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THE ROLE OF MICRO-CONTEXTS IN NOUN COMPOUND FORMATION

Abstract
Scientific and technological advances generate new concepts, and thus, new terms to designate them (Štekauer 1998; Cartier and Sablayrolles 2008). Usually, terms are first created in English (Sanz Vicente 2012), the lingua franca of communication. In specialized discourse, the prevalent terms are noun compounds (Nakov 2013). Evidently, to disseminate knowledge, these multi-word terms must be translated. However, noun compounds are often problematic, given the formation patterns in different languages and the syntactic-semantic complexity of these units (Sanz Vicente 2012). Thus, addressing the semantics of noun compounds is essential, since this is usually the basis for term formation in different languages. This paper describes the role of predicate-argument structures (i.e. micro-contexts) in Spanish neological noun compounds in the domain of wind power, since argument structure represents the interface between syntax and semantics. To this end, the micro-contexts of equivalent noun compounds in English and Spanish were compared. Our results showed that neological noun compounds in Spanish were formed according to the syntactic-semantic patterns of their English counterparts, which highlights the role of argument structure in term formation.
Keywords: neologism, noun compound, micro-context, term formation, terminology.

Introduction

Progress in scientific and technological domains implies the development of new concepts, and thus, new terms to designate them (Štekauer 1998; Cartier and Sablayrolles 2008). An example can be found in the wind power sector in Spain, which has experienced exponential growth since the 1980s. This has led to the creation of new terms in Spanish to meet the needs of the speech community (Štekauer 1998).

The process of primary term formation usually starts in English (Sanz Vicente 2012), the *lingua franca* of communication. In specialized domains, these new terms generally take the form of noun compounds (Nakov 2013). However, their translation is often problematic because of their syntactic-semantic complexity and the term formation patterns in different languages (Sanz Vicente 2012). Given that translation is based on meaning, the semantics of noun compounds is worth studying, especially since it is one of the driving forces behind their formation. However, word formation processes in source and target languages have received little research attention (Fernández-Domínguez 2016).

This paper describes the formation of Spanish noun compounds in the domain of wind power, by comparing the micro-contexts (i.e. the relation between a predicate and its arguments and adjuncts) underlying a set of Spanish neological noun compounds with that of their English counterparts. Therefore, verb paraphrases were used to make the arguments explicit and access the semantics of the noun compounds. The objective was to explore the role of micro-contexts in neological noun compound formation with a view to updating the terminological knowledge base EcoLexicon (http://ecolexicon.ugr.es/) with neologisms (Faber 2012).

1. Neological noun compounds

As previously mentioned, scientific and technological advances generate new concepts and thus new terms to meet the naming needs of a speech community (Štekauer 1998; Cartier and Sablayrolles 2008). The main characteristics of these neologisms are represented by the four criteria in Cabré (1993: 145):

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- diachronic criterion: neologisms are recently coined units.
- lexicographic criterion: neologisms are lexemes that do not appear in dictionaries.
- psychological criterion: neologisms are perceived by speakers as new.
- systematic instability criterion: neologisms are formally or semantically instable.

Neology is directly related to primary and secondary term formation (Sager 1990). Primary term creation alludes to the formation of a concept in a language, whereas secondary term formation can refer to the creation of a new term for an existing concept, either (i) due to the revision of a term in a monolingual community, or (ii) as a result of a transference of knowledge to a speech community that lacks a corresponding term (Sager 1990).

Our study focused on secondary term formation in a target language (i.e. Spanish), which is terminologically dependent on the source language (i.e. English) (Humbley and García Palacios 2012). As Valeontis (2004) highlights, when naming a concept in secondary term formation, the processes used in the source language must be applied. This consideration is known as the *analogue rule*.

The secondary formation of new terms from English is closely linked to the transfer of multi-word terms (MWTs) (Sanz Vicente 2012), which are the most productive units in the source language (Štekauer 1998) and the main type of neological formation (Guilbert 1973). Accordingly, noun compounds are the most frequent units, namely in specialized languages (Sanz Vicente 2012; Nakov 2013).

Noun compounds are a sequence of nouns that function as a single noun (Downing 1977), such as *wind power* or *environmental impact assessment*. These units consist of a head noun usually modified by other nouns or adjectives that add features to the head concept, and tend to be placed on the left of the head (i.e. premodification) in English and on the right in Spanish (i.e. postmodification), in adjectival or prepositional forms (Sanz Vicente 2012). However, this packing of lexemes that is typical of noun compounds results in syntactic and semantic ambiguity since the semantic relation between the constituents of a noun compound is not directly indicated by its surface form (Nakov 2013).

Noun compounds can be endocentric or exocentric. In endocentric noun compounds, one term is the head and the other is its modifier (Nakov 2013) (e.g. *power generation*). Alternatively, in exocentric noun compounds, the MWT is not a hyponym of one of its elements, and thus appears to lack a head (Bauer 2008) (e.g. *saber tooth*). Endocentric noun compounds are characterized by their headedness, transparency, syntactic ambiguity, and language-dependency (Nakov 2013).

Noun compound formation can serve as the starting point for a syntactic-semantic analysis of these MWTs, since they have underlying propositions. These can be inferred in the two processes in Levi (1978), involving predicate deletion (e.g. *water column*) and predicate nominalization (e.g. *energy transfer*).

The relation of a predicate to its arguments, which are mandatory and make up the meaning of the verb, and adjuncts (optional complements) (Tesnière 1976) is referred to as *micro-context*. The study of this context is essential, since the predicate, as the syntactic-semantic core of the sentence, can only be successfully addressed through its complement structure.

2. Materials and methods

Adopting the premises of Frame-based Terminology (Faber 2012; Faber 2015), a corpus of texts on wind power was manually compiled. It was composed of a Spanish subcorpus of 552,872 tokens and an English subcorpus of 540,075 tokens. The texts included in the corpus were PhD theses and articles from specialized journals, all of them originally written in each language.

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We used Sketch Engine (https://www.sketchengine.co.uk/), a corpus-analysis tool, to compile the corpus and analyze concordance lines, with a view to verifying meanings, accessing micro-contexts, and searching for equivalent terms. Since the focus of our study was on Spanish neological noun compounds, the subcorpus of this language was uploaded to the term extractor TermoStat (http://termostat.ling.umontreal.ca/). The search was set to 'complex terms' and a list of 6,005 Spanish term candidates was generated.

The next step was the selection of three-term noun compounds, which reduced the list to 484 candidates. From these candidates, we then targeted those that designated processes (191) since processes play a major role in conceptual structure and have received less attention than entities (L'Homme 2015). The cleaning was based on concordance lines and definitions.

According to Cartier and Sablayrolles (2008), it is not easy to identify the innovative nature of a term. For this reason, we based our selection of Spanish neological terms on two criteria: (i) formal or semantic instability (Cabré 1993) (see Figure 1 for an example); and (ii) rise in the frequency of occurrence from zero or almost zero to a sharp peak (Cabré and Nazar 2012). Based on the first criterion, we classified noun compounds referring to the same concept in the same group. This limited the object of our study to 132 compounds grouped in 12 concepts. Figure 1 shows the instability of Spanish noun compounds that can act as designations for *wind farm construction.*

implantación de parques eólicos	establecimiento de parques eólicos
construcción de parques eólicos	construcción de parques aerogeneradores
construcción del parque eólico	emplazamiento de instalaciones eólicas
instalación de parques eólicos	instalación de centrales eólicas
instalación del parque eólico	construcción de centrales eólicas
emplazamiento de parques eólicos	instalación de turbinas eólicas
emplazamiento del parque eólico	instalación de centrales eoloeléctricas
ubicación del parque eólico	instalación de generación eólica
despliegue de parques eólicos	

Figure 1. Instability of Spanish noun compounds for *wind farm construction*.

Then, following the second criterion, we used the Google Ngrams dataset to observe the eventual diachronic rise in the frequency of our noun compounds in Google Books. Based on these data, we restricted our list to 124 Spanish neological noun compounds. Our MWTs were considered neological when they had experienced a substantial increase in frequency in recent years (i.e. from the 1980s, when the wind power industry skyrocketed) or when they did not appear in the dataset, since this was regarded as an instability indicator (i.e. items with fewer than 50 occurrences are not shown by the tool).

Once the neological noun compounds had been identified in Spanish, their English counterparts were sought to analyze secondary term formation. Since these neological noun compounds do not usually appear in resources, the identification of English equivalent terms began with the search for the Spanish modifiers in specialized resources such as Termium Plus (http://www.btb.termiumplus.gc.ca/).

After translating the modifiers, their co-occurrence patterns were analyzed in the English subcorpus and an English reference corpus of approximately 20 billion tokens, using Sketch Engine. These searches were performed with a view to finding the English head terms

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that combine with the modifiers and form an MWT. For instance, to find the English equivalents of *construcción de parques eólicos* (*wind farm construction*), the modifiers *parque eólico* were looked up in Termium Plus, where equivalents such as *wind farm* or *wind power plant* were found. Then, the concordances of these English modifiers were analyzed in Sketch Engine.

The search for head terms in the corpus was performed in different ways:

(i) Word sketches showing the units that usually accompany the term in the corpus. The word sketches of *parque eólico* (*wind farm*), for instance, provided the head terms that generally appeared with those modifiers. Then, the head terms conveying the meaning in question (PROCESS_OF_CONSTRUCTION) were identified.

(ii) Regular expressions that are a search pattern language that permits searches for specific units in a corpus (e.g. our modifiers followed by a noun, which would be the head).

(iii) Verbs that appear with modifiers and convey the required meaning in their nominalized form.

Figure 2 shows some of the concordance lines of the search «*wind farm* + noun» that was carried out with regular expressions in order to find the head term. As can be seen, three equivalent noun compounds for *construcción de parques eólicos* were identified: *wind farm construction*, *wind farm installation*, and *wind farm implantation*. This search was repeated with the other equivalents of *parque eólico* (*wind farm*). The head was also placed on the left in a prepositional structure (e.g. *construction of wind farms*), which allowed us to elicit better correspondences.

Query wind, farm, N.* 218 (336.56 per million)

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file3850863	support this practice by making information on	wind farm ownership	difficult to obtain. For example, in June
file3850863	transactions and political negotiations leading to	wind farm construction	. Unlike North American wind farms, which
file3850863	institution negotiated among community leaders,	wind farm operators	, and local authorities, could reduce negative
file3850863	the ensuing political dynamics involving	wind farm operators	, the state, and non-governmental organizations
file3850863	modest concern, in contrast to a study of a	wind farm controversy	at a near-shore Dutch site, where the key
file3850863	may escalate into political challenges to	wind farm development	. The erection of wind farms in coastal
file3850863	&M base and one wind farm. However, some	wind farm operators	or O&M service providers may serve multiple
file3850863	specification (DEVS) to build a simulation model for	wind farm operations	and maintenance where two different maintenance
file3850863	user and whether he or she represents a	wind farm owner	/operator or an O&M service provider. In
file3850863	be considered as limited impacts of the	wind farm installation	on this coastal trophic web structure and
file3850863	commercial species) in the direct proximity of	wind farm foundations	(Wilhelmsson et al., 2006, Wilhelmsson
file3850863	propose to develop a holistic view of offshore	wind farm impacts	on ecosystems functioning through the use
file3850863	and fish compartments in relation to the	wind farm construction	. For this, expected observations of species
file3850863	expected observations of species changes in	wind farm areas	obtained through extensive literature searches
file3850863	ecosystems. 2.2. Courseulles-sur-mer offshore	wind farm project	. The project is owned by "Eoliennes Offshore
file3850863	combined nameplate capacity of 450 MW. The	wind farm turbines	will be connected via an inter-array network
file3850863	will be 0.158 km2 or 0.03% of the overall	wind farm area	. Our working hypothesis was that scour
file3850863	amount to 0.342 km2, or 0.72% of the offshore	wind farm area	when considered in two dimensions. In calculating
file3850863	Simulating the "reef effect" due to the	wind farm implantation	using ecosim simulations. The Ecosim module
file3850863	scour protections and divided by the total	wind farm area	at Courseulles-sur-mer. Then, the estimated

Figure 2. Concordance lines of the search [lemma="wind"][lemma="farm"][tag="N.*"].

This search was also complemented by the Web. As Cartier and Sablayrolles (2008) point out, Web search engines are very useful when verifying neologisms in view of the number and type of sites where they appear. Therefore, the Google search engine was used to confirm the existence of possible English equivalents. To ensure their reliability, the English terms were only considered when they appeared in specialized resources.

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After the identification of the equivalent terms in English, the final step was to access the micro-contexts in order to carry out a cross-linguistic comparison of argument structures and to analyze their role in the formation of Spanish neologisms. Micro-contexts represent the interface between syntax and semantics and are a key aspect in determining the degree of proximity between primary terms in English and their Spanish counterparts.

In order to access the semantic content of MWTs, inventories of semantic relations have traditionally been the preferred option, although these categories can pose problems such as the choice of the most adequate classification, their abstract and limited nature, and the existence of more than one possible relation in the same MWT (Nakov 2013). In response, authors such as Teubert (2005) and Nakov and Hearst (2006) suggested that the best way of ascertaining the semantics of a noun compound is by means of multiple paraphrases. This approach is useful since noun compounds represent a syntactic condensation of propositions (Levi 1978; Kocourek 1991 [1982]).

Accordingly, as proposed in Cabezas-García and Faber (in press), the specification of semantic relations by means of paraphrases is a valuable tool in the study of noun compounds. In our research, Sketch Engine was used to analyze paraphrases that permitted us to access the quantitative and qualitative valences of predicates (i.e. number and semantic characterization of arguments) as well as the syntactic-semantic dependency relations of the noun compounds. The information retrieved was used to semantically characterize each concept.

Figure 3 shows paraphrases of the English noun compound *wind power prediction*. As can be seen, this predicate-based approach allows the characterization[1] of the concept by means of the semantic identification of the argument structure, which is not always fully represented in the noun compound. Comparison of this syntactic-semantic information in Spanish neological equivalents was based upon this procedure.

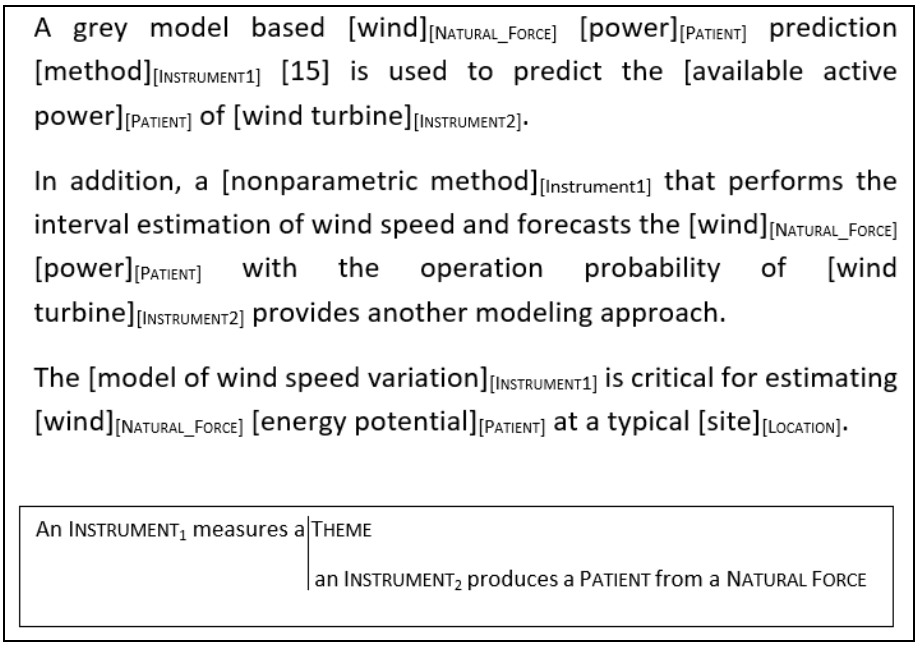

Figure 3. Paraphrases of *wind power prediction* and semantic characterization of the concept.

[1] The semantic roles used in the research were specifically designed following a semasiological approach.

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3. Results and discussion

The analysis of micro-contexts in English and Spanish noun compounds afforded insights into the formation of neological noun compounds. Neologisms were found to be largely present among Spanish three-term noun compounds conveying processes in the domain of wind power. Namely, 65% of these units showed a systematic instability and a heavy rise in their frequency of occurrence, which can be regarded as neology indicators (Cabré 1993; Cabré and Nazar 2012). As for the rise in frequency, Google Ngrams data showed that in the 1970s, wind power began to expand throughout Spain. In the following decades, it experienced exponential growth (see Figure 4 for an example). This led to the creation of new terms.

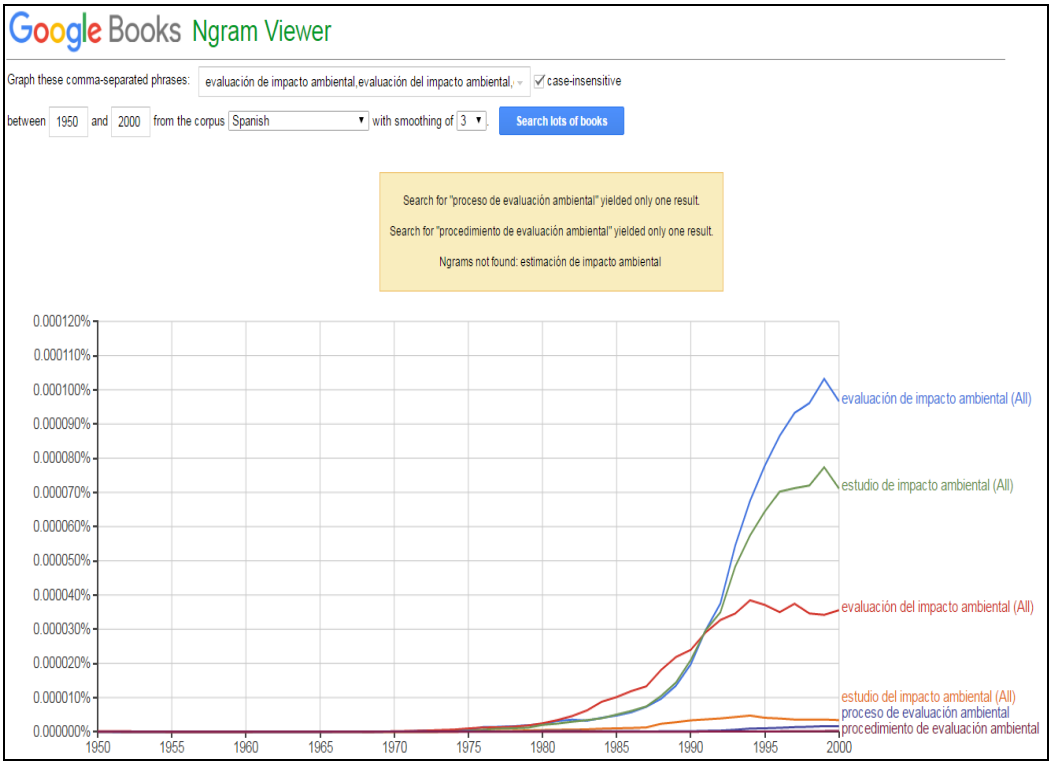

Figure 4. Google Ngrams for the Spanish equivalents of *environmental impact assessment*: *evaluación de impacto ambiental*, *estudio de impacto ambiental*, *evaluación del impacto ambiental*, *estudio del impacto ambiental*, *proceso de evaluación ambiental*, and *procedimiento de evaluación ambiental*.

This was secondary term creation since the Spanish noun compounds were based on the previously existing English terms. The analysis of micro-contexts made it possible to access the syntactic-semantic interface of noun compounds. Thus, similar argument structures were identified in equivalent MWTs.

Figure 5 shows the semantic characterization of the concept conveyed by noun compounds such as *wind farm construction* in English and *construcción de parques eólicos* in Spanish. This conceptualization was obtained by means of verb paraphrases that revealed the propositions underlying the noun compounds. As can be observed, the noun compounds in both languages share the same argument structure. In other words, they have the same number of arguments, and the verb slots are filled by semantically similar units. Additionally, these paraphrases show adjuncts, such as TIME, LOCATION, AGENT, PURPOSE, and CONSEQUENCE.

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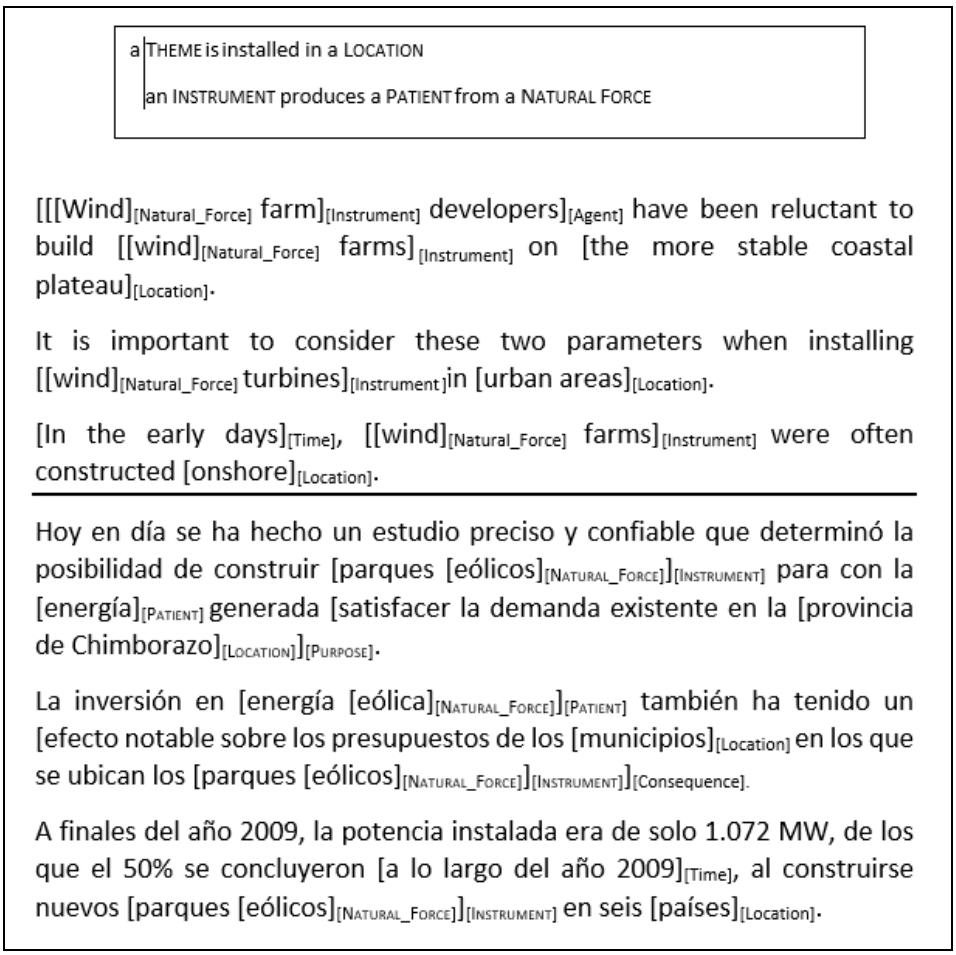

Figure 5. Semantic characterization and English paraphrases of *wind farm construction* and other terms conveying the same process (top panel); Paraphrases of their Spanish counterparts (bottom panel).

This procedure was used to analyze all our noun compounds, which designated 12 concepts. The argument structure of the MWTs in both languages was found to be identical, except in the case of four concepts, where some noun compounds showed slight variations with respect to their English correspondences. The most relevant example of this is *estudio de emplazamiento eólico* (*wind site assessment*). The head of the Spanish MWTs is a verb nominalization with the semantic relation (STUDIES), the first modifier (the term closest to the head) alludes to the LOCATION, and the second modifier refers to the NATURAL_FORCE from which energy is obtained. Although the conceptualization of their English equivalents does not differ (see Figure 6), the arguments that fill the slots of the noun compound are not always the same in each language. Even though there are English noun compounds with the same arguments as those of the Spanish noun compounds, most of the English equivalents possess different arguments (e.g. *wind*[NATURAL_FORCE] *power*[PATIENT] *prospecting*[STUDIES]; *wind*[NATURAL_FORCE]-*energy*[PATIENT] *site*[LOCATION] *assessment*[STUDIES]; [*wind*[NATURAL_FORCE] *farm*][INSTRUMENT] *site*[LOCATION] *selection*[STUDIES]).

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Figure 6. Semantic characterization of *estudio de emplazamiento eólico* and *wind site assessment*, and their equivalents.

Notwithstanding these minor differences that do not alter the conceptualization shared by the noun compounds in both languages, it can be argued that Spanish neological noun compounds in this domain calque the syntactic-semantic structures of their English counterparts since almost all the concepts were conveyed by noun compounds identically formed in both languages.

The syntactic-semantic calques in Spanish were confirmed in the type of arguments (qualitative valence) that mostly fill the slots of the noun compounds in both languages. Therefore, the head of all English and Spanish noun compounds was occupied by the nominalized verb of the semantic relation, because the head term determines the concept designated by the noun compound (*electric power forecast*$_{[\text{MEASURES}]}$, *predicción*$_{[\text{MEASURES}]}$ *de la potencia eléctrica*). Furthermore, all the modifiers (with the partial exception of *atmospheric model forecast/predicción del modelo atmosférico*) represented the PATIENT/THEME[2] of the concealed conceptual proposition. Thus, English and Spanish noun compounds conveying processes in the domain of wind power represent a process and the entity receiving the action.

Moreover, the PATIENT/THEME included secondary conceptual propositions (see Figures 3, 5, and 6 for some examples) that were identically represented in English and Spanish modifiers. In other words, the slots of the first and second modifiers[3] in both languages were filled by the same arguments. As can be seen in Figures 7 and 8, the first modifier was mainly filled by the PATIENT/THEME of the secondary conceptual proposition (e.g. *energía*, *power*), and to a lesser degree, by the INSTRUMENT (e.g. *turbina*, *generator*). As for the second modifier, it was usually the NATURAL_FORCE (e.g. *eólico*, *wind*) and, secondly, the TYPE_OF PATIENT (e.g. *reactiva*, *reactive*). It may appear that English second modifiers were more often filled by the PATIENT/THEME than by the TYPE_OF relation. However, this conceptual relation is typical of the second modifiers in four-term English noun compounds (e.g. *wind power plant establishment*). In fact, it responds to the phenomenon of *fertility* (see Daille et al. 2004), alluding to the different length of equivalent terms in the source and target language (e.g. *wind production > producción de energía eólica*).

[2] PATIENT and THEME both receive the action of the predicate, the difference being that PATIENT can undergo changes, while THEME is not affected.

[3] In order to ensure real correspondence between the languages, only premodified English noun compounds were considered, since the order of the modifiers is altered in prepositional postmodified English compounds.

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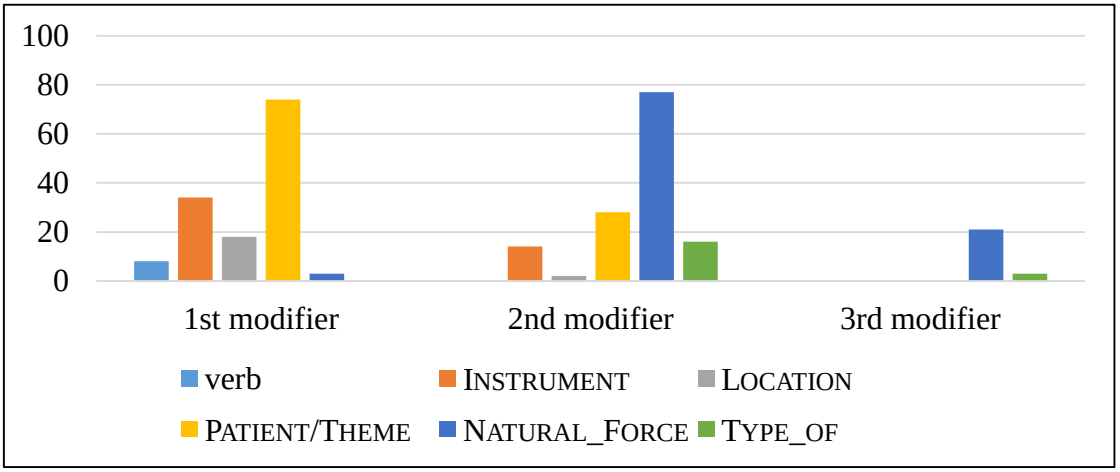

Figure 7. Semantic characterization of English modifiers.

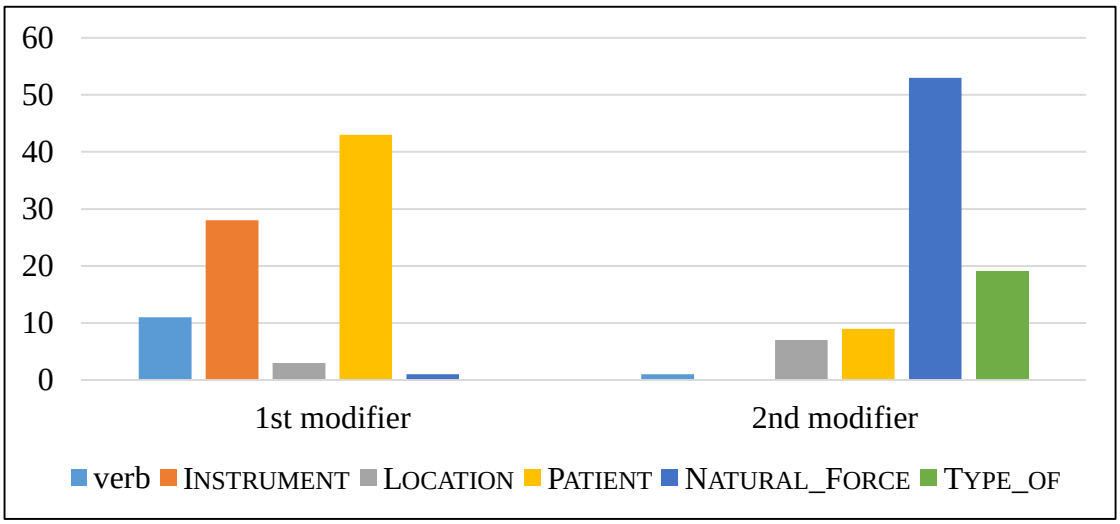

Figure 8. Semantic characterization of Spanish modifiers.

The results of our study showed that Spanish neological noun compounds had the same syntactic-semantic patterns as their English equivalents. As previously highlighted, all of them emphasized the PATIENT/THEME role though one concept was designated by two types of noun compound (*meteorological variables prediction/atmospheric model prediction* and *predicción de variables meteorológicas/predicción del modelo atmosférico*). Whereas the modifiers of some had the PATIENT/THEME role (*meteorological variables prediction* and *predicción de variables meteorológicas*), the modifiers of the other type of noun compound had the INSTRUMENT role (e.g. *predicción del modelo atmosférico* and *atmospheric model prediction*). This was found both in English and Spanish and indicates that the term formation procedure was calqued in Spanish neologisms.

In addition, this type of noun compound supports Levi's (1978) statement about the prevalence of the direct object and subject of the concealed proposition in the modifiers of noun compounds in English (since the modifiers of these compounds were the subject of the proposition), which was also confirmed in Spanish. Accordingly, the First Sister Principle of Roeper and Siegel (1978) establishes that deverbal compounds include the lexeme that appears first on the right of the verb (i.e. in the First Sister position). This was the general rule in our

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noun compounds in both languages, where the PATIENT/THEME (frequently appearing on the right of the verb) was prioritized (e.g. *X predicts wind power* > *wind power prediction*). However, some of the MWTs designating the previously mentioned concept (*predicción del modelo atmosférico* and *atmospheric model prediction*) do not meet the First Sister Principle, since these compounds include the lexemes that appear on the left of the verb (i.e. *an atmospheric model predicts X*). Thus, the relevance of these syntactic-semantic issues lies in the fact that Spanish neological noun compounds reproduced them in the same way as their English correspondences.

As regards term formation processes in Spanish neological noun compounds, most of them were semantic calques in consonance with Spanish term formation processes (e.g. *wind energy exploitation* > *explotación de la energía eólica*). This sometimes led to the derivation of shortened forms (e.g. *prediction of electric power production* > *predicción de la producción eléctrica*). Adaptations were also present in Spanish neologisms. For instance, *wind* became the Spanish adjective *eólico*, even though the use of the direct equivalent of *wind* (*viento*) did not pose idiomaticity problems. Furthermore, another adaptation occurred in *desarrollo de proyectos eoloeléctricos*, one of the equivalences for *wind power sector development*. More specifically, the adjective *eoloeléctrico* includes two arguments (NATURAL_FORCE and PATIENT) joined by the Greek prefix *eolo-*. Additionally, certain Spanish noun compounds also made explicit new conceptual features. For instance, when referring to *wind farms*, *parque* (*park)* was used instead of *granja* (*farm*), which further expanded the meaning of the concept.

The preferred MWTs in Spanish were those conveying the most transparent meaning (e.g. *caracterización de área eólica* against *estudio de prospección eólica* [*wind site assessment*]). However, the most frequent noun compounds for certain concepts coincided with a clearly established noun compound in English (e.g. *environmental impact assessment/EIA* > *evaluación de impacto ambiental*). It should be noted that the clarity of MWTs was enhanced in many cases by making the verb of the hidden semantic relations explicit. One example is *predicción de la producción eléctrica* (*prediction of electric power production*), where two verbs are present under nominalized forms (*predicción* and *producción*). This highlights the important role of micro-contexts in the formation of neological terms.

In spite of the transparency of Spanish neologisms, we found that calques are more prevalent in specialized discourse than in informative texts, since informative texts require a higher degree of clarity that is not always achieved through calquing. For example, in our corpus, *explotación de la energía eólica* (*wind energy exploitation*) had more occurrences (14) than *uso de la energía eólica* (*wind energy use*) (5), although the Web search showed a much higher figure for the latter (*explotación de la energía eólica*: 87,200; *uso de la energía eólica*: 741,000).

As for the morphological systems in English and Spanish noun compounds, it is well known that English noun compounds are right-headed (premodification), whereas Spanish noun compounds are left-headed (postmodification). However, the use of left-headed prepositional constructions was also confirmed in English. In terms of part of speech, many combinations are possible in English for noun compound formation and most of them have a preference for nominal components. As can be seen in Figure 9, compounds formed by the N+N+N and N+of+(art.)+N+N patterns were prevalent. In contrast, Spanish noun compounds were more homogeneous and adjectival forms were more frequent than in English (see Figure 10). In particular, Spanish noun compounds tended to have the N+de+(art.)+N+Adj. pattern. Furthermore, Spanish adjectival modifiers convey a wide variety of semantic relations that are omitted in English because of noun packing. An example can be found in *energía eólica* (*wind power*), which establishes a SOURCE relation that is not always obvious in English.

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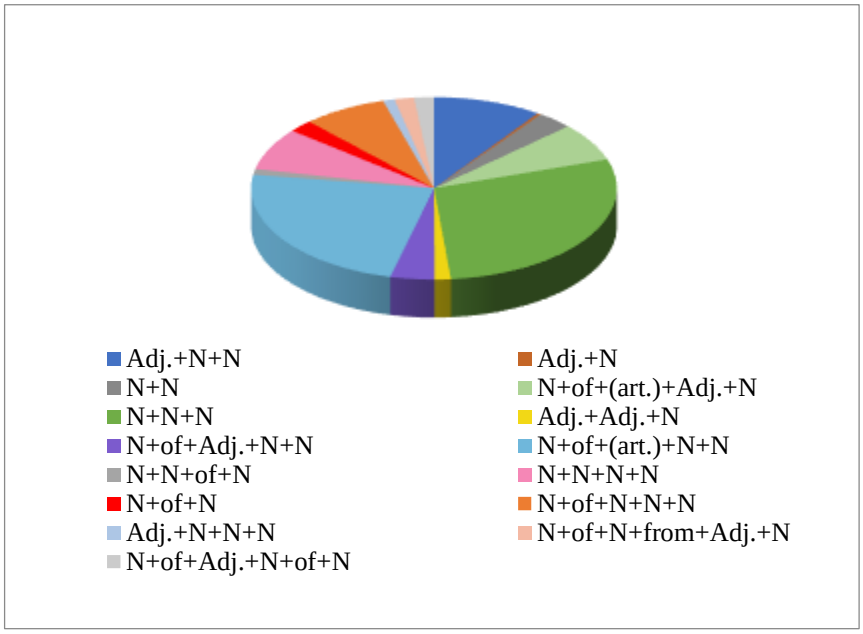

Figure 9. Part of speech of English noun compounds.

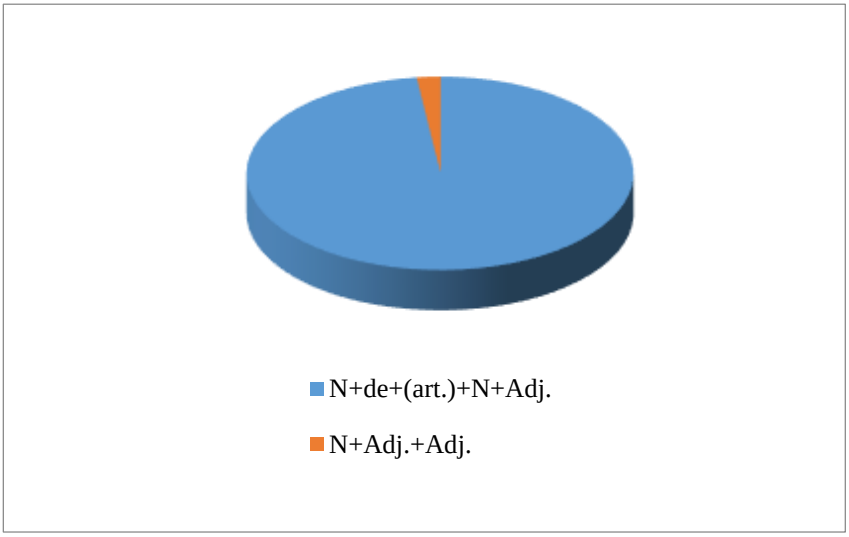

Figure 10. Part of speech of Spanish noun compounds.

Nonetheless, although it may seem that there are no grammatical calques in Spanish neological noun compounds, the patterns in both languages match and there is a close correspondence between Spanish prepositional compounding and English N+N compounds (Fernández-Domínguez 2016). Therefore, Spanish noun compounds tend to repeat the grammatical constructions of English noun compounds, although they are adapted to the term formation patterns of the target language.

Conclusions

This research focused on neological noun compound formation in Spanish, given the fact that scientific and technological advances generate new terms that are usually noun compounds (Nakov 2013). In particular, the role of micro-contexts was studied by means of verb paraphrases (Teubert 2005; Nakov and Hearst 2006), because the underlying propositions

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of these units play a major role in their formation (Levi 1978) and influence their syntactic-semantic complexity.

To this end, a corpus on wind power was compiled in English, the language of primary term formation (Sanz Vicente 2012), and Spanish, the target language. The Spanish neological noun compounds were then identified, based on their formal or semantic instability (Cabré 1993) and a heavy rise in their frequency (Cabré and Nazar 2012). The next step was the search for their English counterparts in order to carry out a cross-linguistic comparison of the argument structure of noun compounds.

Our results confirmed that the analysis of micro-contexts provides valuable information in the study of neological noun compounds. A high frequency of neologisms (65%) was found in Spanish three-term noun compounds designating specialized processes in the domain of wind energy. Furthermore, syntactic-semantic calques were present in Spanish neological compounds, whose nominalized predicates had similar quantitative and qualitative valences to those of their English counterparts. Therefore, the term formation processes in Spanish responded to semantic calques and adaptations. A preference for transparent noun compounds was also observed.

In conclusion, neological noun compounds in Spanish are a type of syntactic neology (Guilbert 1973) often formed by means of syntactic-semantic calques from English. Micro-contexts were thus fundamental to the study of term formation. Our ultimate goal is to include neologisms in the terminological knowledge base EcoLexicon (http://ecolexicon.ugr.es/), given the relevance of new terms in a constantly changing world.

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Résumé
Le progrès scientifique et technologique est à l'origine du foisonnement de nouveaux concepts et, par conséquent, de nouveaux termes (Štekauer 1998 ; Cartier et Sablayrolles 2008), qui sont souvent créés en anglais (Sanz Vicente 2012). Dans la langue de spécialité, les noms composés sont les termes les plus fréquents (Nakov 2013). Cependant, leur traduction pose souvent des problèmes, compte tenu de la formation des termes dans des langues différentes et de la complexité syntaxique et conceptuelle de ces unités (Sanz Vicente 2012). Ainsi, l'analyse de la sémantique des noms composés reste indispensable, car elle est à la base de leur formation. Dans cette étude, nous nous intéressons au rôle des structures prédicat-argument (connues sous le nom de microcontextes*) dans des noms composés néologiques du domaine de l'énergie éolienne en espagnol, car la structure argumentale représente l'interface syntaxe-sémantique. Dans ce but, nous avons comparé les microcontextes des noms composés équivalents en anglais et en espagnol. Les résultats ont montré que les noms composés néologiques en espagnol se sont formés conformément à la syntaxe et à la sémantique des termes équivalents anglais, ce qui souligne le rôle de la structure argumentale dans la formation des termes.*
Mots clés : néologisme, nom composé, microcontexte, formation des termes, terminologie.