaries, like French ones, do not accept the construction without a preposition, whereas English dictionaries do record it.

4.1.2 Results

The results are presented in Tables 3 to 8. For each language, the tables first present the distribution of the structures in all the websites and then only in the websites dedicated to angling that have an emotional dimension.

English

Table 3. Distribution of the English structures in all the Internet data (percentages)

To fish in (DET) river(s)	To fish on (DET) river(s)	To fish within (DET) river(s)	To fish (DET) river(s)
29.2	17.7	2.8	50.3

Table 4. Distribution of the English structures in angling websites that have an emotional dimension (percentages)

To fish (DET) river(s)	To fish on (DET) river(s)	To fish within (DET) river(s)	To fish (DET) river(s)
9.9	16.5	4.4	69.2

Spanish

Table 5. Distribution of the Spanish structures in all the Internet data (percentages)

Pescar en (DET) río(s)	Pescar sobre (DET) río(s)	Pescar (DET) río(s)
72	4.2	23.8

Table 6. Distribution of the Spanish structures in angling websites that have an emotional dimension (percentages)

Pescar en (DET) río(s)	Pescar sobre (DET) río(s)	Pescar (DET) río(s)
64	4.7	31.3

Italian

Table 7. Distribution of the Italian structures in all the Internet data (percentages)

Pescare in (DET) fiume	Pescare su (DET) fiume	Pescare DET fiume
73.9	23.5	2.6

Table 8. Distribution of the Italian structures in angling websites that have an emotional dimension (percentages)

Pescare in (DET) fiume	Pescare su (DET) fiume	Pescare DET fiume
71	26.5	2.4

At first glance, it appears that the structure without a preposition is very frequent in English (which explains why this structure is registered in dictionaries) and very rare in Italian. Table 9 shows this even more clearly. It summarizes the results for all the languages concerning occurrences without a preposition before *rivière/river/fiume/rio* and their distribution in websites in the whole corpus compared to the corpus of angling websites with an emotional dimension. It constitutes the contingency table used to calculate the chi2.

Table 9. Contingency table of the occurrences with/without prepositions calculated for i) non-angling websites without an emotional dimension and ii) angling websites with an emotional dimension

		Non-fishing domain and without an emotional dimension	Fishing domain and with an emotional dimension	TOTAL
FRENCH	Without preposition	64	197	261
	With preposition	894	319	1213
	TOTAL	958	516	1474
ENGLISH	Without preposition	579	529	1108
	With preposition	858	236	1094
	TOTAL	1437	765	2202
SPANISH	Without preposition	143	241	384
	With preposition	696	530	1226
	TOTAL	839	771	1610
ITALIAN	Without preposition	14	12	26
	With preposition	482	479	961
	TOTAL	496	490	986

The crucial question is that of the role of the nature of the websites (which concern angling and present an emotional dimension). Based on the raw numbers presented in Table 9, the chi-squared test showed a significant difference ($p < .001$) in the use of the preposition.⁶ Direct constructions (without

⁶ I warmly thank Basilio Calderone for his help in this part of the study.

a preposition) seem to characterize websites conveying a passion for fishing. This aspect was observed for three languages: French, English and Spanish. It is not the case with Italian, where the direct construction is rare in general and not more significantly present in the websites concerning fishing that have an emotional dimension.

This result seems surprising and at the moment I have no explanation for it. Apart from Italian, it is clear that the possibility of transitivity of the locative complement may be connected to some extra-linguistic characteristics at least in some Romance or Anglo-Saxon languages; it will probably be different in other kinds of languages (see for example Lazard 2001).

I would argue, however, that this phenomenon tells us something about the activity of fishing for anglers. Again, we can consider that, for them, the most important aspect is not to catch fish but rather to be in contact with the river. By expressing the link between the verb and the location directly (probably in an unconscious way) they express their proximity to the river. The fact that this phenomenon exists in different languages is a strong indication that it belongs to a cognitive process, partly independent of language.

4.2 Other verbs

What about other verbs? If my hypothesis is valid, other verbs may allow the same transitivity. Indeed, transitivity of the locative complement is fairly common in sport or hobbies. I tested some verbs on the Internet and easily found other examples in the three languages considered:

- (16) *A partir de quand peut-on skier le Mont Blanc?*
'When can one start skiing the Mont Blanc?'
- (17) *Allí hay mucho que hacer: escalar, paracaidismo, esquiar el Monte Hood*
'There's a lot to do there, climbing, parachuting, skiing Mount Hood.'
- (18) *Boaters should not attempt to paddle the river during periods of swift, high flows*
- (19) *Que mejor para desquitarse que ir a remar un río el mismo día que llegas*
'What better way to wind down than rowing a river the same day that you arrive.'
- (20) *Tuvimos que nadar un río de cerca de treinta yardas de ancho*
'We had to swim a river nearly thirty yards wide.'
- (21) *Essayant de nager un fleuve, elle est descendue au fond.*

‘While trying to swim a river, she sank to the bottom.’

- (22) *Un gars de 190 livres aura toutes les difficultés du monde à surfer la planche de sa copine qui n’en pèse que 115.*

‘A chap weighing 190 pounds will find it a very tough job surfing the surfboard of his girlfriend who only weighs 115’.

- (23) *An opportunity to surf a Mark Richards twin-fin in the early seventies convinced Craig that board technology would define the future of surfing*

However, some verbs that appear similar to *pêcher* do not occur (or only very rarely) without a preposition before the locative complement. This is the case for *chasser* (to hunt). In French, the direct construction with the locative complement is in fact very rare.

- (24) *A la fin du lâcher, on peut chasser les bois et prairies environnantes, à l’aide de son chien d’arrêt*

‘At the end of the release, you can hunt the surrounding woods and fields with your pointer.’

It is also the case for Spanish

- (25) *Cazar el bosque para todo tipo de animales y ser conscientes de que no todo obtener buenos puntos*

‘Hunting woods for all sorts of animals and being aware that getting good shots is not everything.’

It seems a little more frequent in English, however:

- (26) *I went out to hunt the forests surrounding the canyon.*

In order to explain what appears to be an important difference between *to fish* and *to hunt*, it would probably be necessary to take into account the nature of the location. A river is perhaps more limited an area than a forest or fields, and it provides a real resistance (a force in Talmy’s terminology (Talmy 2000)). This hypothesis will be examined in further studies.

5. Cognition, emotion and specialized languages

This study conducted on fishing contributes to the development of new considerations in terminology that take into account the role of the body and of emotions, thereby bringing terminology closer to cognitive linguistics. I will examine this issue first by discussing studies dealing with cognitive linguistic

aspects, and then those dealing with the notion of embodiment. Finally, I inquire how this kind of variation could be registered in terminological databases.

5.1 Cognition, terminology, frames

Like the lexicon in formal or generative approaches, terms in the Wüsterian point of view are considered as being remote from emotion. The prescriptive Wüsterian approach argues that normalization contributes to the clarity of language and considers communication as the equivalent of information transmission. This point of view seems too reductive for linguists. These situations are assumed to correspond to technical or scientific contexts. However, specialized fields cannot be reduced to these situations, and even scientific and technical situations may generate emotions (stress, enthusiasm, apprehension, etc.). For terminologists, the problem is to analyze how terms work in emotional situations. If the way they work is regular enough, it must be included in term banks.

The problem is that looking for and describing such phenomena may be very time-consuming. One of the important concepts in cognitive linguistics is that of *frame*. Frames are defined by Evans and Green (2011:166) as “detailed knowledge structures or schemas emerging from everyday experiences.” The notion of frame comes from Fillmore’s work on semantic grammar (Fillmore 1977). Fillmore defined a semantic frame as a “schematic representation of the conceptual structures and patterns of beliefs, practices, institutions, images, etc. that provide a foundation for meaningful interaction in a speech community” (Fillmore et al. 2003:235).

From these two definitions, two elements stand out. First, cognition is based on everyday experience. And experience involves actions or thoughts in which the body (that is, perceptions) is involved. Even in scientific or technical domains, it seems very difficult to argue that only rationality is involved. And in sports or hobbies, it is obvious that the entire body is involved. The role of emotion in terminology has been examined in a recent neurolinguistic study carried out by Faber’s team (Faber et al. 2014), based on brain-imaging techniques. In a paper relating this experiment, Faber and her team show that, in a task associating words with more generic words and terms with more generic terms, experts and non-experts do not use exactly the same part of their brain:

The amygdala is said to facilitate the integration of emotive and cognitive function. Our results seem to confirm that lexical decisions were more accurate for terms with an emotional valence because their semantic representations stored in a distributed network of cortical regions in the temporal cortex received reciprocal feedback from the amygdala. (Faber et al. 2014:27)

They also note that the amygdala is “interconnected with the other frontotemporal components implicated in autobiographical memory.” In other words, when experts are involved in a linguistic process implying their domain knowledge, they use their perceptive and emotive experience of the objects denominated by the nouns and not only a rational perception. In the case of fishing, we can establish a similarity between the neurolinguistics experiment and the possibility of transitivizing the location by saying that anglers, who are experts in their domain, use the perceptions they experience when fishing to authorize themselves to infringe the code and give the river the role of object. The quotation from Fillmore points out the importance of the speech community in meaningful interaction. In the case of fishing, experts (the anglers) restrict infringements of the code mainly to situations in which they assume that the readers are also experts, that is to say that they share the same bodily experience of being in the water when fishing.

5.2 *Embodied cognition*

In cognitive approaches, the role of the body (perceptions and emotion) is usually addressed under the term *embodied cognition*. The quote from Johnson below highlights the role of the body not only in cognition but also in understanding:

On the view developed here, the key notion is embodied understanding. We are never separated from our bodies and from forces and energies acting upon us to give rise to our understanding (as our “being-in-the world”). (Johnson 1987:205)

Johnson’s remark concerning the role of the body in understanding can probably also be extended to speaking. The position of Varela et al. (1993) is very close to that of Johnson, but it also underlines the link with cultural context:

Let us explain what we mean by this phrase embodied action. By using the term embodied we mean to highlight two points: first, that cognition depends upon the kinds of experience that come from having a body with various sensorimotor capacities, and second, that these individual sensorimotor capacities are themselves embedded in a more encompassing biological, psychological and cultural context. (Varela et al. 1993:175)

So, when fishing, we can consider that anglers are engaged with their whole body in the activity (perceiving water, battling the natural elements, etc.) with the result that this engagement is linguistically expressed, at least when among other anglers, by the transitivization of the locative complement.

5.3 Taking the emotional dimension into account in terminology

Taking the emotional dimension into account in terminology raises two main issues. First, it is necessary to provide models that account for the type of variation that is linked to the emotional dimension. This seems possible with database models in which more than one frame can be associated with a word. As noted by Faber and Pizzaro (2012:5), “Until now, frames have only been applied to general language and not to specialized languages.” But now, some new models based on frames are being designed in order to describe terminological variation. This is the case of FrameNet, developed by Fillmore and his team (Fillmore et al. 2003). However, it is not easy to tackle the fact that several entries for the same word may or may not concern different meanings. Can we consider that *pêcher* in the two constructions *pêcher un poisson* and *pêcher une rivière* has the same meaning or not? Such a question allows to link terminology studies with cognitive semantics issues. This appears a very promising perspective. But, fundamentally, this very interesting theoretical question has probably no consequence on the chosen model itself. Nonetheless, it is important to decide whether it is acceptable to register a verb, generally constructed with a direct argument belonging to a certain semantic class, with a direct argument belonging to another semantic class, generally represented by a complement (locative argument in the case of *pêcher*). If the answer is “yes,” the problem is then to find the best way of registering it: for each individual verb or for a verb class? Whatever the answer, the important point is that the variation between the two constructions is linked to the nature of the communicative situation (with or without emotion). In the future terminological bases, it will be probably possible to take this element into account.

The second issue raised is the problem of identifying the linguistic phenomena, on the one hand, and, on the other, of identifying the kind of situation that may generate the emotion, in order to link linguistic phenomena and situational characteristics. Every type of linguistic variation may be difficult to identify, but with regard to emotional variation, the two aspects—linguistic and situational—may be particularly difficult to single out. In the case of fishing, for example, locating the transitivization phenomenon was a question of chance, and its description, based on real usage, was very time-consuming. As we have seen, if some verbs (*ski*, *paddle*, *surf*, etc.) seem to have the same characteristics, it is not the case with others such as *chasser* (to hunt). So, it is not yet possible to generalize the description to all verbs. Further research is necessary in order to describe precisely the situational characteristics that allow this phenomenon.

6. Conclusion

This contribution has attempted to show that the emotional dimension cannot always be eliminated from a terminological perspective. It can play a role in

scientific or technical domains, and above all, it is essential in domains belonging to hobbies or sports. Emotion may have a major impact on the way terms work. With the example from fishing, we saw that when anglers are emotionally involved, they may transitive the locative complement and give it the status of object. The study, first carried out for French by using the Internet as a corpus, was then conducted for English, Spanish and Italian. Of the four languages, there is only one, Italian, in which the link between the absence of a preposition before the locative complement and the nature of the website (dedicated to fishing and with an emotional dimension) is not statistically significant. These results are promising in different ways.

First, and this was my starting point, it seems necessary to develop studies on the role of the emotional dimension in terminology. Needs concerning terminology are changing. They do not concern only canonical situations in science or technology but also those domains where emotion may play a role, mainly in oral communication, as well as domains involving specialized knowledge that have a strong emotional engagement such as sports or hobbies. As we have seen, tackling this emotional dimension is not straightforward. Several elements have to be examined:

- It is necessary to design terminological models able to take the emotional dimension into account. The model proposed by the FrameNet project appears able to do that (Fillmore et al. 2003).
- Only linguistic phenomena regularly observed in speech communities (and not generated by a single speaker), associated with certain emotions should be considered.
- It may be difficult to determine which phenomena are relevant and which speech community they are related to.

A corpus linguistic approach to the description of the grammar of genres will be useful for the latter two points.

Second, the results from the fishing domain bring terminology closer to cognitive linguistics. Like several researchers in cognitive semantics, I assume that the relationship between a subject and an object in an utterance is quite strong. So, when anglers choose to put a locative complement in the object position, even unconsciously, this indicates something about the relationship they have with this location. The embodied cognition may be a good approach to describe this phenomenon. Indeed, it is necessary to understand the circumstances in which the transitive of the locative complement is possible in order to generalize the description. While it seems clear that the emotional dimension is crucial in explaining this phenomenon, it does not seem sufficient to explain why this transitive is very rare for some other verbs in French such as *chasser* (to hunt). In this specific case, the notion of force dynamics proposed by Talmy (2000) could be relevant.

Extensive studies are necessary in order to describe this phenomenon of transitive and, more generally, to analyze how this kind of phenomenon may be first detected, then explained and finally described in terminological databases.

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