



Entreculturas 14 (2024) pp. 196-206 — ISSN: 1989-5097

The role of Lexical Priming theory in the investigation of the formal characteristics of metaphoricity

El papel de la teoría de la imprimación léxica en la investigación de las características formales de la metaforicidad

 Natalia Baena Franco

Universidad de Córdoba (España)

Recibido: 29 de septiembre de 2023

Aceptado: 15 de enero de 2024

Publicado: 27 de febrero de 2024

ABSTRACT

This paper aims to relate the body of research and findings on the role of Michael Hoey's Lexical Priming theory in current metaphor investigation, with special emphasis on the research on its formal representations. It is argued that the application of this theory to metaphor analysis, pioneered by Katie J. Patterson, sheds light on explaining some aspects of metaphoric language, which have been of increasing interest among linguists in recent years. From a purely theoretical approach, these contributions will be thoroughly examined. The ability of this theory to account for the processes of metaphor acquisition, identification, and usage by the individual, as well as for the great diversity of metaphorical behaviours and uses, demonstrates the particular relevance of its application to the study of figurative language.

KEYWORDS: cognitive linguistics, corpus linguistics, figurative language, lexical priming, metaphor.

RESUMEN

Este artículo pretende poner en relación el conjunto de estudios y hallazgos sobre el papel de la teoría psicolingüística de la imprimación léxica de Michael Hoey en la actual investigación sobre la metáfora, con especial énfasis en la investigación sobre sus características formales. Se propone que la aplicación de esta teoría al análisis de la metáfora, iniciada por Katie J. Patterson, arroja luz sobre algunos aspectos del lenguaje metafórico que han suscitado un creciente interés entre los lingüistas en los últimos años. Desde un enfoque puramente teórico, se pretende examinar de manera exhaustiva estas aportaciones. La capacidad de esta teoría de dar cuenta de los procesos de adquisición, identificación y uso de las expresiones metafóricas por parte del individuo, así como de la gran diversidad de comportamientos y empleos metafóricos, demuestra la particular relevancia de su aplicación al estudio del lenguaje figurado.

PALABRAS CLAVE: imprimación léxica, lenguaje figurado, lingüística cognitiva, lingüística de corpus, metáfora.

1. Introduction

Lexical Priming theory is a lexical and psychological approach developed by Michael Hoey between 2003 and 2005, which focuses on the central role of lexis in the organization and acquisition of language. Applied to the study of metaphoric language, the consideration of the psychological aspects of the individual in these two processes enables the theory to account for the psycholinguistic mechanisms involved in metaphor identification and use. This paper aims to present a comprehensive literature review of each aspect of research on metaphoric language for which the contribution of Lexical Priming theory is significant.

For this purpose, a summary of the main challenges in the investigation of metaphor from Lakoff and Johnson to date will be presented first, in order to introduce and legitimise three foundational pillars of current metaphor research: the need to study linguistic expressions, the scientific urge to base the study on real data, and the inadequacy of the dichotomy which the very term *metaphor* implies, i.e., literal versus metaphorical.

Also, three concrete areas, namely metaphor acquisition, identification, and usage, are to be exhaustively explained throughout the paper regarding the Lexical Priming theory and following Katie J. Patterson's argumentation (2014, 2015a, 2015b, 2017, 2018). The main postulates of Hoey's theory that are of interest to this research will be first introduced, and then their application to the study of metaphor, carried out by Katie J. Patterson, will be discussed.

The theory is relevant to explaining of how metaphoric language is recognised through a set of lexical, grammatical, semantic and pragmatic features called *primings*. Primings are contained in a language user's knowledge of the metaphoric word or expression and serve as lexico-grammatical indicators that facilitate the reader's or listener's interpretation. This knowledge is acquired through his or her cumulative encounters with the metaphor and allegedly determines how the individual will subsequently use the metaphor. Also, to be discussed is the capacity of the Lexical Priming approach to account for the creative nature of metaphors and language in general.

More importantly, the present paper will focus on what Lexical Priming theory says about the lexical and grammatical forms of metaphoricity. To do so, previous research about this matter will be first introduced. Emphasis will be placed on the discoveries about patterns within metaphoric language, the presence of lexico-grammatical markers and the investigation of the elements surrounding metaphors. These will, in turn, be taken as evidence for the relevance of applying Lexical Priming theory to explain the range of metaphorical behaviours.

2. Challenges in metaphor investigation

With the publication of *Metaphors We Live By* in 1980, Lakoff and Johnson revolutionised the understanding and investigation of metaphor. The Conceptual Metaphor Theory (CMT) proposes that metaphors found in language only reflect an underlying system of metaphors in thought and that the former are secondary to the latter. However, it soon became evident that the conceptual level is hardly accessible without using language as an intermediate. As Kövecses states, «in order to be able to arrive at [...] metaphors [...], one needs to study the conventionalised linguistic expressions» (1991 in Deignan, 2008: 152).

Another problematic question arises from how we study linguistic expressions. As Deignan (2008) explains, until the 1970s, linguists studied language and its functioning through their intuitions as speakers. Thus, the language data that many researchers used were often invented. According to the author, this raises another issue: «the invented data tend to consist of single sentences or at best short paragraphs, lacking in context, and therefore sometimes suggesting ambiguity that is rarely present in natural discourse» (Deignan, 2008: 152).

Nevertheless, with the development of new technologies and their application to language study came the so-called Corpus Linguistics, which allows linguists to analyse language based on empirical evidence of collections of naturally occurring texts, instead of relying on their judgment

alone (Deignan, 2008). Deignan states that «corpus linguistics has had a huge impact on descriptions of language in use, especially at the lexical level» (2008: 150). The corpus tools also speed up the linguistic analysis of a considerable amount of data through language patterns, word frequencies, collocations, etc., and there has been a recent trend in using the corpus approach to provide a «usage-based, real-world account of metaphors in context» (Patterson, 2015b: 4).

This trend includes authors such as Katie J. Patterson, Michael Pace-Sigge, Jenny Lederer, and the Pragglez Group. Nonetheless, a further constraint has become apparent to these authors when dealing with corpora metaphors: the term *metaphor* itself. Although the CMT already questioned the distinction between literal and figurative language, these authors argue that a dichotomy is a rather ineffective way to describe such a complex phenomenon (Patterson, 2015b). Instead, they propose different levels of metaphorical expressions or words, in other terms, a gradation of stronger and weaker metaphors. According to Patterson, «the term *metaphoricity* is being increasingly adopted as a way of addressing metaphoric language from the point of view of a cline theory rather than a strict dichotomy» (Patterson, 2015b: 1).

It is important to clarify that these levels of metaphoricity proposed, following Patterson (2015b), are not analysed in terms of their degree of conventionality. They are instead considered to be inherent to the language user and their interaction with the language rather than to the linguistic expressions themselves. The author argues that the metaphoricity of linguistic expressions is not static nor universal but is subject to variation depending on several factors. Consequently, Patterson claims that

metaphoricity is a highly fluid psychologically dependent phenomenon, which has the ability to come into and out of view. [...] the perspective on lexical metaphor should be re-focused on to the individual language user and both the social and psychological processes that dominate meaning and our ever-changing use of language. (2015b: 7)

This consideration of the psychological aspects paves the way for the subsequent application of the Lexical Priming theory to the study of metaphor, which will allow metaphorical language to be analysed from a psycholinguistic approach.

3. Investigation of the lexical and grammatical characteristics of metaphoricity

Lexico-grammatical features of metaphors have been analysed recently to see how metaphorical meanings emerge and if a change in either of these two levels –lexical or grammatical– impacts the linguistic expressions' metaphoricity.

In terms of grammatical category, Krishnakumaran and Zhu (2007 in Neuman et al., 2013: 2) identified three types of metaphorical phrases involving nouns:

In a type I metaphor, a subject noun is associated with an object noun via a form of the copula verb “to be”, such as in the case of “God is a king”. For a type II metaphor, the verb is the focus of the metaphorical use representing the act of a subject noun on an object noun, such as in the case of “The war absorbed his energy”. Type III metaphors involve an adjective-noun phrase such as “sweet girl”.

About this classification, Patterson agrees that «the metaphoricity of words and phrases is dependent on the word class» (2018: 64). However, following Deignan (2005), Patterson states that too much focus has been placed on noun-noun metaphors, which are less frequent than previously thought, and that, consequently, more research based on naturally occurring, corpus derived data is required. In contrast, it has been proven that verb metaphors are more common than noun metaphors. Finally, Patterson adds that adjectival metaphors can carry out different functions; for example, an adjective can «provide additional strength to an already existing noun metaphor [...], create metaphoricity exclusively, [and] a combination of the two, where an adjective modifies a noun metaphor and at the same time carries its own metaphoricity» (2018: 64).

Katie J. Patterson has aimed to investigate the impact of these lexicogrammatical features on the identification and understanding of metaphors on several occasions. Together with Michael Pace-Sigge, Patterson argues that «these subtle relationships, such as the collocates a word has in a given use, its grammatical constructions and its pragmatic effects, all help us to determine which sense of a word is being meant in a given context» (2017: 2). From a corpus linguistics approach, they analysed the behaviour of metaphorical and non-metaphorical instances of different keywords in a nineteenth-century corpus and found evidence of lexical and grammatical patterns within the metaphoric data. They concluded that, although figurative language remains creative and flexible in some ways, there are also invariable formulas for metaphors that are repeated in their use and that can be observed in corpora. Their findings, therefore, suggest that «metaphoricity can be identified through the presence or absence of lexicogrammatical markers» (Patterson & Pace-Sigge, 2017: 5).

3.1. Investigation of the elements surrounding metaphor

Another research on the elements that can contribute to the identification of metaphors was carried out by Alice Deignan and Lynn Cameron in 2003. They combined two spoken language corpora of different sizes to analyse the context in which metaphorical expressions occurred exhaustively. They then identified words and phrases that regularly co-occurred with them and compiled a list of *tuning devices*. Examples would be the expressions *actually*, *almost*, *imagine*, *just*, *kind of*, *a little*, *really* and *sort of*, among others (Cameron and Deignan, 2003).

It is the same phenomenon that Steen et al. (2019) referred to as *metaphor flags*, i.e., metaphor signalling devices. The concept refers to the set of expressions which, in varying degrees and functions, help the speaker to determine in which way the hearer should interpret a metaphor. Hence, it is a discourse perspective that aims to consider the bidirectional and interactional nature of language.

In their mentioned research, Cameron and Deignan (2003) identified three main functions carried out by the tuning devices: 1) directing the interpretation of a metaphor, 2) adjusting the strength of a metaphor, and 3) alerting interlocutors to the unexpected.

Firstly, a tuning device is said to be directing listeners to a particular interpretation when it serves «to prevent a metaphor from being understood literally [...], to prevent a metaphorical interpretation of a statement that was intended to be taken literally [and] to indicate the nature of the mapping to be made between Topic and Vehicle» (2003: 153). Secondly, the speakers can also use tuning devices to adjust the level of metaphoricity to their communicative intent and the needs of the hearer, either to mitigate the implications of the metaphor or to provide it with additional emphasis. And thirdly, from a somewhat pragmatic perspective, tuning devices can serve «to signal that a stretch of discourse coming up may be less than straightforward to interpret» or «to cushion any semantic mismatch between the metaphor and its referent» (2003: 156), especially when the relation between the domains is unconventional, ambiguous, or unexpected.

Cameron and Deignan argue that this notion of «expectedness» is what seems to determine if the employment of a tuning device is needed or not in a given context. They hypothesise is that the more predictable a metaphor is, the less likely it is to co-occur with a tuning device, whilst less frequent metaphors are more often found to be accompanied by them. However, they call for further research on the implications of these findings.

As can be observed, this approach also differs from that which relates the level of metaphoricity to the notions of 'originality' or 'conventionality' since it places the focus on the individual users of language rather than on the linguistic expressions immanently (Cameron & Deignan, 2003). There is, therefore, an explicit interest of linguists in the study of psychological aspects and their role in the distinction between word meanings and uses, which has eventually led to applying a psycholinguistic theory such as Lexical Priming to the investigation of figurative language.

4. Lexical Priming Theory

In order to thoroughly comprehend the relevance of the Lexical Priming theory to the study of figurative language, it is first necessary to present its foundational claims and assumptions. The theory of Lexical Priming is a linguistic theory developed by Michael Hoey between 2003 and 2005, which puts lexis at the centre of language since it is proposed that words are the main organizing factor of language. Thus, it is a lexical and psycholinguistic approach to language, which claims that «we hold in our minds elaborate networks of possible co-occurrence patterns that are linked to domain and genre. [...] Calling up the words stored in our mental lexicon sparks off a series of expectancies that we use to build up discourse» (Williams, 2006: 327).

These expectancies are called *primings* and are based on repetition, in the sense that they are constructed through subsequent encounters with the word or combination of words. According to the theory, whenever listeners or readers come across a lexical item, they subconsciously associate it with the elements surrounding it, i.e., its linguistic context and, consequently,

as these encounters with the word, syllable, or word combination multiply, listeners or readers come to identify the word or words that characteristically accompany it (its collocations), the grammatical patterns with which it is associated (its colligations), the meanings with which it is associated (its semantic associations), and the pragmatics with which it is associated (its pragmatic associations). (Hoey, 2012: 2)

In other words, Hoey proposes that we store words in our mental lexicon along with information about their grammatical, semantic and pragmatic usage. A further claim is that when we produce language, we use the words following all this information. More specifically,

when we come to use the word (or syllable or word combination) ourselves, we are likely [...] to use it

in one of its characteristic lexical contexts, in one of the grammatical patterns it favors, in one of its typical semantic contexts, as part of one of the genres/styles with which it is most associated, in the same kind of social and physical context, with a similar pragmatics and in similar textual ways. (Hoey, 2012: 4)

This theory, therefore, provides a lexical and psychological explanation of how language is acquired, how words are structured in our minds, how we access them and how we go on to use them appropriately. Furthermore, Lexical Priming theory also aims to account for «how language change occurs with drifts and cracks in the initial primings as we discover new contexts» (Williams, 2006: 328). Each new encounter with a word implies an actualization of the information we previously had on it, so the primings of a word can vary over time and use.

In addition to the aforementioned psychological aspects, the theory employs concepts specific to corpus linguistics, such as collocation and colligation (Hoey, 2012). This combination of different perspectives –lexical, psycholinguistic– and methods –corpus linguistics– is what is truly novel about this theory and what, according to Patterson, enables it to present «a usage-based account for both the psychological motivation behind our understanding of language and our ability to use language fluently to communicate within a given context» (2014: 239).

4.1. Individual and collective nature of language

Another important question implied by this theory and the notion of *priming* is that language acquisition depends on each individual's exposure to the language. If we understand that language acquisition occurs through continuous encounters with language, it would mean that different encounters by different individuals entail different acquisitions. However, Hoey argues that these individual dissimilarities are modulated by their pooling with the rest of the

speakers, creating a collective consciousness of language¹. As Williams explains,

primings are individual constructs, something that we build up in our minds through contact with language and which through a process of reflexivity we combine into personal ‘rules’ about how we expect units of language to perform. This individual knowledge is then harmonised through contact with others [which] leads to the development of shared language expectations. (2006: 330-331)

These «harmonised differences» explain language’s social and conventional nature and the individual’s capability to use language in novel and creative ways.

4.2. The account for language creativity

Language creativity, understood as a language user’s natural ability to create new sentences, is one of the central concerns of generative grammarians (Williams, 2006). Following Noam Chomsky, they argue that any linguistic theory that explains the language phenomenon must account for its creative nature. Thus, the relationship between this theory and the theory of Lexical Priming, which holds that we understand and use language through repetitive patterns, may be incompatible. These two views are nevertheless not mutually exclusive but, according to Hoey (2005), complementary.

Following the Lexical Priming approach, language creativity can emerge in several ways:

Our priming is based on data that are rarely uniform and, in uttering or writing, we have to choose which of the patterns in those data we are going to replicate. The permutations of even the most well-established

primings of a common word, syllable, or word combination are sufficient to ensure a great variety of potential utterances, some of which will certainly be novel to their audience. (Hoey, 2012: 4)

In addition, whilst the theory claims that the language user is *likely* to use language following the dominant primings of the lexical items, these may be intentionally disregarded to achieve different communicative purposes (e.g., artistic, humorous). For instance, a language user «may make an unexpected choice from an expected semantic paradigm (e.g., *three nano-seconds ago*, where the choice from a semantic paradigm of time span is as expected but the item selected is not a collocate of ago)» (Hoey, 2012: 4). Also, the language user may infringe some of the features contained in the primings –but not all. To illustrate this, Hoey takes as an example the phrase *a grief ago*, in which the collocational primings are partly violated while the colligational and textual primings are maintained. As can be seen, the deliberate neglect of the primings is frequently due to creative or literary purposes. This clarification is key for implementing Lexical Priming theory in studying metaphorical language.

5. Lexical Priming theory in the investigation of the formal characteristics of metaphoricity

Katie J. Patterson has pioneered this perspective of analysis, so all discussed below will be a compilation and further explanation of the implications of her various findings and research.

The first and most important implication that emerges from the use of Lexical Priming theory to account for the phenomenon of metaphor is that –in figurative and literal language– there exist patterns based on repetition that determine how we use and understand metaphors. Thus, Patterson proposes that «the theory of Lexical Priming can be adopted to provide an explanation of linguistic norms and exploitations involved in metaphoric language» (2014: 237). The author argues that this combination of

¹ Following Hoey, Williams states that «the major forces of language harmonisation are seen as being socialising factors, and in particular education, literary and religious traditions, mass media, dictionaries and grammars» (2006: 330).

linguistic and psychological approaches can be beneficial to the identification of metaphors in corpora because if the theory holds true, it would mean that metaphorical words or expressions «have a fixed set of choices in terms of grammar and lexis, and that can be observed through an analysis of corpus» (2014: 238).

Indeed, the assumption that there are trends within metaphorical language legitimises the previous and further use of corpora in its research since this approach focuses on frequency of use and word repetition. Patterson's analyses will thus be based mainly on qualitative studies of the behaviour of metaphors in corpora.

The conclusions of her first investigations confirmed that «linguistic primings are evident in metaphoric as well as literal language» (2014: 252) and that they allow speakers to determine if a word is being used metaphorically or not through a range of linguistic features. These linguistic features can be, for example, whether a verb is transitive or intransitive, whether the direct object is concrete or abstract, whether the subject is a person or an object, etc., and a word's collocates and colligates. Also, the evidence of patternings or primings suggests that «whilst metaphor is inevitably and ultimately creative, there may appear to be underlying rules governing our exposure to and ultimately our interaction with that language» (2014: 252).

Later on, Patterson studied how Lexical Priming theory supports the mentioned cline theory, i.e., the idea that there are different levels of metaphoricity. She argues that it can be a way of «providing an explanation for, and giving insight into, the fuzziness of 'metaphoricity'» (2015b: 2), that is, to explore and account for the range of behaviours found within metaphoric language. It is argued that this approach allows categorising metaphoricity based on lexico-grammatical features or primings. Accordingly, this research will focus on «frequent clusters, colligations, collocations, and pragmatic associations [...] to highlight the lexical patterns of metaphor» (2015b: 2).

After a qualitative analysis of the words *flame* and *grew* in a nineteenth-century corpus, Patterson concluded that primings not only exist within metaphorical language, but also perform a fundamental function in the sense that they

serve as lexico-grammatical markers which enable the listener or reader to differentiate which sense of a word is being used and whether it is metaphorical or not. Also, the author argues that a variation in these features influences the level of metaphoricity of the instances, not because the metaphoricity of the instances relies entirely on these formal markers, but because a change in them activates or deactivates certain primings in the reader's or listener's mind, which conditions his or her interpretation of the instances. In summary, as Patterson herself puts it,

evidence of lexical primings demonstrates that through subsequent use, we have come to expect metaphors (as indeed all language) to be presented in particular patterns and constructions, within certain contexts and uses. This may be a conscious process or it may not be, but the important point is that the metaphoricity of a word or phrase comes about only through the role of the language users (producers and the receivers) and their primings, not simply on the language as a static phenomenon. (2015b: 7)

5.1. The account for the creative nature of metaphors

As stated, this approach and this author do not consider the levels of metaphoricity inherent to the metaphorical word or phrase. Instead, Patterson's research «looks [...] at the idea of metaphoricity as a crack in the primings or expectations of language users, at both a collective and individual level» (Patterson, 2015b: 2). Following Hoey's theory to explain metaphorical language would mean that each encounter with a metaphor endows it with certain lexical, grammatical, pragmatic, and even textual primings. In this way, we have subconsciously created a system of recurring patterns and expected uses of metaphors, which not only facilitates their identification but, at the same time, is flexible enough to allow for the creation of new instances, yet consistent with this system. The latter is important because, according to Patterson, creative

metaphors must «still retain enough linguistic conventionality (grammatically and lexically) to be understood by the receiver. This may be by retaining existent expectations, or primings» (Patterson, 2016: 240). Without this connection to the norm, the reception of the communicative intent of the metaphor could be compromised.

Furthermore, Patterson agrees with Hoey that

primings are not permanent features of a word (or set of words). Each use we make of a word, and each new encounter, either reinforces the primings or loosens them. They may accordingly shift in the course of time and use, and subsequently the lexical item/s can shift slightly in meaning and/or function (Patterson, 2015b: 4-5).

This is referred to by Hoey as drifts in the priming (2005), and it is what, according to Patterson, «allows for the creative use or flexibility of metaphors» (2015b: 5).

Concerning this, researchers agree that this flexibility is what allows for the pervasiveness of figurative language in everyday communication. In turn, what provides metaphoric language with its flexibility and freedom is its ability to experiment with and reshape the conventional uses of language, whether lexically, grammatically, or semantically (Patterson, 2017). However, the evidence of patternings in metaphor usage implies that conventional and less conventional instances exist within metaphoric language, as Patterson explains:

the conventional, and often used instances are those which will have stronger primings and thus are more recognizable to a reader or listener, within the context and environment in which they are used. In contrast, types of language which are less often used, will not have such strong patternings or tendencies and thus be more flexible in how they are used. (2015a: 6)

Therefore, Lexical Priming theory explains how we can produce and identify metaphors through recurring patterns and, simultaneously, how we bend these internalised rules to create new instances.

5.2. Relevance of Hoey's hypothesis on synonymy and polysemy

Another claim of the Lexical Priming theory important for the present investigation is synonyms. Although Hoey has not focused mainly on figurative language and semantic relations, he has nevertheless drawn some brief hypotheses, which have been significantly applied to metaphor research by Patterson.

As to synonyms, Hoey looked at the primings of different synonymous words and expressions and found that shared primings were less common than expected. Also, he noticed that multiple shared primings were more often found in synonymous words that only vary by one letter or syllable (e.g., *round the world* and *around the world*). Based on these findings, Hoey hypothesises that «synonyms differ in respect of the way they are primed for collocations, colligations, semantic associations and pragmatic associations, and the differences in these primings represent differences in the uses to which we put our synonyms» (2005: 79). In other words, primings are linked more to the word form than to the semantic relations, and therefore they tend to vary from word to word rather than from meaning to meaning (Williams, 2006).

Exactly the opposite seems to happen, however, with polysemous words. If we take the previous hypothesis as true and assume that primings are associated with form rather than meaning, it would mean, *a priori*, that polysemous words do not vary their primings in their different senses and, therefore, are ambiguous to a certain extent. But this has been proven not to be the case. Instead, looking at polysemous instances in a corpus, Hoey found that different meanings of polysemous words presented distinct and separate primings, both collocational and colligational. More importantly, the author drew three

conclusions regarding this, and brought them together in what he called the Drinking Problem Hypothesis²:

- 1) The rarer sense of a word will avoid the collocations, semantic associations, and colligations of the more common sense of a word.
- 2) If two senses of a word are equally or nearly equally common, they will avoid each other's contexts of language use.
- 3) Where neither 1 or 2 apply, the effect will be humor, ambiguity, or the invention of a new sense. (2005: 82)

Although these hypotheses may appear contradictory concerning the hypothesis about synonyms, they all refer to the same phenomenon, in the sense that different meanings of a polysemous word operate as different words with their own lexical and grammatical primings, although there may be occasional overlaps. In this way, the hypothesis that primings are linked to words rather than meanings remains consistent. However, the explanation of this area within the theory of Lexical Priming needs to be further developed.

Helpful to this purpose is Patterson's application of the Drinking Problem Hypothesis to metaphoric language. The author argues that these assumptions about polysemous words can be extrapolated to metaphors because metaphors are, ultimately, a special meaning of a word different from its literal meaning. Thus, Patterson takes Hoey's statements and claims that metaphorical uses of a word avoid the lexico-grammatical features (or primings) of non-metaphorical uses of that same word to avoid ambiguity (Patterson, 2017).

² Hoey explains the name of his hypothesis as follows: «In the film *Airplane*, we are told of a pilot who is no longer permitted to fly because he has a 'drinking problem'. The next shot shows him spilling a non-alcoholic drink all over himself; his problem is in fact that he misses his mouth when he tries to drink. The joke depends on the order of the words» (Hoey, 2005: 82). It refers to the fact that meaning depends to a great extent on precise word order (sentences disambiguate polysemous words) and that speakers actively avoid sequences of words that are commonly used with another meaning.

To illustrate this, in her 2014 article, Patterson briefly analysed concordance lines of the verb *to kindle* from a corpus of nineteenth-century writings. The author divided the instances into metaphorical and non-metaphorical and then looked at their grammatical and syntactic properties (direct objects, subjects), degree of concreteness, and collocates. She found out that most direct objects of the metaphorical group were, predictably, «abstract notions related to vision or human emotion, including love, desire, thoughts, excitement, sympathies, triumph, and liking» (Patterson, 2014: 249). What was highly interesting about her results, however, was that when the metaphoric instances had concrete objects, these objects were distinct and separate from those found in the non-metaphors, for example, *spark*, *fiery*, *blister* or *burning*. This would suggest that the collocates of one group are avoided in the other (Patterson, 2014).

In short, if this hypothesis holds true, it would suggest that metaphoricity, like polysemy, can be identified through a set of lexico-grammatical and semantic associations primed in the reader's mind through subsequent exposure and use (Patterson, 2018). In other words, «as readers we become primed to associate these features with one sense or the other (metaphoric or non-metaphoric), which subsequently strengthens the differences between them» (Patterson, 2018: 125). Indeed, and following the hypotheses about synonymy and polysemy, Patterson's (2017) research using corpora confirmed that metaphorical instances of a word appear to be completely separate lexical items compared to the literal uses of the same words in terms of the primings both categories presented.

These results again support the idea that, albeit subconsciously, we identify and produce metaphors according to these primings and recurring patterns. At the same time, this legitimises and reinforces the study of the lexical and grammatical forms of metaphors and the tuning devices accompanying them. Moreover, Patterson concludes that

a metaphoric sense of an item appears to be dependent on the primings activated in a reader. It can thus be argued, based upon the lexical priming approach,

that metaphoricity is inherent in the language user rather than the language itself, and that its manifestation is often dependent on the individual's interpretation of the language. (Patterson, 2017)

Hence, metaphoricity becomes a pragmatic phenomenon that acquires its full meaning in context. In addition, its dependence on the psychological factors of the interlocutors implies that «metaphoricity cannot be accounted for unanimously or universally» (Patterson, 2015b: 5). This is the reason why the application of a psycholinguistic theory such as Lexical Priming becomes essential to the investigation and understanding of metaphor.

6. Conclusions

As documented, Hoey's theory of Lexical Priming sheds light on some aspects of metaphorical language hitherto unknown or scarcely studied. As Patterson (2014) argues, the theory's account for language allows us to explain how we learn to identify these deviations from conventional meaning and make sense of and use of them. The introduction of the psychological dimension enables linguists to study the influence of individual aspects on the use of metaphors.

More important for the present research is how the theory has proved beneficial in explaining the existence of recurrent patterns and tendencies in metaphorical data, legitimizing previous and subsequent research on the formal characteristics of metaphoricity. The application of Lexical Priming theory to metaphor investigation allows for categorising metaphoricity according to its lexico-grammatical features, which are observable and analyzable in corpora. The corpus approach allows research based on real and naturally occurring data.

In addition, Hoey's hypotheses on synonymy and polysemy support the notion of metaphoricity and confirm that it relies to a great extent on the lexico-grammatical form of the instances in the sense that the presence or absence of these features gives away the presence or ab-

sence of metaphoricity. Primings specific to metaphoric or non-metaphoric word use support the Drinking Problem Hypothesis and the idea that different word senses behave as separate lexical items. This area would, however, benefit from further research on the relation between the two hypotheses and their more profound implications on metaphor investigation.

Also of interest would be a closer examination of the lexico-grammatical characteristics found within metaphoric language from a Lexical Priming approach, as well as an investigation of whether the findings which have been discussed also apply to figurative language in other languages.

Bibliography

- Cameron, Lynne and Deignan, Alice (2003). Combining Large and Small Corpora to Investigate Tuning Devices Around Metaphor in Spoken Discourse. *Metaphor and Symbol*, 18(3), 149-160. http://dx.doi.org/10.1207/S15327868MS1803_02
- Deignan, Alice (2008). Corpus linguistic data and conceptual metaphor theory. In Mara Sophia Zanotto, Lynne Cameron and Marilda C. Cavalcanti (eds.) *Confronting Metaphor in Use: An applied linguistic approach* (pp. 149-162). John Benjamins Publishing Company. <https://doi.org/10.1075/pbns.173.10dei>
- Hoey, Michael (2005). *Lexical Priming: A New Theory of Words and Language* (1st ed.). Routledge.
- Hoey, Michael (2012). Lexical priming. In Carol A. Chapelle (ed.) *The Encyclopedia of Applied Linguistics*. <https://doi.org/10.1002/9781405198431.wbeal0694>
- Hoey, Michael and Patterson, Katie J. (2021). Lexical Priming. In Carol A. Chapelle (ed.) *The Encyclopedia of Applied Linguistics*. <https://doi.org/10.1002/9781405198431.wbeal0694.pub2>
- Krishnakumaran, Saisuresh and Zhu, Xiaojin. (2007). Hunting elusive metaphors using lexical resources. *Proceedings of the Workshop on Computational Approaches to Figurative Language*, 13-20. <https://doi.org/10.3115/1611528.1611531>

- Lakoff, George and Johnson, Mark (1980). *Metaphors We Live By*. University of Chicago Press.
- Neuman, Y., Assaf, D., Cohen, Y., Last, M., Argamon, S., Howard, N., and Frieder, O. (2013). Metaphor Identification in Large Texts Corpora. *PLoS ONE*, 8(4). <https://doi.org/10.1371/journal.pone.0062343>
- Patterson, Katie J. (2014). The Analysis of Metaphor: To What Extent Can the Theory of Lexical Priming Help Our Understanding of Metaphor Usage and Comprehension? *Journal of Psycholinguistic Research*, 45, 237-258. <http://dx.doi.org/10.1007/s10936-014-9343-1>
- Patterson, Katie J. (2015a). The confinements of ‘metaphor’ – Putting functionality and meaning before definition in the case of metaphor. *Globe, A Journal of Language, Culture and Communication*, 2, 1-22. <http://dx.doi.org/10.5278/ojs.globe.v2i0.748>
- Patterson, Katie J. (2015b). An investigation into the lexical representations of metaphoricity using corpus methods. *CORPORA*, 1-9. <http://dx.doi.org/10.13140/RG.2.2.21274.34247>
- Patterson, Katie J. (2017). Lexical priming and metaphor – Evidence of nesting in metaphoric language: Applications and advances. In Michael Pace-Sigge and Katie J. Patterson (eds.) *Lexical Priming: Applications and advances* (pp. 141-161). John Benjamins Publishing Company. <http://dx.doi.org/10.1075/scl.79.06pat>
- Patterson, Katie J. (2018). *Understanding Metaphor Through Corpora: A case study of metaphors in nineteenth century writing*. Routledge.
- Patterson, Katie J. and Pace-Sigge, M. (2017). When is a metaphor not a metaphor? - An investigation into lexical characteristics of metaphoricity amongst uncertain cases. *Corpus Linguistics*, 103-117. <https://doi.org/10.1080/10926488.2017.1297622>
- Steen, G. J., Dorst, A. G., Herrmann, J. B., Kaal, A. A., Krennmayr, T., and Pasma, T. (2010). *A Method for Linguistic Metaphor Identification: From MIP to MIPVU*. John Benjamins Publishing Company. <https://doi.org/10.1075/celcr.14>
- Williams, G. (2006). Michael H. Lexical Priming: A New Theory of Words and Language. *International Journal of Lexicography*, 19(3), 327-335. <https://doi.org/10.1093/ijl/ecl017>