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The World Meets the Body: Sociocultural Aspects of Terminological Metaphor

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Introduction

The experientialist view of the embodied mind is condensed in Gibbs' (1999:155) affirmation that cognition is what happens when the body meets the world. Yet, it is also necessary to ask what happens when the world meets the body. In our opinion, conceptual metaphor analysis, whatever the knowledge field, is traceable to both sensory-motor inferences and cultural factors. On this basis, this paper analyzes a number of resemblance metaphor term pairs in English and Spanish, which were extracted from a text corpus of marine biology academic journals. Drawing on the examination of these terms, we propose a classification of metaphors that arranges them according to their level of socio-cognitive situatedness. This classification shows that sensorimotor perception and sociocultural factors merge into a physical-social experience that shapes scientific knowledge through metaphor, and that sociocognitive patterns involved in terminological metaphor formation give rise to inter-linguistic variation and commonalities.

As introductory background, let us briefly discuss the connection between bodily aspects and sociocultural aspects in Cognitive Linguistics. It should be highlighted that the relationship between both aspects has been a matter of controversy within this theoretical tradition. One body of research approaches metaphor from a purely neurophysiological and neurocomputational viewpoint. A case in point is Lakoff and colleagues' Neural Theory of Language, which is being developed in a range of parallel research works (cf. Dodge and Lakoff 2005, Feldman 2006). This strand downplays sociocultural factors involved in (metaphor-induced) embodied conceptualization, and focuses on the analysis of metaphor and other cognitive phenomena in terms of neural models, neural circuits, axonal firings and parietal-hippocampal networks.

This strand of research, which focuses on embodiment and on the biophysical

underpinnings of thought lately seems to be overshadowed by the second body of research, which highlights the situated nature of metaphor (cf. Gibbs 1999, Kövecses 2005, 2006, Yu 2008). Such research is also advocated by metaphor analysts in neighbouring disciplines, such as cognitive and psychological anthropology (cf. Kimmel 2008; Palmer 1996). The point is that many scholars opt for a metaphor description model that integrates both bodily and cultural experiences.

A good example is Kövecses (2005), whose contrastive study of English, Hungarian, and Spanish provides evidence of the existence of non-universal metaphors. These are motivated by sociocultural factors (including environmental, historical, and communicational aspects) and cognitive preferences and styles, including processes such as elaboration, focusing, and conventionalisation. Kövecses (2005:231) concludes that both types of parameters cannot be separated from each other, but rather work jointly.

1 Metaphor, Science, and Culture

The body-culture mergence has also found its way into science. It is now argued that the concrete sociocultural situatedness of individual language agents inevitably leads them to employ interpretive conceptualizations that are partial, ie. not shared by all of the members of the “expert” scientific community in question (Frank 2008:218). Sociocognitive Terminology Theory (Temmerman 2000) pioneered research into the way metaphor models life science knowledge as a consequence of the ongoing social, cognitive, and technological advances in Western civilization.

However, studies focusing on the interplay of physiological and cultural patterns have typically shown a preference for non-resemblance metaphors, in other words, metaphors that emerge from rich and abstract structures not involving physical or behavioral patterns (Lakoff and Turner 1989:91). As a consequence, resemblance metaphors, which arise because of comparison in physical appearance (typically shape, color, and size) or behavior, were left more or less out in the cold. For example, Larson (2008) elaborates on the biological, cultural, and linguistic origin of the war on invasive species within the domain of invasion biology, a subdiscipline of conservation biology concerned with strategies to maintain biodiversity. Larson identifies the macro-metaphors NATURAL LANDSCAPES ARE PERSONS, INVASION SPECIES ARE A DISEASE, and INVASION SPECIES ARE HUMAN INVADERS, and examines their historical and cultural bases.

The main reason for this preference is that resemblance metaphor was regarded by Lakoff and others as a fleeting kind of metaphor with an impoverished inner structure (Lakoff 1993, Lakoff and Turner 1989). Consequently, Conceptual Metaphor Theory has traditionally limited the treatment of resemblance metaphors to literature and poetry within Cognitive Poetics (e.g. Lakoff 1993, Lakoff and Turner 1989, Stockwell 2002).

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Fortunately, in recent years there has been a renewed interest in resemblance metaphor. Corpus-based research both in general language (Deignan 2007) and specialized discourse (Caballero 2006 in architecture, Ureña and Faber 2010 in marine biology) shows that resemblance metaphors are well-established, conventional metaphors that arise from enduring and productive patterns of figurative thought, and that they are not only subscribed to literature, but also to general and specialized language.

Nevertheless, research offering a systematic approach to the body-culture conflation in terminological resemblance metaphor from a cross-linguistic perspective is long overdue. The translation-oriented work by Alexiev (2005) opens the door to this line of investigation. He carries out a corpus-based contrastive analysis of resemblance metaphor terms in Bulgarian, English, and Spanish in the fields of mining, geology, civil engineering, and architecture. Alexiev (2005:36) points out that the choice of a target language conceptualization strategy and a subsequent translation technique are determined not only by cognitive, but also by language- and culture-specific factors. On this basis, Alexiev (2005:108-115) establishes a set of culture-experiential parameters which determine the choice of the designation, and thereby, the general concept to be exploited in the terminological metaphorization process.

2 Method

2.1 Justification

This paper sheds light onto the relationship between the physical and the sociocultural underpinnings of terminological resemblance metaphor, an aspect that has hardly been researched. For this purpose, this study revises Alexiev's (2005) proposal, and suggests a typology of culture-induced marine biology metaphors arranged according to four criteria: culture-specificity, culture-typicality, the angles of referent perception, and degree of specificity.

2.2 Materials and Procedures

The framework is a contrastive study between English and Spanish resemblance metaphor terms extracted from a bilingual text corpus of marine biology academic journals. The nature of this corpus ensures the analysis of authentic, naturally occurring data. According to Charteris-Black (2004:19), corpus evidence helps the user to detect cases of inactive conventional metaphors and compensate for the arbitrariness of dictionaries.

This corpus was already used in a previous study (Ureña and Faber 2011), where we present an innovative methodology for the semi-automatic retrieval of resemblance metaphor term pairs in English and Spanish. In the first phase of the

methodology, the corpus was searched for target domain keywords in English and Spanish, such as *fish/pez*, *sea/de mar*, and *crab/cangrejo*. The great potential of this strategy has been documented in previous research (cf. Stefanowitsch 2006), but never applied to scientific texts. Secondly, a search was made for a set of lexical markers that are typical of scientific discourse. These markers include phrases such as *known as* and *conocido/a como*, and importantly, taxonomic designations, which are standard Latin names written in italics (e.g. *Portunus pelagicus*) and used by all scientists around the world. Taxonomic designations were important for resemblance metaphor and interlinguistic term pair detection because they turned out to co-occur with their corresponding (metaphorical) common names. Besides being quicker and more effective than manual searching, the combination of both these search strategies was found to successfully retrieve metaphors, also providing interlinguistic information regarding terminological metaphor.

Thus, the set of interlinguistic terminological metaphor pairs analyzed here was retrieved by means of the strategies applied in this previous study. The pairs were analyzed from an intercultural perspective following a bottom-up procedure. We contrasted the data, and established situatedness criteria by drawing on assumptions from social psychology, cognitive anthropology, and cognitive semantics.

3 Results and Discussion

3.1 Situated Metaphor and Inter-Linguistic Variation

In Social Psychology, *social identity* is defined as “that part of an individual’s self-concept which derives from his knowledge of his membership of a social group (*or groups*) together with the value and emotional significance attached to that membership” (Tajfel 1978:63) [our emphasis]. The possibility of membership in more than one group sanctions the assumption of a layered sociocultural structure, which presupposes generic and ingroup patterns. The notion of *ingroup membership* is envisaged in the definition of *human cognition* as a joint product of many people working over many years, combining and accumulating skills and knowledge (Tomasello 2000a:357). On this basis, scientific *perception* and *conception* are contingent on the divergent groups of experts who industriously work to obtain sound knowledge about the entities and phenomena under examination. For this reason, scientific knowledge can be regarded as situated. Accordingly, while English-language and Spanish-language marine biologists share a broad social cognition model – i.e. they belong to the same sphere of civilization (Kövecses 2005:68) – they constitute separate communities of scientists, who have their own self-group schemas impinging on universal sensorimotor experiences.

The next subsections provide an analysis of English-Spanish term pairs showing that metaphorical thought plays a major role in this impingement. One of the few scholars addressing this issue is Alexiev (2005), who suggests a set of culture-experiential parameters in the field of architecture and civil engineering. We review his proposal, and suggest a typology of resemblance metaphors according to their level of socio-cognitive situatedness. This typology distinguishes between culture-specificity, culture-typicality, unconstrained angles of referent perception, and degree of specificity.

3.1.1 First Level of Situatedness: Culture-Specificity

The incidence of culture in the conceptualization of specialized referents can give rise to evident cross-linguistic differences. Alexiev (2005:91,109) speaks of *degree of cultural typicality*, making a distinction between *culture-specific* and *culture-experiential parameters* that prompt such cross-linguistic differences. He states that a culture-specific metaphor results from a culture-specific (unique/realia) concept mapping, whereas a culture-experiential metaphor entails a concept-onto-concept mapping in one language which cannot be proved to affect the other one.

We agree with this distinction, but, in our view, the representative examples proposed by Alexiev to flesh out such distinction need revising. For instance, in his corpus, Alexiev (2005:114) finds the English-Bulgarian mining equivalents *bootleg*/гърне, which refer to the portion of shothole after a blast has been fired. Regarding the English term, Alexiev explains that the original sense of the word *bootleg*, ‘upper part of a boot,’ can only be found in some American English dictionaries and not in major British ones, which only define the noun *bootleg* as “something hidden, especially smuggled liquor.” For this reason, *bootleg* should be regarded as culture-specific (Alexiev, 2005:114). In the first place, Alexiev does not clarify the metaphorical relationship between the boot-part sense and the mining domain sense. When we looked into the issue, we discovered that the term *bootleg* designates “a hole, *shaped somewhat like the leg of a boot*, caused by a blast that has failed to shatter the rock properly” (*McGraw-Hill Dictionary of Scientific and Technical Terms*). Thus, this is an evident case of resemblance in shape.

Secondly, in this case, Alexiev considered the concept of *cultural specificity* from an intralinguistic perspective. One sense of a word, which is the one giving rise to the terminological metaphor, is only recognised in American English, not in British English. This is thus a case of intralingual variation. Evidently, this variation is not the reason why English-language experts use a different metaphor from those used by Spanish and Bulgarian experts to designate a shothole after a blast. Indeed, boots, the source domain of the English metaphor, are not unique to American culture, but also exist in Spanish-language countries, in Bulgaria, and in

most of the world. In other words, the comparison between the shape of a boot and that of a hole after a blast could very well have been made by Spanish and Bulgarian mining specialists as well. In our opinion, the bootleg metaphor is an instance of metaphor based on the angle from which the expert perceives the domain-specific referent (see subsection 3.1.3).

This research study targets culture-specific metaphors that arise from an interlinguistic, (rather than an intralinguistic) analysis. In this regard, a culture-specific metaphor can belong to one of three categories:

- (i) a metaphor emerging because it has *both* a culturally unique source domain and a culturally unique target domain;
- (ii) a metaphor arising because the source-domain concept is *solely* found in the expert community where such concept occurs;
- (iii) a metaphor arising because the source-domain concept, which is exclusive of *one* broader expert community, is only used by a cultural subgroup of such community.

The existence of boots across different languages and cultures is what makes *bootleg* unsuitable for types (ii) and (iii), and obviously, for type (i) too.

Concerning the Bulgarian term *гърне*, Alexiev affirms that this is an example of metaphor with a high degree of cultural typicality. Literally, *гърне* refers to the traditional cooking pot for the national Bulgarian bean stew dish (Alexiev 2005:114). There is thus a comparison in shape between the hole in the ground and the Bulgarian pot. In our view, this is not a case of metaphor based on cultural typicality, but rather a case of culture-specific metaphor since the source-domain concept exclusively belongs to Bulgarian gastronomic culture. Therefore, the term *гърне* fits the profile of type (ii) of our subtypology of culture-specific metaphors.

We found no empirical evidence of culture-specific resemblance metaphors belonging to type (i) in the marine biology corpus. Thus, this subsection includes resemblance metaphors belonging to types (ii) and (iii). Let us first focus on metaphors arising because the source-domain concept is unique to an expert community. One of these metaphors is the Spanish term *ochavo* (*Capros aper*). It designates a fish with a roundish shape (see picture in Appendix). This shape prompts the comparison between the fish and an *ochavo* (no literal translation into English), the coin used from the reign of Spanish king Philip III until the 19th century (*Diccionario de la Real Academia Española*). *Boarfish*, the English equivalent, is not culturally marked. The fish receives this name because of its projecting snout and bright red/orange coloring. Both languages rely on the same sensory mode (visual perception), and the same motivation for metaphorical transfer (shape). However, restrictive sociocultural factors bias the conceptualization of the specialized referent in Spanish. Moreover, the Spanish term lacks the metaphorical motivation of color, which does operate in the English unit. This is a clear example of how interaction with entities (in this case, objects, but also dwellings, people, fauna, and flora) exclusive of a physical environment during a

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specific historical period critically constrains visual perception, a physiological capacity common to human beings.

Let us now focus on the third type of culture-specific metaphor, that is, metaphors that are exclusive of a cultural subgroup within a broader expert community. As previously stated, a sociocultural context is a layered structure which includes different subcontexts. Accordingly, although English-language and Spanish-language marine biologists belong to different subcultural backgrounds, they all form part of a broader social frame, which entails the sharing of a particular set of values, habits, and cognitive standpoints.

Nevertheless, on some occasions, a concept characteristic of such a broad social group of specialists is exclusively used by one cultural subgroup to metaphorically designate a specialized concept (third type of culture-specific metaphors in our classification). A representative example extracted from our corpus is the pair *blue manna crab/jaiba azul* [‘blue jaiba’ (*jaiba* is an untranslatable word into English)] (*Portunus pelagicus*). The metaphor *blue manna crab* is grounded in color and shape. The white spots on the blue shell of males of the species are compared to manna, snowflake-like food which, according to the Bible, was eaten by the Israelites in the wilderness during their flight from Egypt (see picture in Appendix). The source domain concept, manna, is one of the religious beliefs of Christianity. As a matter of fact, this species is abundant off the coasts of East Asian countries, where it is known as *flower crab* because the concept of *manna* does not exist there. Unlike English-language experts, Spanish-language experts, who largely share traditions and sociocultural values with English-language experts in Western civilization, do not use the manna metaphor, but simply call this crab *jaiba azul*, which is a non-figurative name.

3.1.2 Second Level of Situatedness: Culture-Typicality

As previously explained, Alexiev (2005:109) argues for the degree of cultural typicality of the general concept giving rise to the metaphorical concept. We agree with him that the more prototypical a referent is in a linguistic community, or the more frequently it is experienced, the more likely it will be for such a referent to take part in metaphorization processes.

We retrieved resemblance metaphor terms from the corpus that feature concepts typical though not exclusive of their corresponding community of speakers. One of them is the Spanish metaphor *camarón café* [‘coffee shrimp’] (*Farfantepenaeus californiensis*), which emerges because of the brownish color of this shrimp (see picture in Appendix). As its taxonomic name indicates, this animal is found in the eastern Pacific, from the Californian coasts down to Perú. Accordingly, the common name *camarón café* was in all likelihood coined by Latin-American scientists. As is well known, Spanish-language countries such as Guatemala, Costa Rica, and particularly, Colombia are great coffee producers,

consumers and exporters. Thus, coffee can be considered a typical element of Latin-American culture. The English equivalent is the non-figurative term *brown shrimp*.

3.1.3 Third Level of Situatedness: Unconstrained Angles of Referent Perception

Alexiev (2005:108) states that the selection of a domain-specific referent designation is determined by the angle of referent perception, and that this angle is contingent on the experience of the metaphor designator in the particular culture. As a result, scientists, researchers and technologists belonging to different linguistic communities often select different domain-specific referent designations associated with different metaphors. Although this is doubtless true, the *experience of the particular culture* as well as the *angle of special referent perception* (Alexiev 2005) are too general notions, and thus, need greater specification.

- Metaphors motivated by exclusively cultural factors;
- Metaphors emerging from typically cultural factors;
- Metaphors determined by factors that, though neutral or equally familiar to experts from different communities, were used by the designator to coin the metaphor.

As with the first two types of situated metaphors, the locus of the metaphorical conceptualization in the third type is first individual. It then spreads among the group members through the dynamics of group interactions, and as a result, the metaphor is no longer reduced to individual representations (Shafarian 2008:119). In the third type of situated metaphor, however, the initially individual conceptualization is not determined by exclusive or typically salient sociocultural patterns, but simply by an expert's choice based on his/her unconstrained angle of perception of the domain-specific referent. The created term is eventually assumed by the scientific community that the expert belongs to because of peer pressure and group membership (Kristiansen 2008:412). Since the entrenchment of the metaphor only takes place in a particular community, we can speak of situated metaphor, thus giving rise to cross-cultural and cross-linguistic variation.

Experts from different linguistic communities can use either the same or different angles of domain-specific referent perception. When marine biology experts from different language communities examine the same organism from different angles, such an organism is not perceived and named in the same way. This cross-linguistic difference in *perception* constrains the (metaphorical) *conceptualization* of the organism. An example of this type of unconstrained angle of referent perception is the pair *ocean sunfish/pez luna* (Mola). The English term, which is not metaphorical, refers to this fish's habit of basking on its side at the sea surface, as though having a sunbath. English-language experts focus on the animal's behavior. This angle of referent perception differs from the angle

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taken by Spanish-language marine biologists, who metaphorically refer to this animal as *moonfish* because of its rounded shape (see picture in Appendix).

When marine biology experts from different language communities examine the same organism from the same angle – i.e. they focus on the same specific feature to conceptualize the domain-specific referent –, the conceptualization process may result in different conceptual metaphors for each language or in the same metaphor. A clear example featuring different conceptual metaphors is the pair *thresher shark/tiburón zorro* (Alopias). A thresher is a man who beats grain with a flail (a long, thin tool). In marine biology, the term *thresher shark* arises because of resemblance in both shape and behavior. Regarding shape, the shark's unusually long, thin, caudal fin looks like a flail, and insofar as behavior is concerned, the shark uses its flail-like fin to strike its preys and daze them (see picture in Appendix). Originally, an English-language expert's angle of perception led him/her to compare this shark with a thresher, and thus coin the metaphorical term. The same process holds for its Spanish terminological equivalent, *tiburón zorro* 'fox shark.' This metaphor emerged because in Spanish, the shark's long caudal fin was perceived as resembling a fox's long tail.¹

First of all, both *thresher* and *fox* are possibly universal, or at least, widespread concepts that are not specifically associated with either English-language or Spanish-language communities. Secondly, experts from both communities use the same angle of domain-specific referent perception. In other words, they all focus on the same aspect of the referent, which is used as a *tertium comparationis* in the metaphorical conceptualization. In this case, the aspect shared is the shark's body part, viz. its tail. As previously mentioned, despite adopting the same angle of perception, English-language experts rely on a different metaphor from that used by their Spanish-language colleagues. Moreover, English-language biologists use two metaphorical motivations, shape and behavior, unlike Spanish-language biologists, who only use one (shape). This signifies that the angle of domain-specific referent perception and metaphorical motivations are very closely related, but are not necessarily lexicalized as one.

We now turn our attention to the second subcategory, which involves the conceptualization process resulting in the same metaphor in English and Spanish. Alexiev accounts for the incidence of cultural patterns in terminology metaphor from the perspective of translation studies. Alexiev (2005:115) underlines the level of specificity of special referent perception as one of the translation strategies used in the field of mining and architecture. His corpus data show that most non-metaphorical target language translation equivalents of source language metaphorical terms are superordinates. In other words, the target language culture usually perceives the same domain-specific referent at a higher level of generality

¹ Thus, this term also has a metonymic basis. Specifically, it is a whole-for-the-part metonymy since the whole source domain, FOX, is used instead of the specific concept, TAIL, which is actually the source element that inspires the metaphor.

than the source language culture.

In our study, we use the notion of *degree of specificity* to pin down differences between English and Spanish term pairs whose constituents are all metaphorical in nature. Specifically, the constituents of each of the interlinguistic pairs are both grounded in the same conceptual metaphor. There is a degree of specificity because one of the pair terms focuses on a more or less specific/generic aspect of the source conceptual domain than the other term. This phenomenon has been analyzed in general language non-resemblance metaphors. For instance, Kövecses (2005:154) considers it a type of differential cognitive preference involving a hierarchy of things or events. However, it had yet to be attested in specialized language, and concretely, in resemblance metaphors.

With this new criterion, we thus go further up the scale of metaphor situatedness to establish a fourth level. However, we consider degree of specificity to actually be a subtype of the expert's unconstrained angle of domain-specific referent perception since the source domain concepts are not exclusive or typical of the two language communities at work. English- and Spanish-language scientists view the domain-specific referent from the same angle of perception, i.e. they use the same aspect of the referent as the target domain concept to take part in the metaphorical process. Nevertheless, depending on the language, this aspect is compared to a more or less specific aspect of the source domain.

A good example of this phenomenon is the pair *triggerfish/pez ballesta* 'crossbow fish' (Balistidae). This fish erects the first two dorsal spines to scare potential predators away (see picture in Appendix). This behavior is compared with the functioning of a crossbow, whose trigger is pulled to keep enemies away. The English term focuses on the specific concept *trigger*, whereas the Spanish term designates the generic concept *crossbow*, which eventually constitutes the whole source domain. Thus, both expert communities rely on the same aspect of the target domain (same angle of perception), which is the dorsal spines of the fish. However, conceptualization of this sea organism through metaphor shows a clear difference in degree of specificity from an interlinguistic perspective.

3.2 Culture-Specificity Brings English and Spanish Together

Evidence has been given so far of the crucial influence of different types of situatedness and sociocultural factors on scientific knowledge to prompt English-Spanish differences through metaphor. We are now presenting a new scenario, in which cultural elements that are exclusive of one expert community shape the metaphorical conceptualization of a sea organism in this community and in others. In our case, this means that one culture critically influences the other so that both use the same conceptual metaphor, which is moreover subject to no degree of specificity from an interlinguistic perspective. In other words, there is total coincidence of both cultures at the conceptual and the linguistic levels.

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The only example found in the corpus is the Spanish metaphorical common name *bailarina española*, which designates a species of nudibrach (scientific name *Hexabranhus sanguineus*). English-language marine biologists have adapted this name into the literal equivalent *Spanish dancer*, and use it in their academic journal articles. The dynamic mental image that this metaphor evokes integrates three closely interrelated metaphorical motivations. First of all, the intense red color of this nudibrach is similar to the color of a typical flamenco dancer's dress (see picture in the Appendix). Secondly, the spirals of the nudibrach look like the frills and founces on the skirt of the dress. Thirdly, the nudibrach behaves like a flamenco dancer insofar as the nudibrach moves its spirals in a fluttering manner to advance through the water, much like the flamenco dancer moves the founces on her skirt while performing. Thus, this metaphor combines physical appearance and behavioral patterns.

Importantly, it emerges from very specific Spanish cultural patterns, which are so appealing to outgroup specialists – in this case, English-language experts – that they adopted it to designate the same marine organism. Thus, in this case, English-language experts have assumed Spaniards' socio-cognitive patterns to make and communicate science.

4 Conclusions

The analysis of English-Spanish metaphorical term pairs extracted from academic journal articles on marine biology reveals that metaphorical conceptualization and categorisation of domain-specific referents are traceable not only to sensory-motor inferences, but also to cultural factors, which critically constrain the former. This fact challenges the feed-forward logic claim of experiential realism (Lakoff and Johnson 1999) that it is the body that necessarily comes first.

The interlinguistic term pairs analyzed offer empirical evidence that English and Spanish have conceptual differences that are culturally grounded. As Yu (2008:393) argues, cultural models set up specific perspectives from which certain parts of the body and certain aspects of bodily experience are viewed as especially salient and meaningful. Terminological metaphor analysis is thus an effective way of ascertaining and improving our understanding of inter- and cross-linguistic variation.

Based on this English-Spanish contrastive study, a typology of terminological metaphors is proposed that classifies them according to their level of socio-cognitive situatedness. This typology distinguishes between four levels: culture-specificity, culture-typicality, unconstrained angles of referent perception, and degree of specificity.

Finally, metaphorical terms, such as the Spanish name *bailarina española*, show that very specific sociocultural patterns exclusive of a particular linguistic community can be adopted by other community to conceptualize and lexicalize

the same referent through metaphor (*Spanish dancer*). This fact supports the claim that although cultural practices more often than not establish cross-linguistic differences, they can occasionally bring them together as well.

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Sociocultural Aspects of Terminological Metaphor

Appendix. Typology and Pictures of the Sea Animals described in this Paper

LEVEL OF SITUATEDNESS	ENGLISH TERM	SPANISH TERM	PICTURE
<p>Culture-specificity (source-domain concept unique to one expert community)</p>	<p>boarfish (metaphorical but not culture-specific)</p>	<p><i>ochavo</i> (metaphorical and culture-specific)</p>	
<p>Culture-specificity (source-domain concept exclusive of a broader community used only by one cultural subgroup)</p>	<p>blue manna crab (metaphorical and culture-specific)</p>	<p><i>jaiba azul</i> (neither metaphorical nor culture-specific)</p>	
<p>Culture-typicality</p>	<p>brown shrimp (neither metaphorical nor culture-typical)</p>	<p><i>camarón café</i> (metaphorical and culture-typical)</p>	
<p>Different unconstrained angles of domain-specific referent perception</p>	<p>ocean sunfish (not metaphorical)</p>	<p><i>pez luna</i> (metaphorical: based on shape)</p>	
<p>Same unconstrained angle of domain-specific referent perception (different conceptual metaphors)</p>	<p>thresher shark (metaphorical: based on shape and behavior)</p>	<p><i>tiburón zorro</i> (metaphorical: based on shape)</p>	

<p>Degree of specificity (same unconstrained angle of domain- specific referent perception: same conceptual meta- phor)</p>	<p>triggerfish (metaphorical: based on behavior)</p>	<p><i>pez ballesta</i> (metaphorical: based on behavior)</p>	
<p>Culture-specificity bringing English and Spanish together</p>	<p>Spanish dancer (metaphorical: based on shape, color, and behavior)</p>	<p><i>bailarina española</i> (metaphorical: based on shape, color, and behavior)</p>	