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# *OVER* IN *TAKE OVER*: METAPHORICAL EXTENSIONS FROM A FUNCTIONAL-COGNITIVE APPROACH

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*aos meus pais, por sempre acreditarem em mim, mesmo nos momentos em que não fui capaz de fazê-lo.*

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*“Que eu possa agradecer a Vós,*

*minha cama estreita,*

*E ter sempre um feixe de lenha*

*debaixo do meu fogão de taipa,*

*e acender, eu mesma,*

*o fogo alegre da minha casa*

*na manhã de um novo dia que começa”.*

*(Cora Coralina)*

**ABSTRACT**

Under the light of Functional-Cognitive Linguistics, taking into account the fact that language use is motivated by contextual factors and human experience, we aimed at investigating the influence of both lexical verb (*take*) and particle (*over*) in the meaning formation of the multi-word verb *take over*. In order to accomplish such task, a sample of 1,412 occurrences of the multi-word verb was randomly selected by means of the R software for statistics purposes out of 14,128 concordance lines first obtained from the Corpus of Contemporary American English – COCA. The verb *take over* was chosen due to the fact that it was the most recurrent multi-word verb with the particle *over* (which, in fact, was the initial focus of this research) in COCA. The studies of Lakoff (1987) and Tyler & Evans (2001, 2003) were the central pillars that inspired the present study. Whereas the account for *over* explaining its spatial senses and metaphorical extensions by means of image schemas and the theory of conceptual metaphor (LAKOFF & JOHNSON, 2003; LAKOFF, 2006) provided by Lakoff was the starting point of our analysis, Tyler & Evans's approach to the particle was equally important. The scholar's Polysemy Network for *Over* alongside their Principled Polysemy methodology to distinguish different senses of *over* were of great relevance to the development of our analysis. Despite the fact that, indeed, the approaches of Lakoff (1987) and Tyler & Evans (2001, 2003) are divergent, especially with regard to the critique of the latter of the exaggeration in number of senses attributed to *over* by Lakoff's (1987) full-specification approach and of metaphorical approaches to *over*, both theories were of equal merit to this research. Thus, the *Above* Schema (LAKOFF, 1987) was used to illustrate the conceptualization of spatial senses of *over* in *take over* and the conceptual metaphors underlying the process of metaphorical extensions formation (in this case, the control sense of *over*) were taken into account. In the same vein, the polysemy network for *over* (TYLER & EVANS, 2001, 2003), encompassing fifteen senses and showing how the control sense of the particle stems from a prototypical spatial scene, or proto-scene, by means of implicature and reanalysis (conceptualizing power / control in terms of vertical elevation), was also considered. In such attempt to explain the way non-spatial metaphorical senses extend from spatial meanings, the concepts of primary and complex metaphors (GRADY, 1997) as well as of trajector (TR) and landmark (LM) were also relevant. The research questions that guided this study were as follows: 1) Given that metaphorical extensions of particles stem from spatial senses, how does this process occur in the case of *over* and what is the impact of this in the senses of *take over*?; 2) How does the relationship between the TR and the LM contribute to the polysemy network of *take over*?; 3) What is the role played by the primary senses of both verb and particle in the non-composite meanings of the multi-word verb at stake?; 4) What may contribute to the retention of spatial aspect in metaphorical uses of *take over*? The results suggested that not only the particle (*over*), but also the lexical verb (*take*) play an important role in the meanings of *take over* observed in the sample.

**Keywords:** Multi-word verbs, *Over*, Functional-Cognitive Linguistics, Particles.

## RESUMO

À luz da Linguística Cognitivo-Funcional, considerando-se o fato de o uso da língua ser motivado por fatores contextuais e pela experiência humana, almejamos investigar a influência tanto do verbo lexical (*take*) quanto da partícula (*over*) na formação de sentidos do verbo multi-palavra *take over*. A fim de cumprir essa tarefa, uma amostra de 1.412 ocorrências do verbo multi-palavra foi selecionada aleatoriamente pelo software R, para fins estatísticos, a partir de 14.128 linhas de concordância obtidas, primeiramente, no Corpus of Contemporary American English – COCA. O verbo *take over* foi escolhido por ter sido o verbo multi-palavra mais recorrente com a partícula *over* (que, de fato, foi o enfoque inicial desta pesquisa) no COCA. Os estudos de Lakoff (1987) e Tyler & Evans (2001, 2003) foram os pilares centrais que inspiraram o presente estudo. Enquanto a abordagem de *over*, explicando os seus sentidos espaciais e extensões metafóricas por meio de esquemas imagéticos e da teoria da metáfora conceptual (LAKOFF & JOHNSON, 2003; LAKOFF, 2006), realizada por Lakoff, foi o ponto de partida para a nossa análise, a abordagem da partícula por Tyler & Evans foi de igual importância. A rede semântica, desses estudiosos, para *over*, juntamente com a metodologia de *Principled Polysemy*, para distinguir sentidos diferentes de *over*, possuíram grande relevância para o desenvolvimento da nossa análise. De fato, apesar de as abordagens de Lakoff (1987) e Tyler & Evans (2001, 2003) serem divergentes, especialmente, em relação à crítica destes ao exagero no número de sentidos atribuídos a *over* pela *full-specification approach* de Lakoff (1987) e às abordagens metafóricas de *over*, ambas as teorias foram importantes para esta pesquisa. Assim, o *Above* Schema (LAKOFF, 1987) foi utilizado para ilustrar a conceptualização dos sentidos espaciais de *over* em *take over* e as metáforas conceptuais subjacentes ao processo de formação de extensões metafóricas (neste caso, o sentido de controle de *over*) foram considerados. Do mesmo modo, também foi considerada a rede polissêmica para *over* (TYLER & EVANS, 2001, 2003), que engloba quinze sentidos e mostra como o sentido de controle da partícula se estende de uma cena espacial prototípica, ou *proto-scene*, por meio de implicatura e reanálise (conceptualizando poder / controle em termos de elevação vertical). Nessa tentativa de explicar como os sentidos metafóricos e não espaciais se estendem de sentidos espaciais, os conceitos de metáforas primárias e complexas (GRADY, 1997), bem como trajetor (TR) e marco (LM) também foram relevantes. As perguntas de pesquisa que guiaram este estudo foram as seguintes: 1) Uma vez que as extensões metafóricas de partículas se estendem de sentidos espaciais, como ocorreria esse processo no caso de *over* e qual seria o impacto disso nos sentidos de *take over*?; 2) Como a relação entre TR e LM contribui para a rede polissêmica de *take over*?; 3) Qual é o papel dos sentidos primários, tanto do verbo quanto da partícula, nos sentidos do verbo multi-palavra em questão?; 4) O que iria contribuir para a retenção de aspectos espaciais nos usos metafóricos de *take over*? Os resultados sugeriram tanto a partícula (*over*), quanto o verbo (*take*) possuem um papel importante nos sentidos de *take over* observados na amostra.



**Palavras-chave:** Verbos multi-palavra, *Over*, Linguística Cognitivo-Funcional, Partículas.

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COCA – Corpus of Contemporary American English

CG – Cognitive Linguistics

EFL – English as a Foreign Language

FC – Functional Linguistics

LM – Landmark

TR - Trajector

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## 1. INTRODUCTION

Having Ronald Langacker as one of its precursors in 1970s, Cognitive Linguistics (CL) bridges the gap between language and cognition, shedding light on the various cognitive and experiential processes underlying language apprehension and use. In fact, unlike other approaches, such as Generative Theory, in Cognitive Linguistics lexical items walk hand in hand with syntax, forming a "continuum of assemblies of symbolic structures" (LANGACKER, 2008, p.6). Furthermore, cognitivists do not rely solely on linguistic studies; indeed, their work is truly interdisciplinary, so that there is cross-fertilisation between cognitive research and other fields such as psychology, philosophy, neuroscience and even artificial intelligence. As claimed by Evans and Green (2006, p. 16), "the drive to understand human cognition" is linguists' motivation. Given that language is "a uniquely human capacity", linguistics itself would stand as a cognitive science. Thus, it would walk hand in hand with the other areas mentioned above; according to the scholars, those fields of research would investigate human cognition. Cognitive linguists, in particular, would "view language as a system that directly reflects conceptual organisation". Furthermore, as Evans and Green (2006) claim, "for cognitive linguists, the emphasis is upon relating the systematicity exhibited by language directly to the way the mind is patterned and structured, and in particular to conceptual structure and organisation" (p. 15-16). However different some cognitive approaches or theoretical accounts might have been over the years, with regard to models and concepts proposed, they seem to be pervaded by discussions on metaphor.

As Lakoff and Johnson (2003) claimed, "our conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature"; therefore, "our conceptual system plays a central role in defining our everyday realities" (p. 4). Unlike traditional accounts to metaphor, which regarded it as external to conventional language, i.e. as a literary device employed by poets, cognitive scholars consider it a recurrent tenet of language use or communication on a daily basis. Moreover, metaphor would actually reside in thought – being "general mappings across conceptual domains" – rather than in language (LAKOFF, 2006). Hence, the issue of metaphor alongside the concepts of embodiment and encyclopaedic knowledge are of paramount importance to Cognitive Linguistics.

At its early stages, Functional Linguistics placed considerable emphasis on grammaticalisation as well as on the correlation between form and function, with little focus on their corresponding contexts. Nevertheless, contemporary American Functionalism leaves more room for an empirical perspective (ROSÁRIO & OLIVEIRA, 2016). Such approach,

also called Usage-Based Linguistics or Functional-Cognitive Linguistics (FURTADO DA CUNHA, BISPO & SILVA, 2013), makes Cognitive and Functional Linguistics concur. The present study relies on the theoretical framework provided by these approaches as it shows how cognition, human experience and language use may be intertwined.

A core issue of the present study, multi-word verbs, might be considered challenging for English learners. As pointed out by Kovács (2015), "there are some misunderstandings that make phrasal verbs daunting for learners" (p. 143). Such fact may be due to the various senses of those verb + particle constructions that constitute multi-word verbs. In contrast to traditional accounts which regarded them as an arbitrary combination of verbs and particles, scholars with a cognitive perspective see experiential and contextual motivations for their occurrence. In light of what Rudzka-Ostyn (2003) claims, regarding comprehension of multi-word verbs meanings going from a concrete realm to an abstract one, this study discusses the motivations for the polysemy network of the multi-word verb *take over* from a functional-cognitive perspective. In addition, we investigate the semantic *potential* (EVANS, 2006) of the lexical verb *take*, alongside the particle *over*, in order to comprise the meaning of *take over*.

As Evans (2006) points out, "words provide access to what I will refer to as a *semantic potential*, with different sorts of knowledge being potentially *activated*" (p. 493). Indeed, the scholar revisits Langacker's (1987) idea of "point of access", assuming that words may lead to "large-scale encyclopaedic knowledge networks" (EVANS, 2006, p. 494). Such perspective stands as an enlightenment to the present work, as we also aim at analyzing the semantic role of the lexical verb, not only the particle, in the non-composite meaning of multi-word verbs.

Lakoff's (1987) analysis of the senses of the particle *over* by means of Idealised Cognitive Models (ICMs), as well as image schemas, involving the participation of a moving entity – trajector (TR), and of a point of reference – landmark (LM), were the starting point of the present study. The five senses and their corresponding image schemas – above and across, above, covering, reflexive and excess – discussed by the scholar were the first elements taken into account at the very beginning of this study. The scholar's theory of conceptual metaphor was another key factor of great relevance to the analysis carried out in the present study. As demonstrated in Chapter 5, in which the analysis and the discussion of results are provided, Lakoff's work bridges the gap between the mental processes pervading conceptualisation and the actual use of metaphorical or extended meanings of *over* – although use, in an empirical

basis, is not under the scope of the scholar's work, room is left for future empirical studies addressing the use of *over*.

In turn, the network of the particle over proposed by Tyler & Evans (2003) is of equal merit to the present research. Despite the questions it poses to the schemas and metaphorical tenet of Lakoff's approach, it encompasses a step forward in the literature regarding the discussion on the polysemy of over. The network, developed by means of the Principled Polysemy which, according to the authors, has focus "on the issue of semantic polysemy, the phenomenon whereby a single linguistic form is associated with a number of related but distinct meanings or senses" (TYLER & EVANS, 2001, p. 724). The idea of a proto-scene, or spatial "primary meaning component" (p. 724), alongside the non-spatial control sense stemming from that original meaning, stand as ground-breaking elements, as they provide an overview of the senses of over that relies on the particle use. Such theoretical framework allowed us to follow a path from a quite theoretical approach (aimed at explaining cognitive processes by means of providing insights at a theoretical/ conceptual level) to an empirical approach (focused on the uses of over on a daily basis, regardless of their spatial or non-spatial nature).

Indeed, there have been a number of studies on spatial prepositions/ particles under the light of Cognitive Linguistics – which are quite enlightening to the present research. As pointed out by Barbosa and Rossini (2017), "Cognitive Linguistics has provided new conceptual tools for the analysis of language and, as a consequence, there has been a growing interest in multi-word verb and particle" (p. 67) under the light of cognitive principles. For instance, besides Tyler & Evans's (2001, 2003, 2005) renowned work on the particle *over*, Oliveira (2007, 2010, 2011, 2012, 2016) also provides valuable insight in the area, with studies on semantics of prepositions with especial focus on schemas of CONTAINMENT. In her work entitled "Cognitive relations in the semantics of Brazilian-Portuguese preposition *em*" (OLIVEIRA, 2012), casting light on how the meanings of that preposition "can be organized as to form a prototypical category structured as a network such as the Schematic Network Model proposed by Langacker (1987)". In turn, Lindner (1981) had already addressed "English verb particle constructions with *out* and *up*" "within the framework of Ronald Langacker's Space Grammar" (p. xi) and Barbosa (2016), in her Master's dissertation, echoes Lindner's work, moving a step forward, towards an empirical analysis of the multi-word verb come out "to investigate how the verb and particle contribute to the meanings of this multi-word verb in the different contexts it is used" (p. 6).

In a similar fashion, the present work aimed at addressing the multi-word verb *take over* from a Functional-Cognitive perspective. The relationship between verb and particle alongside the configuration of both TR and LM in such use of the particle *over* were investigated. Furthermore, in light of the Principled Polysemy Network proposed by Tyler & Evans for the particle *over*, it was also taken into account the extent to which the use of the particle in *take over* would walk hand in hand with the network proposed by the scholars.

The online Corpus of Contemporary American English – COCA, acclaimed in the academic field worldwide, was used to obtain empirical data for the analysis we carried out. The corpus made it possible to note recurrent patterns in the use of the multi-word verb at stake; more specifically, with regard to recurrent features in the control sense held by the verb. Throughout the process by in which primary spatial scenes or ideas entailed by both the verb and the particle originate non-spatial ideas or senses, minor stages of spatial retention were quite salient in the data gathered.

The present dissertation has as its main goal: verify to what extent the meanings of the multi-word verb *take over* stem from the same prototypical meaning in empirical data gathered from the Corpus of Contemporary American English. Echoing Tyler & Evans's (2003) assumption that "all the senses associated with the spatial particles (…) were at one time derived from the proto-scene or from a sense that can be traced back to the proto-scene" (p. 58-59), this study aims at discussing the way all the senses of *take over* are connected to the same control-related sense observed. This sense, in turn, appears to derive from a spatial one, with considerable influence of both the lexical verb and the particle.

Walking hand in hand with the main objective above, are the following research questions, which guided the present work:

1) How does the relationship between the TR and the LM contribute to the polysemy network of *take over*?
2) What is the role played by the primary senses of both verb and particle in the non-composite meanings of the multi-word verb?
3) What may contribute to the retention of spatial aspect in metaphorical uses of *take over*?

Taking into account the linguist duty of shedding light on potential recurrence of linguistic patterns in language use, the research questions above were the guiding principles of our investigation. Therefore, the objectives and questions stated motivated our interest in noting and

analysing patterns in the formation of the metaphorical meaning of *take over* in the empirical data obtained.

In terms of organization, this dissertation is comprised of six chapters. Under the light of the valuable insights provided by the literature, the first chapter, or the introduction, provides an overview of Cognitive Linguistics and some of its basic principles, as well as the objectives and structure of the present study.

Chapter two relies on the theoretical framework of great value to the analysis carried out in this research. Cognitive concepts, such as the notions of image schemas, trajector (TR) and Landmark (LM), alongside conceptual (LAKOFF, 1987; LAKOFF and JOHNSON, 2003; LAKOFF, 2006) and primary metaphors (GRADY, 1997), the Prototype Theory (ROSCH, 1978) and verb-framed in contrast to satellite-framed languages (TALMY 1985, 1981, 2000) are briefly addressed.

In chapter three, the case of *over* is its core issue. First, the starting point provided by Lakoff (1987) with an account on the particle by means of image schemas and the theory of conceptual metaphor is addressed. Second, the studies developed by Tyler & Evans (2001, 2003) on the issue are also regarded as of considerable relevance to the discussion intended.

Chapter four presents the methodological procedures adopted in the present study, taking into account the theory of the Principled Polysemy Network, proposed by Tyler & Evans (2003) as well as the study developed by Jamrozik and Gentner's (2011) on retention of spatial aspect in metaphorical meanings by particles.

In chapter five, an analysis of the empirical data collected from the Corpus of Contemporary American English – COCA is provided, discussing the way the polysemy network of the multi-word verb *take over* is formed in the samples obtained with the contribution of both its lexical verb and its particle. Furthermore, sample activities for raising students' awareness of the contribution of verbs and particles to the meanings of multi-word verbs are provided at the end of the chapter – leaving room for a discussion on likely implications of the study for multi-word verbs teaching in an English as a Foreign Language (EFL) environment.

Finally, in chapter six, the conclusion and the results of the research are presented in an attempt to contribute to the literature, revising renowned studies, concepts and theories in the field, but also wondering about the sufficiency of the available theories on particles to explain the process of metaphorisation when both verb and particle form the sense of a multi-word verb.

# 2. THEORETICAL FRAMEWORK

This chapter aims at providing an overview of the theoretical framework relevant to the development of the present work. Various concepts played a central role in the analysis carried out, supporting not only the methodological procedures adopted, but also the conclusions drawn from the study. The Idealised Cognitive Models (ICMs) proposed by Langacker (1987), alongside the theory of Conceptual Metaphor, as well as Tyler & Evans's (2003) Polysemy Network for *Over* encompassed the guiding elements of this work – not to mention the concepts of trajector (TR) and landmark (LM), image schemas, metaphor, proto-scene. However, it seems to be worth presenting an overview of Functional-Cognitive Linguistics prior to addressing the basic concepts underlying this research.

## 2.1. Functional-Cognitive Linguistics

Cognitive Linguistics (CL) arose in the 1970s, proposing a quite divergent and innovating approach to language, in contrast to previous studies, for instance, Generative Grammar. The relatively recent field represented by various scholars, namely Langacker (1987), Rosch (1978), Lakoff (1987), Talmy (2000), Tyler and Evans (2003), "is a modern school of linguistic thought and practice", in Evans, Bergen and Zinken's (2007) words. With strong influence of other areas, such as philosophy and psychology, CL bridges the gap between language and cognition. Shedding light on the symbolic nature of language, the Cognitive Grammar proposed by Langacker (1987), for example, explains that "grammatical structures do not constitute an autonomous formal system or level of representation" (p. 29). Moreover, room is left for the experiential nature of language use and its conceptualisation. With the later increase of more empirical cognitive studies, for instance, in Tyler and Evans (2003) work, the motivated nature of language use and conceptualisation becomes, unarguably, more evident.

Indeed, in such a field in which language use and thought seem to walk hand in hand, categorisation stands a key concept. As claimed by Lakoff (1987), despite the "automatic and unconscious" tenet of categorisation, "a large proportion of our categories are not categories of *things*; they are categories of abstract entities". The scholar also adds that "We categorize events, actions, emotions, spatial relationships, social relationships, and abstract entities of an enormous range". (p. 6)

As claimed by Evans and Green (2006), there are two “key commitments” assumed in cognitive linguistics: the Generalisation Commitment and the Cognitive Commitment. Whereas the Generalisation Commitment is “a commitment to the characterisation of general principles that are responsible for all aspects of human language”, the Cognitive Commitment stands as “a commitment to providing a characterisation of general principles for language that accords with what is known about the mind and brain from other disciplines” (p. 27-28). Both commitments underlie the two main branches of cognitive studies, which are cognitive approaches to grammar and cognitive semantics (p. 27).

In its turn, cognitive semantics entails some guiding principles, as follows (EVANS, BERGEN and ZINKEN, 2007, p. 6):

- *Conceptual structure is embodied (the ‘embodied cognition thesis’).*
- *Semantic structure is conceptual structure.*
- *Meaning representation is encyclopaedic.*
- *Meaning construction is conceptualization.*

Although Cognitive Linguistics stands as the main theoretical framework of the present work, Functional Linguistics, addressed in the following section, also provides valuable insight to this research. Once the cognitive principle of experiential and cognitive motivation of language use is quite relevant in the literature and, thus, to this study, a modern functional approach may be of equal merit. Furthermore, as our analysis relies on empirical data, a theoretical framework that is of paramount important importance.

Therefore, Functional Linguistics (FL) also provides valuable insight to this research. Furthermore, given that language use is considered motivated and based on experience as well as semantic memory by cognitivists, room is left for studies which encompass Cognitive Linguistics walking hand in hand with Functional Linguistics.

However, some difference between the early stages of FL and its current approaches may be observed. As claimed by Rosário & Oliveira (2016), in their beginning, functional studies placed more emphasis on grammaticalisation as well as on the study of items in isolation (p. 235). The scholars add that, over the 1960s and 1970s, Functionalism investigated the correlation between form and function in language use. However, the context did not seem to play an important role in the scope of Functional Linguistics. By contrast,

contemporary North American Functionalism places more emphasis on context. As the authors explain (translation mine):

> Such reorientation corresponds to Functional Linguistics in contemporary day and conceives the linguistic structure as derived from general cognitive processes, according to Bybee (2010). The linguistic uses are, in this way, understood as a result of experience, of routinization and of perspectivization in and by language, among other motivations[1]. (ROSÁRIO & OLIVEIRA, 2016, p. 236)

Furthermore, according to Furtado da Cunha (2013), Usage-Based Linguistics or Cognitive-Functional Linguistics encompasses studies from both Functional Linguistics – such as the ones developed, namely by Talmy Givón, Paul Hopper, Sandra Thompson, Wallace Chafe, Joan Bybee – and Cognitive Linguistics, namely the works developed by Ronald Langacker, George Lakoff, Gilles Fauconnier, Adele Goldberg (p. 13-14).

Under the light of the above considerations, alongside our aim at studying a linguistic item (multi-word verbs) by bridging the gap between cognitive principles and theories and language in use in context, the present study relies on a Functional-Cognitive basis. Nevertheless, other cognitive concepts are equally worth addressing in the following sections of this chapter.

## 2.2. The Prototype Theory

Categorisation plays a very important role in cognitive linguistics and stands as a key element when names are attributed to things in the world. As pointed out by Ferrari (2010), classical approaches to categorisation would place into the same category elements with all of its traits. However, the prototype theory developed by Rosch (1978) is a shift in studies on categorisation in the twentieth century. The novel theory proposes that categories may stem from a prototype.

Two principles guide the prototype theory:

> The first has to do with the function of category systems and asserts that the task of category systems is to provide maximum information with the least cognitive effort.

[1] "Tal reorientação corresponde ao Funcionalismo na contemporaneidade e concebe a estrutura linguística como derivada de processos cognitivos gerais, de acordo com Bybee (2010). Os usos linguísticos são, nesse âmbito, entendidos como produto da experiência, da rotinização e da perspectivização na e pela linguagem, entre outras motivações" (ROSÁRIO & OLIVEIRA, 2016, p. 236).

> The second principle has to do with the structure of the information so provided and asserts that the perceived world comes as structured information rather than as arbitrary or unpredictable attributes. (ROSCH, 1978, p. 2)

Rosch (1978) adds that "the mapping of categories" plays a key role in the fulfilment of the first principle above. Accurate mapping of the perceived world leads to achievement of "maximum information with least cognitive effort" (p. 2). With regard to the second principle, there is high correlation between "the material objects of the world" (p. 3). Providing the example of *wings*, *fur* and *feathers*, the scholar explains that wings are more correlated to feathers, than with fur.

In order to better illustrate the process of categorisation underlying the prototype theory, Ferrari (2010) explains that there are "levels of inclusion" so that one of the levels holds specificity. The scholar provides the following categorisation with Portuguese words to demonstrate the process. The words in bold are the level of specificity.

a. Veículo > **ônibus** > ônibus escolar
b. Fruta > **maçã** > maçã verde
c. Animal > **cavalo** > alazão
d. Item do mobiliário > **mesa** > mesa de escritório

Source: FERRARI, 2010, p. 153.

As the examples above illustrate, in each category, the words or expressions on the very left are the least specific elements, in contrast to the words on the right, which are most specific ones. The words in bold are at the basic level of specificity (p. 153). Echoing Rosch and Mervis (1975), Rosch (1978) claims that high prototypicality of an element walks hand in hand with more similarity with the other elements of a category and lower correlation with "members of the contrasting categories" (p. 12).

## 2.3 Trajector and Landmark

Once multi-word verbs are constituted by particles with a spatial nature, the concepts of trajector (TR) and landmark (LM) stand as key elements in an analysis of such verbs. With regard to prepositions, according to Langacker (2010),

> spatial relationships are primary components of the circumstantial realm (that of settings, locations, and stable arrangements), but we are most concerned with this realm as a stage for human action. This is reflected in the sorts of entities most commonly chosen as the primary and secondary focal elements in the relationship designated by a preposition. In CG, these elements are referred to as the **trajector** and the **landmark**. (LANGACKER, 2010, p. 09)

Indeed, the spatial scene (TYLER & EVANS, 2003) or image schema (LAKOFF, 1987) used to conceptualise a preposition encompasses a relationship between two elements: the trajector and landmark. As Rudzka-Ostyn (2003) points out, "we unconsciously foreground or focus on a (moving) entity and view it against a background seen as a container or surface". The scholar adds that "the moving entity focused on is called *trajector* whereas the container or surface which serves as a background is called *landmark*" (p. 9). The scholar provides some examples identifying the TR and the LM, which are shown in table 2.1 below.

**Table 2.1:** Examples of trajector and landmark 1

| | ***Moving entity trajector*** | ***Point/ container/surface landmark*** |
|---|---|---|
| *John went home.* | *John* | *Home* |
| *The plane managed to land on the runway.* | *Plane* | *Runway* |
| *The lamp is hooked on the ceiling.* | *Lamp* | *Ceiling* |
| *There is a fly on the wall.* | *Fly* | *Wall* |
| *He put his handkerchief in his pocket.* | *Handkerchief* | *Pocket* |
| *Ten convicts broke out of the prision.* | *convicts* | *prison* |

Source: RUDSKA-OSTYN, 2003, p.10

Table 2.1 above shows the examples provided by Rudzka-Ostyn (2003). As it may be noted, the TRs depicted in the sentences are of different types of nature, from human beings, *John* and *convicts*, to objects, *lamp*. In turn, the LMs provided are physical things, namely *home*, *runway*, *ceiling*, *wall*. Indeed, the scholar echoes the literature, attributing to the TR the

characteristics of being, in general, a moving entity, smaller than the LM, flexible, in contrast to the LM, which may be a point of reference, fixed, larger, "easier to identify" (p. 10)

In the same vein, with regard to *over*, as proposed by Lakoff (1987), in the image schemas with spatial senses of such particle, TRs tend to be smaller, movable, in contrast to larger fixed LMs. Depending on the type of schema at stake, contact between the TR and the LM may occur, the LM may be vertical, extended, or vertical and extended. Figure 2.1 below illustrates Schema 1 for *over*, proposed by the scholar, which is discussed in Chapter 3.

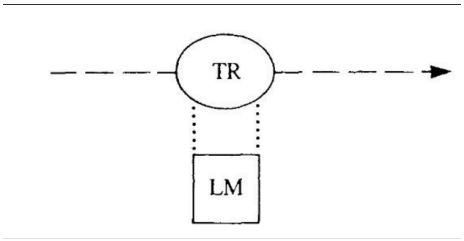



FIGURE 2.1 – The plane flew over. Schema 1
Source: LAKOFF, 1987, p. 419

Figure 2.1 above clearly illustrates the spatial relationship between the TR, *the plane*, moving on a PATH in relation to a non-specified LM.

However, in the metaphorical uses of *over*, such as in the multi-word verb *take over* analysed in Chapter 4, non-spatial TRs and LMs may be identified. However, the image schemas are a starting point for a more complex relationship between the TR and the LM, as conceptual metaphors (LAKOFF, 1987) or implicature (TYLER & EVANS, 2003) are necessary concepts to explain the conceptualisation of non-spatial meanings of *over*. In the concordance lines obtained from the Corpus of Contemporary American English (COCA), TRs tend to encompass people and things, but the latter may be physical or abstract, and LMs can be larger, physical or abstract. Examples (1) and (2) below illustrate such configurations:

(1) *Crocs CEO Gregg Ribatt, who took over the company in January, said of the original clogs*.
(2) *An addiction to crystal meth took over her life and wrecked her first* marriage (…).

Source: COCA (2016)

In example (1), the TR, *Crocs CEO Gregg Ribatt*, is a person and the LM, *the company*, is a thing (being interpreted either as a physical thing if the building is taken into account or as an abstract one if the institution or organisation is considered). In example (2), the TR, *an*

*addiction to crystal meth*, is an abstract thing and the LM, *her life*, is another abstract thing, or concept. Both examples illustrate the likely occurrence of non-physical TRs and LMs in the quite metaphorical sense of *over* in the multi-word verb *take over*. In Chapter 4, in the data analysis provided, the non-spatial relationship between TR and LM in the metaphorical meanings of *take over* are discussed in more detail.

## 2.4. Image schemas

By means of image schemas, one may conceptualise and reason about information. According to Lakoff (1987), information is obtained by means of "vision and language" (p. 440). Moreover, regardless of its source, information may be reasoned. The scholar concludes that "image schemas play a central role in both perception and reason. I believe that they structure our perceptions and that their structure is made use of in reason" (p. 440). Other scholars echo the importance attributed to image schemas in Cognitive Linguistics. Grady (2005) adds that such concept, first introduced by Lakoff and Johnson in 1987, has been employed by researchers, being "useful in developing their own accounts of how concepts are structured in the mind, and of the relationship between bodily experience and thought" (p. 35). "Embodiment", as it is called by Lakoff and Johnson (2003), has to do with the influence of "perception, bodily movements, manipulation of objects, and experience of force" (MANDLER and CÁNOVAS, 2014, p. 2-3) in conceptualisation, thus, in image schemas.

Nevertheless, recent studies have also accounted for elements even prior to image schemas: spatial primitives. In their work addressing the conceptualization of spatial primitives and image schemas by infants, Mandler and Cánovas (2014) provide a clear distinction between these concepts.

> Spatial primitives are the first conceptual building blocks, image schemas are simple spatial stories built from them, and schematic integrations use the first two types to build concepts that include non-spatial elements. These three kinds of structure and some others as well have often come under the umbrella term of 'image schemas'. (MANDLER and CÁNOVAS, 2014, p. 1-2)

As Barbosa (2016) explains in her Master's work, echoing the theory developed by Mandler and Cánovas (2014) as well as the distinction drawn by the scholars, an example of a spatial

primitive could be CONTAINER, an image schema would be THING INTO A CONTAINER, and a schematic integration ay encompass "the other types of cognitive structures to build concepts that would include non-spatial elements" (p. 21).

The authors also problematize the recurrent definition of image schemas in the literature, as, despite being associated to "sensorimotor experience" (p. 2), "no distinction was made between information about the world that stems from perception, action, or the internal feelings involved in actions" (p. 2). Furthermore, the scholars claim that scholars such as Gibbs (2006) do not distinguish between spatial and non-spatial schemas, considered "equally as 'attractors': SOURCE – PATH – GOAL stands on equal terms with BALANCE or RESISTANCE" (p. 3).

In light of the above considerations, the spatial primitives addressed by Mandler and Cánovas (2014) stand as a concept of paramount importance to a discussion on the earlier steps of human cognition. The scholars explain that "in the first months of life", infants simplify the information observed and conceptualisation, which starts its development "at or near birth" (p. 4), seems to be spatial, with special focus on appearance, movement or "what happens in the events" (p. 3) For instance, despite the fact that some languages paths are expressed rather than manner by their verbs, and the contrary occurs in other languages, "both express moving on paths through space" (p. 4). Because infants are more interested in the events themselves, instead of their participants, the perception of containment and occlusion, developed "as early as $2^{1/2}$ months" (p. 6), encompasses "the acts of going in and out of containers are what matter to infants, more than the containers themselves" (p. 6).

Conversely, the idea of force might stand as a daunting task for the scholars, as they do not rely on the theory which considers force as an element encompassed by image schemas. Indeed, Mandler and Cánovas (2014) wonder about the force is conceptualised, once only BLOCKED MOVE is physically experienced by infants and "they have no language and their image schemas only represent the spatial movement they are engaging in" (p. 12). Thus, the idea of "feeling of force" (p. 12), constituting a schematic integration, is a valuable element that comprises the scholars' argument

> The psychological process involved is a very basic one, namely, forming an association through repeated experiencing of things together. Both elements become integrated, making the feeling of force part of the BLOCKED MOVE event. The result is an image schematic structure with an added element. The feeling of force (or, for that matter, any other bodily feeling) cannot be imaged and is difficult to think about on its own. But once the forceful feeling becomes integrated with an

> image schema, it can play a role within an organized experience. (MANDLER and CÁNOVAS, 2014, p.12)

Thus, from the scholars' perspective, such schematic integration entailing the feeling force and an image schema is what enables an infant, for instance, to conceptualise force. Moreover, it differs from the concept of force-dynamics proposed by Talmy (2000) and, according to the authors, "widely accepted as the basis of force image schemas in cognitive linguistics today" (p. 13).

## 2.5. Metaphor

Traditionally considered a poetic mechanism, metaphor has been addressed as a linguistic element outside of everyday language. According Lakoff (2006), "in classical theories of language, metaphor was seen as a matter of language, not thought" (p. 185). Contrasting to this view, cognitivists, such as Lakoff, claim that the scope of metaphor resides, in fact, in thought, as "they are general mappings across conceptual domains" (p. 185), not only regarding poetry, for instance, but also, ordinary uses of language.

Furthermore, as the scholar explains, metaphor is concerned with "cross-domain mappings", in which "one mental domain" is conceptualised "in terms of another". Language used on a daily basis alongside "abstract concepts like time, states, change, causation and purpose also turn out to be metaphorical" (p. 185). Once human conceptual system holds a metaphorical nature, thoughts and acts may also be metaphorical (LAKOFF and JOHNSON, 2003).

Our spatial experience may walk hand in hand with our emotions. For instance, our "up-down orientation" is a result of such spatial experience in our daily lives. Thus, the metaphor HAPPY IS UP, associated to the emotion of happiness, is an example of the correlation between spatial experience and emotions (Lakoff and Johnson, 2003) or abstract ideas. Echoing such assumption, Mandler and Cánovas (2014) point out the association between spatial metaphors and emotions, so that "spatial metaphors of containment, opening and closing, in and out, appearing and disappearing, are common when talking about emotions" (p.16). This may be due to the way emotions are apprehended,

In the case of the particle *over*, the object of study of the present research, it is discussed over the literature the relationship between its sense of "power" and vertical elevation. Whereas Lakoff (1987) explains this process by means of conceptual metaphor,

Tyler and Evans (2003) propose implicature and reanalysis as mechanisms for conceptualizing the control sense in the use of *over* – whose prototypical spatial meaning has to do with vertical elevation. As discussed in the analysis in Chapter 4, despite the divergent approaches of Lakoff (1987) and Lakoff and Johnson (2003) in contrast to the one proposed by Tyler and Evans (2003), with regard to the processes underlying the conceptualization of the control/ power sense of over based on vertical elevation, it seems to be beyond dispute that the spatial experience of vertical elevation plays an important role in the metaphorical sense of power/ control held by the particle.

### 2.5.1. Conceptual Metaphor

The theory of conceptual metaphor (LAKOFF, 1987) plays a central role not only in the study of metaphor itself, but also in the study of the role of metaphor in conceptualisation. First introduced in Lakoff and Johnson's (2003) *Metaphors We Live By*, conceptual metaphors encompass cross-domain mappings, in which a concrete domain, or **source domain**, is mapped onto an abstract domain, or **target domain**. As Lakoff (2006) points out, "more technically, the metaphor can be understood as a mapping (…) from a source domain (…) to a target domain" (p. 190). For instance, in the case of *up* used to express feeling, such as the conceptual metaphor HAPPY IS UP, "the source domain is spatial and the target domain is emotional, and the spatial sense is viewed as being more basic" (LAKOFF, 1987, p. 417).

The LOVE-AS-A-JOURNEY MAPPING is an example of the process of mapping from a source domain to a target domain. The examples of "We've hit a dead-end street" and "we can't turn back now" (LAKOFF, 2006, p. 192) illustrate such mapping. In both sentences, the lovers correspond to the ones travelling, the romantic relationship corresponds to the vehicle, and the objectives shared by the individuals in the relationship correspond to the journey destinations (p. 190). Hence, "the metaphor involves understanding one domain of experience, love, in terms of a very different domain of experience, journeys" (p. 190).

Another striking aspect of conceptual metaphors is that not only do they pervade everyday language use, but the way the mappings they entail may mirror our experience. Taking the example of the conceptual metaphor ARGUMENT IS WAR, a wide range of expressions encompass the relationship between argument and war. For instance, sentences

(1) to (6) below, from Lakoff and Johnson (2003), are examples of the way such conceptual metaphor is in scope of language on a daily basis. The scholar italicised the words and expressions that may walk hand in hand with the idea of war.

(1) Your claims are *indefensible*.
(2) He *attacked every weak point in* my argument. His criticisms were *right on target*.
(3) I *demolished* his argument.
(4) I've never *won* an argument with him.
(5) You disagree? Okay, *shoot*!
(6) If *you* use that *strategy*, he'll *wipe you out*. He *shot down* all of *my* arguments.

Source: LAKOFF and JOHNSON, 2003, p. 4-5.

In all of the sentences above, there seems to be a close relationship between arguments and war strategies. In sentence (1), for instance, the idea of attacking and defending by means of arguments is encompassed, as the *claims* are *indefensible*; in sentence (2), not only is the idea of attacking explicitly mentioned, but the idea of aiming at a target is also present, by means of *right on target*; in sentence 3, in particular, either the idea of THEORIES (thus, claims and arguments) ARE BUILDINGS or the ARGUMENT IS WAR are encompassed, once things might also be demolished by attacks; in sentence (4), the idea of victory is at stake, by means of *won*; in sentence (5), the verb *shoot* is directly related to war or battles; last but not least, in sentence (6), *strategy*, *wipe out* and *shot down* also entail the idea of being strategic and attacking.

All of the above things considered, the conceptual metaphor ARGUMENT IS WAR underlies everyday language. However, as Lakoff and Johnson (2003) claim, in our experience, arguments are not associated to war when we talk about them. In fact, when arguments are concerned, one may literally experience the war concepts of winning or losing, for instance. According to the scholars,

> We can actually win or lose arguments. We see the person we are arguing with as an opponent. We attack his positions and we defend our own. We gain and lose ground. We plan and use strategies. If we find a position indefensible, we can abandon it and take a new line of attack. Many of the things we *do* in arguing are partially structured by the concept of war. (LAKOFF and JOHNSON, 2003, p. 5)

The scholars argue that despite the lack of a real war or battle, the concepts associated to battles, such as *attack*, *defense*, *counterattack*, are present in "the structure of an argument". Thus, even though there is no physical battle, there is a verbal one, and the conceptual metaphor at stake "structures the actions we perform in arguing" (p. 5).

Nevertheless, the theory of Conceptual Metaphor has been questioned by other scholars, such as Grady (1997). Assuming that such theory might not take into account the motivation resulting from experience and pointing out lack of sufficiency of mappings in some metaphors, the scholar proposes the concept of primary metaphor, in contrast to complex metaphors – which are addressed in the following section.

### 2.5.2. Primary Metaphor

In contrast to the conceptual metaphor theory currently applied in cognitive studies, Grady (1997) proposed the concept of primary metaphor. Pointing out "poverty of mapping" alongside "lack of experiential motivation" in that theory, the scholar suggests that the conceptual metaphors might encompass metaphors of different types or nature. For instance, the conceptual metaphor HAPPY IS UP can be "readily interpretable" due to its direct relation to spatial experience.

Unlike this metaphor, a conceptual metaphor such as THEORIES ARE BUILDINGS would not hold experiential correlation between the domains of theories and buildings. Therefore, the distinction between primary and complex metaphors drawn by Grady stands as a necessary issue. Whereas primary metaphors have "a direct experiential basis" and "motivate highly predictable sets of data (i.e. sets without "gaps")" (p. 47), complex metaphors are "compounds" of primary metaphors" (p. 48).

Another important concept proposed by Grady (1997) is *primary scene*. Unlike other scholars, such as Lakoff (1987) who associate image schemas to conceptual metaphors when metaphorical senses or extensions are at stake, Grady associates primary scenes to primary metaphors. He claims that "a primary scene is a cognitive representation of a recurring experience type which involves a tight correlation between particular aspects of the experience" (p. 86).

Contrasting to image schemas, the primary scene is, in the scholar's words, the "subjective (phenomenological) experience of a basic event including both the perceptual

aspect and our response to it" (p. 23). Therefore, the concept proposed by Grady (1997) relies on an experiential basis, unlike image schemas. For instance, when an object is lifted, the subjective experience of discomfort due to the effort made alongside the object weight observed constitute the primary scene.

By means of the concept of primary scene, Grady (1997) explains the metaphor ACCEPTING IS SWALLOWING. As he claims, among the details of such experience, swallowing is a salient act. In addition, this act has correlation with "a cognitive act—a low-level decision". Hence,

> Since the act of swallowing and the act of mentally accepting are so closely linked in our experience, this pairing of subscenes constitutes a plausible motivation for the metaphor ACCEPTING IS SWALLOWING. (GRADY, 1997, p. 86)

Despite the fact that Grady's (1997) study differs from the theory of Conceptual Metaphor developed by Lakoff (1987) and Lakoff and Johnson (2003), it is quite valuable. Not only does it encompass "minor" categories addressed by Lakoff's theory in a broader way (explaining a potential inconsistency of some conceptual metaphors by means of proposing primary and complex metaphors), but it also entails experience – by means of primary scenes.

## 2.6. Verb-framed and satellite-framed languages

Once the present study aims at analysing the influence of the particle *over* in the composite non-spatial meaning of the multi-word verb *take over*, verb-framed and satellite framed languages stand as paramount concepts for the explanation of the relationship between verbs and their corresponding particles in multi-word verbs. Echoing Talmy (1991), who termed verb particles encoding path *satellites*, as being "able to express a number of spatial paths even with a verb representing the original action concept" (p. 45), Slobin (2006) draws a distinction between verb-framed and satellite-framed languages.

In verb-framed languages, i.e., Romance languages, such as Portuguese or French, the lexical verb entails movement or location (p. 3). By contrast, satellite-framed languages, i.e., Germanic languages, such as English or German, encode movement by means of a lexical verb being associated to a particle. This particle encodes movement or location. In order to better illustrate the point raised by Slobin (2006), let us take the following examples into account:

A. The man **exit** the room.

B. The man **got out** of the room.

Source: The author

As illustrated above, both examples encompass a way of encoding movement. However, whereas in sentence A, the movement is encoded by the lexical verb *exit*, in sentence B, the particle (or *satellite*, in Talmy's (1997) words), encodes the idea of movement outside the room. Verb-framed languages would encompass solely the case shown in sentence A, in which movement is encoded by the verb, contrasting to satellite-framed languages, in which the case shown in sentence B occurs.

Moreover, manner would be expressed in different ways in those two types of languages. In satellite-framed languages, a sentence such as *The owl flew out* (SLOBIN, 2006) would have manner alongside path encoded by the particle. As Slobin (2006) claims, "encoding of manner is dependent, in interesting ways, on the option for encoding path" (p. 3). In turn, verb-framed languages encode manner of movement by means of other ways, such as adverbs or gerunds, such as in the sentence *The owl exit flying* (SLOBIN, 2006). The manner of movement, in this sentence, is entailed by *flying*.

## 2.7. Retention of spatial content in abstract uses of prepositions

Regardless of the approach to spatial particles at stake, i.e. Lakoff's or Tyler and Evan's, it seems to be a widely held assumption that spatial particles may hold both spatial and non-spatial senses. However, in some cases, a degree of spatiality may be still encompassed by metaphorical extensions of particles. Echoing (COVENTRY, 1992), Jamrozik and Gentner (2011) propose, in a study involving three experiments with native speakers of English, that "non-spatial relationships might preserve one specific aspect of prepositions' spatial meaning: the degree to which the figure or the ground controls the figure-ground relationship" in the cases of *in* and *on*" (p. 1589).

Considering that the preposition *in*, for instance, may be equally meaningful in phrases/ sentences such as "orange *in* a bowl" (with a spatial sense) and "Mary is *in* love" (with a non-spatial sense), the scholars wonder whether there may be patterns that "remain stable across spatial and non-spatial contexts" (p. 1589).

Jamrozik and Gentner's (2011) study provided valuable insight to the present research. The scholars aimed at demonstrating that idiomaticity would not stand as a constraint to spatial meaning retention, that is, idiomatic uses of prepositions would encompass elements of spatial meaning. As they claim,

> We found out that locus of control distinguishes *in* and *on* in common abstract metaphorical contexts (e.g., *in*/ *on time*), and novel abstract contexts. These findings suggest that prepositions retain aspects of their spatial meaning when used abstractly. (Jamrozik and Gentner, 2011, p. 1589)

In fact, with regard to the prepositions *in* and *on*, Jamrozik and Gentner (2011) noted that, even in non-spatial uses, such prepositions held non-spatial locus of control. Thus, the authors suggest that metaphorical uses of prepositions may encompass spatial meaning. Furthermore, preposition use is likely to be metaphorical. For instance, "Spatial prepositions such as *in* and *on* are often used to describe non-spatial relationships" and "approximately 40% of preposition use is metaphorical (Steen, Dorst, Herrmann, Kaal, Krennmayr, & Pasma, 2010)" (p. 1589).

Furthermore, in the experiments carried out to verify the viability of such hypothesis, the scholars found out that the prepositions *in* and *on* "retain a key aspect of their spatial meaning – namely, locus of control – when used to describe abstract relationships" not only in conventional, but also novel contexts (p. 1593). Therefore, in uses such as "in my mind", despite a lack of physical containment, the relation of locus-of-control still remains. Furthermore, "such an abstraction process is consistent with accounts of the process of grammaticalisation" (p. 1593).

Such theoretical account stands as a key element for our analysis. Once this study has as one of its main goals an analysis of the role played by metaphorical senses of *over* in the non-spatial sense of *take over* observed in the samples analysed, it is of paramount importance to account for the process in which metaphorical extensions of *over* stem from a primary spatial sense. In addition, potential patterns, such as retention of spatial elements in the metaphorical senses of the particle, that might pervade such process of non-spatial meaning formation were also taken into consideration. All of the above things considered, the study carried out by Jamrozik and Gentner (2011) was also relevant to the present research.

In our attempt to understand the contribution of the particle non-spatial senses to the non-composite meaning of the multi-word verb at stake, it was vital to take into account the

most prototypical (ROSCH, 1978) spatial sense, image schema (LAKOFF, 1987) or protoscene (TYLER & EVANS, 2003) of *over* and, then, analyse the cognitive processes that led to the non-spatial sense or metaphorical extension (LANGACKER, 1980) of the particle. Thus, a research question posed was: would the metaphorical senses of *over* in *take over* stem directly from the original spatial sense, or would such process occur gradually, with "stages"? The findings of Jamrozik and Gentner's (2011) experiments played an important role in our answer to this question in Chapter 5, in the analysis.

# 3. ACCOUNTS TO *OVER* BY LAKOFF AND TYLER & EVANS

In this chapter, we aim at presenting two relevant approaches to *over* in the literature: Lakoff's (1987) and Tyler & Evans's (2001, 2003) accounts on the spatial schematisation and non-spatial meaning formation of the given particle. These approaches were privileged over other studies in the entire literature due to their relevance in the field. On the one hand, Lakoff (1987) provided a starting point in studies on *over*, by providing six main senses to the particle by means of image schemas and conceptual metaphors when metaphorical extensions were at stake.

On the other hand, Tyler & Evans (2003), expanding the theory proposed by Tyler & Evans (2001), provide a more recent account for *over*, posing some questions to Lakoff's theory. The full-specification approach, which, according to the scholars, would exaggerate in the number of distinct senses attributed to *over*, alongside the theory of Conceptual Metaphor are put into question by the scholars. By means of a proto-scene, based on the earliest attested meaning for *over*, fourteen other senses are proposed for the particle and the scholars attempt to demonstrate how those senses stem from the proto-scene or from a sense derived from it.

## 3.1. Lakoff's schemas and senses for *over*

*Idealized cognitive models*, or ICMs, are structures used in the organisation of knowledge, as claimed by Lakoff (1987). As the scholar explains

> Each ICM is a complex structured whole, a gestalt, which uses four kinds of structuring principles:
> - Propositional structure, as in Fillmore's frames
> - Image-schematic structure, as in Langacker's cognitive grammar
> - Metaphoric mappings, as described by Lakoff and Johnson
> - Metonymic mappings, as described by Lakoff and Johnson
>
> (LAKOFF, 1987, p. 68)

By means of ICMs, image schemas, the scholar provides a starting point in the literature with regard to the particle *over*. Taking into account the challenge posed by the rather complex polysemy network of such particle, as "it covers nearly one hundred kinds of uses" (p. 418),

Lakoff (1987) provides six main spatial senses and their corresponding metaphorical extensions to *over*. The scholar proposes the *Above-Across* Sense, the *Above* Sense, the *Covering* Senses, the *Reflexive* Schemas, the *Excess* Schema and the Repetition Schema.

### 3.1.1. The *Above-Across* Sense

Lakoff (1987) claims that "the central sense of *over* combines element of both *above* and *across*" (p. 419). This sense encompasses a moving entity, the trajectory (TR), moving across a path, in relation to a point of reference, the landmark (LM). However, there is some variation in the first schema used to represent such sense. Figure 3.1 illustrates the Schema 1 presented by the scholar.

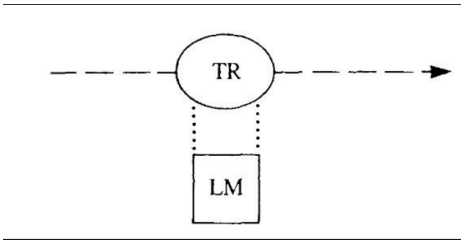



FIGURE 3.1- The plane flew over. Schema 1
Source: LAKOFF, 1987, p. 419

Indeed, figure 3.1 depicts the first schema for the *Above-Across* Sense proposed by Lakoff (1987). In this case, the arrow represents a trajectory or PATH followed by the TR across the LM and there is lack of contact between them. However, such lack of contact may not interfere the sense.

Figures 3.2 to 3.7 below represent the other types of variation in schema 1, with regard to the LM verticality and extension, as well as to contact between TR and LM.

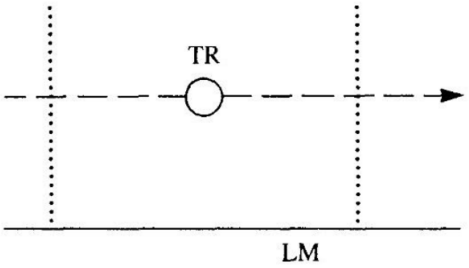



FIGURE 3.2 - The bird flew over the yard 1
Source: LAKOFF, 1987, p. 421

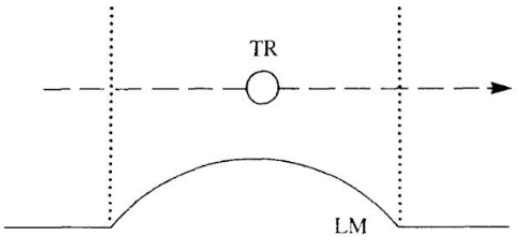



FIGURE 3.3 - The plane flew over the hill 1
Source: LAKOFF, 1987, p. 421

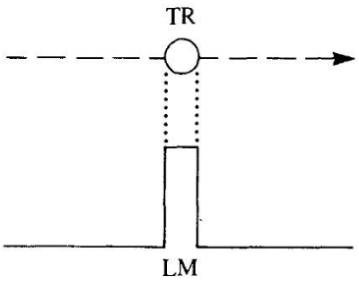



FIGURE 3.4 - The bird flew over the wall 1
Source: LAKOFF, 1987, p. 421

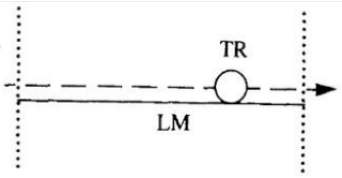



FIGURE 3.5 - Sam drove over the bridge. 1
Source: LAKOFF, 1987, p. 422

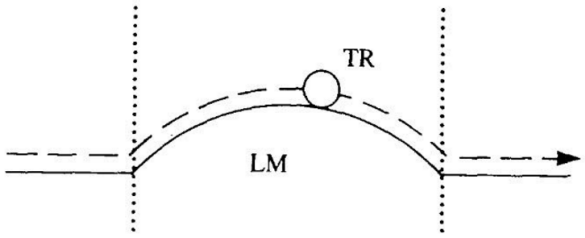



FIGURE 3.6 - Sam walked over the hill. 1
Source: LAKOFF, 1987, p. 422

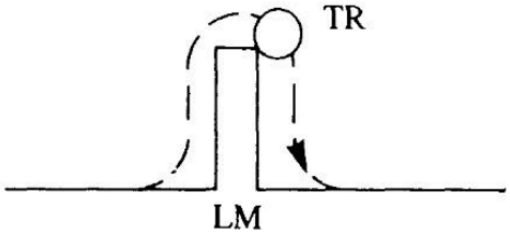



FIGURE 3.7: Sam climbed over the wall. 1
Source: LAKOFF, 1987, p. 422

All the figures above illustrate different nuances in the Schema 1 of the *Above-Across* Sense with regard to LM shape and contact between TR and LM. Whereas in figure 3.2 the LM is extended and there is no contact between TR and LM, in figure 3.3 the LM is both vertical and extended and there still lack of contact between TR and LM, in figure 3.4 the LM is vertical and there is lack of contact between TR and LM, in figure 3.5 the LM is extended and there is contact between TR and LM, in figure 3.6 the LM is vertical and extended and there is contact between TR and LM and in figure 3.7 The LM is vertical and there is contact between TR and LM.

Lakoff (1987) also describes the "end-point focus" in Schema 1, when *over* actually has the meaning of "on the other side of" (p. 424), as illustrated in figures 3.8 and 3.9.

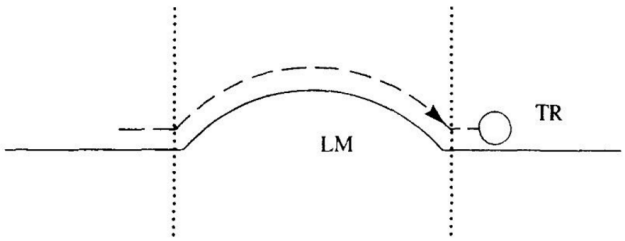



FIGURE 3.8 - Sam lives over the hill. 1
Source: LAKOFF, 1987, p. 421

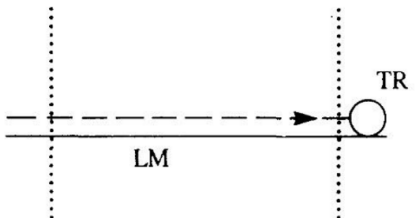



FIGURE 3.9 - Sausalito is over the bridge 1
Source: LAKOFF, 1987, p. 421

Both figures 3.8 and 3.9 are schematic representations of the "on the other side of" sense of *over*. Whereas the former is comprised of an extended vertical LM (the hill) in contact with the TR, the latter entails an extended LM that is not vertical, also in contact with the TR.

### 3.1.2. The *Above* Sense

In turn, the Schema 2 of the *Above* Sense does not encompass PATH or boundaries. Thus, "*over* has a stative sense" (LAKOFF, 1987, p. 425), being associated to the idea of "above". Furthermore, there is no contact between TR and LM. Figure 3.10 illustrates such schema.

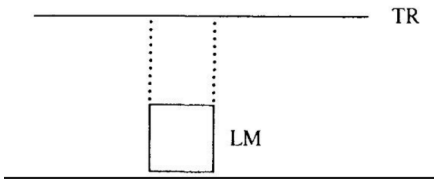



FIGURE 3.10 - The power line stretches over the yard. Schema 2 1
Source: LAKOFF, 1987, p. 426

As illustrated in figure 3.10 above, the TR is one-dimensional, there is not the idea of movement across a path or trajectory neither there is contact between the TR and the LM. The distinction drawn by the scholar between the *Above-Across* Sense and the *Above Sense* are put into question by scholars such as Tyler and Evans (2003), as discussed later in this chapter. The scholars claim that such senses would not be distinct, as, among other reasons, the spatial configuration between the TR and the LM remains basically the same.

### 3.1.3. The *Covering* Senses

As posited by Lakoff (1987), "there is a group of schemas for *over* that have to do with covering" In fact, the scholar considers Schema 3, which represents the *Covering* Senses, "a variant of Schema 2" (p. 426). In both schemas, the TR may be two-dimensional and "extends across the boundaries of the LM". However, whereas in Schema 2 the TR dimension is not specified and there is lack of contact between the TR and the LM, in Schema 3 the TR

is at least two-dimensional and a lack of contact between TR and LM is not necessary. Figures 3.11 and 3.12 illustrate Schema 3.

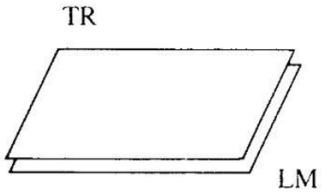



FIGURE 3.11 - The board is over the whole. Schema 3 1
Source: LAKOFF, 1987, p. 427

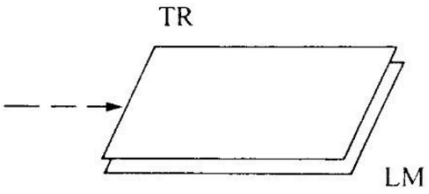



FIGURE 3.12 - The city clouded over. 1
Source: LAKOFF, 1987, p. 427

As shown by figures, 3.11 and 3.12, the TR the dimensionality of the TR is specified and extends across the boundaries of the LM (Lakoff, 1987). However, there may be some slight difference in the representation of Schema 3, as both figures illustrate. While in figure 3.11 the TR seems to be static and there is some kind of contact between the TR and the LM, in figure 3.12 there is a path, "indicating motion to the final position", so that the TR moves "above and across the LM" (p. 427). Furthermore, in this variation of Schema 3, there is no contact between the TR and the LM.

### 3.1.4. The *Reflexive* Schemas

Echoing the study of Lindner (1981) that pointed out *reflexive trajectors* with regard to *out*, Lakoff (1987) employs such concept to propose the Reflexive Schema for *over*. Taking the case of *The syrup spread out* (LAKOFF, 1987, p. 431), imagining that some syrup was spilled on a surface, the TR, syrup, moves outside is own boundary. Therefore, the TR and the LM are, indeed, the same, so that the relationship between the TR and the LM is seen as *reflexive*.

In the case of *over*, the scholar provides the following examples: “Roll the log *over*” and “turn the paper *over*”. In both situations, the TR and the LM are the same. In the first sentence, “a major part (roughly half) the log is moving above and across the rest” (p. 432). Therefore, it is partially the TR and partially the LM. Figure 3.13 illustrates such schema.

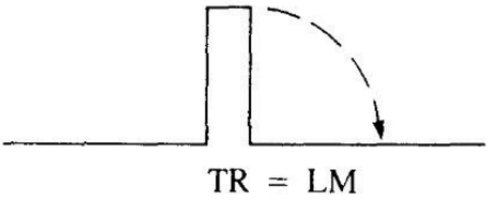



FIGURE 3.13 - The fence fell over. Schema 4 1
Source: LAKOFF, 1987, p. 432

In the case illustrated by Figure 3.13 above, the TR, the fence, also stands as the LM, once it was in an initial vertical position and follows “the last path of a reflexive path” (p. 433).

### 3.1.5. The Excess Schema

By means of the use of *over* in *overflow*, Lakoff (1987) explains the idea of excess conveyed by *over*. In the following example, “the bathtub *over*flowed” (p. 433), there is fluid (probably water) in such a large amount that it goes beyond the boundaries of a container (the bathtub). Thus, “the path of the overflowing fluid is upward and *over* the side of the container” (p. 434). The excess schema may also be related to the schema illustrated in figure 3.14 below, in which the TR goes beyond the edges of a container.

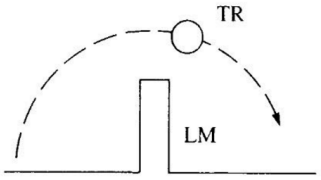



FIGURE 3.14 - The dog jumped over the fence. 1
Source: LAKOFF, 1987, p. 434

### 3.1.6 The Repetition Schema

In fact, the Repetition Schema encompasses a metaphorical nature. Taking the use of *over* in "Do it *over*", Lakoff (1987, p. 435) explains the repetition sense of this particle. Schema 1 is the starting point of the complex Repetition Schema. Whereas in the former the TR moves above and across the LM, in the present schema this spatial schema is used and two metaphors are applied to it. The path is metaphorical, representing "the course of the activity" and the LM, also metaphorical, turns out to be "an earlier completed performance of the activity" (p. 435).

The metaphorical extensions of *over* are explained by Lakoff by means of metaphor, or, more specifically, by means of the theory of Conceptual Metaphor. When an example such as *She has a strange power over me* (LAKOFF, 1987, p. 435) is at stake, conceptual metaphors, namely CONTROL IS UP and LACK OF CONTROL IS DOWN may also be encompassed. In the sentence provided by the scholar, the sense held by the particle *over* is a metaphorical extension of the *Above* Schema, with the TR in vertical elevation in relation to the LM.

With regard to the present study, among the (main) senses shown above, the *Above* Sense (alongside the *Above-Across* Sense) stood as the most suitable schema for the uses of *over* in *take over* in the data obtained. Considering that the control sense was the one pervading the use of *over* in *take over* in the concordance lines analysed and that control or power may be conceptualised by means of vertical elevation, the *Above* Sense, represented by Schema 2, seems to best suit the analysis purposes. However, the Principled Polysemy Network for *Over* proposed by Tyler & Evans (2003), addressed over the following section is equally important to this research. The network presented by the scholars as well as their methodology to design it were relevant to our discussion on the influence of the senses of *over* in the senses of *take over* – which is addressed in our analysis in Chapter 5.

## 3.2. Tyler & Evan's (2003) Principled Polysemy Network for *Over*

The Principled Polysemy Network is a methodology developed by Tyler & Evans (2001, 2003) for sanctioning the senses of *over* and reducing the subjectivity of this process. By means of such methodology, the scholars aim at drawing a distinction between "contextual

interpretations created on-line" and "conventionalized meanings, that is, distinct meanings represented in memory" (p. 37). In such approach, it is believed that "not all contextually varying uses of a form constitute distinct senses" (p. 38) and, in the case of *over*, it is posited that this particle may have a wide range of "distinct but related meanings", "in a systematic and motivated way" (p. 38). All of these assumptions considered, the principled polysemy network is useful to the analysis of present study, as we aim at showing the process underlying the formation of the metaphorical extensions of *over* stemming from a spatial sense in *take over*, not to mention the influence of these metaphorical senses in the non-composite meaning of the multi-word verb.

Contrasting to previous studies, such as the one on *over* carried out by Lakoff (1987), Tyler & Evans argue against what they call "the polysemy fallacy", that is, exaggerating "the number of distinct senses associated with a particular form, generating more redundancy than is wanted" (p. 39). The scholars question the distinct senses that Lakoff's *full-specification* approach attributed to *over*. In such approach, "a vast number of senses" may be attributed to the particle, and distinct senses may be determined, for instance, due to "differences in the dimensionality of the LM" (p. 40). The examples *The hummingbird hovered over the ocean* and *The hummingbird hovered over the flower*, provided by Tyler and Evans, demonstrate that, unlike what is assumed by Lakoff (1987), despite the difference in dimension of the LM in the first sentence (*the ocean*) and the LM in the second sentence (*the flower*), "the spatial relation between the TR and LM is conceptually the same" (p. 42) in both sentences.

However, a methodological challenge for distinguishing the different senses of *over* by means of the principled polysemy network was how the primary sense of the particle would be determined. Lakoff and Johnson (2003) suggest that empirical and linguistic evidence are the main types of evidence that contribute to identifying the primary sense, in Langacker's (1987) words, the "sanctioning" sense that leads to its extensions. With regard to linguistic evidence, Tyler & Evans (2003, p. 47) propose the following criteria to distinguish different senses:

1. earliest attested meaning,
2. predominance in the semantic network,
3. use in composite forms (Langacker, 1987),
4. relations to other spatial particles,
5. grammatical predictions (Langacker, 1987).

With regard to the earliest attested meaning, the historically earliest sense of the particle is taken into account. In the case of *over*, the earliest attested sense observed by Tyler & Evans (2003), based on the Oxford English Dictionary, has to do with "higher" (p. 48). The authors claim that such early senses for spatial particles are related to a spatial configuration between the TR and the LM. Even though there may be co-occurrence of English particles (once they stem from various languages), namely *beneath*, *below* and *under*, those competing particles "retain a core meaning that directly involves the original TR – LM configuration" (p. 47-48). Therefore, the earliest attested meaning of spatial particles encompasses an original spatial relationship between TR and LM.

In turn, the "predominance within a semantic network" means a "unique spatial configuration" that pervades most of the distinct senses of a given particle. Regarding this criterion, Tyler & Evans (2003) suggest that the spatial relationship in which the TR is higher than the LM would be the primary sense of *over*. As the scholars observed, out of the fifteen senses associated to *over*, eight encompass the TR located higher than the LM; four encompass the TR being on the other side of the LM "vis-à-vis the vantage point"; one entails the covering sense, with "multiple TR – LM configurations"; and two encompass spatial reflexivity (p. 48). Hence, the predominant TR – LM spatial configuration noted by the scholars – the one comprised of the TR being higher than the LM – is likely to be the original configuration between the TR and the LM. It may also constitute the earliest attested meaning.

Compound nouns (such as *overcoat*) as well as verb particle forms (such as *look over*) are the two "types of composite lexical units" in which spatial particles may occur, according to the scholars (p. 48). They suggest that, in fact, when particles participate in such composite units, it is unlikely to determine the primary sense. However, "failure to participate can be taken as suggestive that that particular sense is probably not primary in the network" (p. 48) For instance, the On-the-other-side-of Sense might not constitute the primary sense of *over*, as it is not present in composite forms such as *overhouse* (which, in fact, does not mean "the house on the other side of") and *kick over* (which does not mean "kick something to the other side"). On the other hand, "a number of composite units involve the sense of a TR being higher than the LM, as in *overhang*" (p 48). Thus, the configuration of the TR being higher than the LM is more likely to be the primary sense in contrast to the On-the-other-side-of Sense.

Regarding the fourth criterion to determine the primary sense of particles, which is "relations to other spatial particles", "contrast sets" (Lakoff and Johnson, 2003: 48) between

spatial particles may be observed. For instance, there is salient contrast between *up* and *down*, *before* and *after*, *over* and *under*, *above* and *below*. Once what we determine using a particle, i.e. *in*, is determined, in part, by its contrasting particle, i.e. *out*, in terms of the contrasting features it encompasses. The scholars conclude that, with regard to *over*, "the sense that distinguishes this particle from *above*, *under* and *below* involves the notion of a TR being located higher than but potentially within reach of the LM" (p. 49).

Last but not least, the fifth criterion, concerning grammatical prediction, in fact, bridges the gap between primary and additional extended (metaphorical) senses. Echoing Langacker's (1987) concept of "sanctioning" sense, from which metaphorical senses stem, Tyler and Evans (2003) discuss that distinct senses derived from the primary sense may have additional senses. These, in turn, may arise from the context by means of implicature. Thus, senses that do not stem from the primary sense can be associated to a sense originated from the primary scene (p. 49).

### 3.2.1. Semantic network for *over*

The semantic network for *over* proposed by Tyler & Evans (2003) is a key element in this research. As addressed in Chapter 3, image schemas (LAKOFF, 1987) and the semantic network for *over* are of equal merit to the analysis developed. Unarguably, one may note divergence between such approaches to the spatial and non-spatial senses of *over*, specially due to Tyler & Evan's (2003) critique of Lakoff's full-specification approach as well as of the theory of conceptual metaphor used to explain metaphorical extensions of particles. However, those theories are equally important to the present study, once Lakoff's work stands as a theoretical starting point for the analysis and Tyler & Evans's approach presents more senses to the semantic network of *over*, including the sense at stake in the analysis: the control sense.

Out of the 15 senses Tyler & Evans (2003) discussed, the control sense and its relationship with the Up-Cluster alongside the proto-scene play are considered in the analysis. Given the recurrence of the ideas of 'control', 'power' or 'influence' in the concordance lines analysed, the sense that appeared to best suit the analysis purposes was the control sense.

In their book entitled *Semantics of English Preposition*, Tyler & Evans (2003) provide a semantic network for *over*, earlier proposed by Tyler and Evan's (2001), based on the Principled Polysemy network. Such sense, in turn, is identified by means of the first criterion of the methodology, which associates the "diachronically earliest meaning" (p. 65) of particles to their primary sense. It is represented in abstract terms by what the scholars termed *proto-scene*.

This abstract representation of the primary sense does not entail details of specific spatial scenes. As the authors exemplify, "we do not have mental representations of pictures of bees or trees directly associated with over" (p. 65). Indeed, in our conceptualisation, more schematic structures are encompassed, i.e., the TR and the LM. Furthermore, "the proto-scene also captures configurational information, namely the conceptual-spatial relation that relates the TR and the LM" (p. 65).

In the case of *over*, the relationship between the TR and the LM involving vertical elevation is quite recurrent in the spatial senses of the particle. As the scholars claim, "the majority of distinct senses associated with *over* involve a spatial configuration in which the TR is higher than the LM" (p. 65), or within the sphere of mutual influence. Figure 3.15 illustrates the proto-scene for *over*.

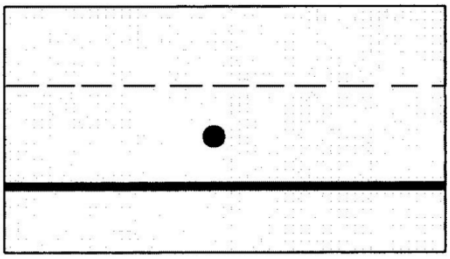


FIGURE 3.15 - Proto-scene for over 1
Source: TYLER & EVANS, 2001, p. 736

Tyler & Evans (2003), while proposing the proto-scene for *over* associated to the particle primary sense, question the full-specification approach adopted by scholars such as Lakoff (1987). The scholars suggest an exaggeration in the number of distinct senses attributed to *over*. By means of the Principled Polysemy Network for *over*, Tyler & Evans (2001, 2003) propose fifteen senses for the particle, including its proto-scene as well as its additional senses (which are, in fact, not distinct, but inferred from the context and derived from the proto-scene or from its distinct senses). In light of such methodology, the scholars put into question the distinction between the *Above* Sense and the *Above-Across* Sense. From Lakoff's (1987)

perspective, they are considered distinct senses of *over*. By contrast, Tyler & Evans claim that the senses are not distinct, as not only does the TR – LM relationship remains similar, but the *Above-Across* Sense can be also inferred from the context and, "hence, based on this methodology, *over* does not have a distinct Above-across or Path Sense associated with it". (TYLER & EVANS, 2003, p. 69)

In turn, the semantic network proposed for the particle *over* has as its starting point a proto-scene, that is, a schematic representation of the primary sense attested for the particle. Tyler & Evans (2003) "hypothesize that the other senses in the semantic network are derived from the proto-scene in a principled fashion, a process that has been ongoing throughout the history of the language" (p. 79). Thus, the other senses of the particle derive from the proto-scene – fact that walks hand in hand with the purposes of the present research, as it aims at discussing the way the metaphorical extensions of over in take over stem from the same prototypical spatial sense, or, under the light of Tyler & Evan's (2003) work, from the same spatial scene derived from the proto-scene. Moreover, when a distinct sense is at stake, the scholars consider that some distinct senses may not be directly derived from the proto-scene "within the sentential context in which the spatial particle occurs" (p. 79); thus, a process of reanalysis may occur.

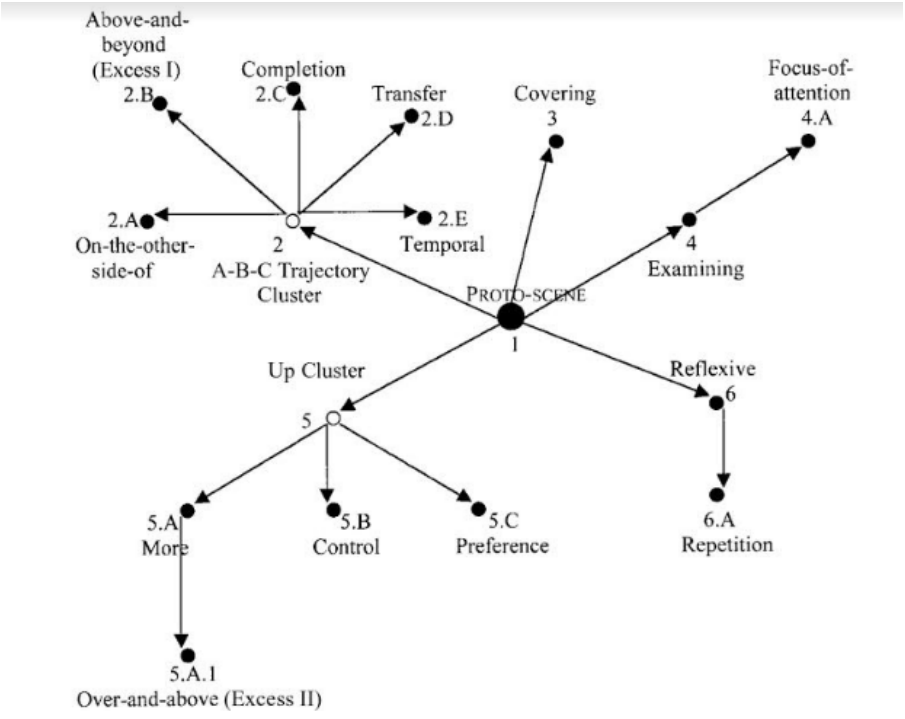



FIGURE 3.16 - The semantic network for over 1
Source: TYLER & EVANS, 2001, p. 80

Figure 3.16 above shows the fifteen senses of *over* proposed by Tyler & Evans (2001, 2003). As illustrated above, the senses may stem directly from the proto-scene or from a sense derived from the proto-scene. The scholars term complex conceptualisations originating various senses "a cluster of senses" (p. 80). In the network, the clusters are symbolised by open circles, in contrast to single senses, represented by shaded spheres.

### 3.2.1. Senses of *over* from the Principled Polysemy Network

In this section, the distinct as well as additional senses stemming from the proto-scene for over proposed by Tyler & Evans (2001, 2003) are briefly addressed.

Besides the proto-scene, associated to the primary sense of *over* ("above" or "higher than"), the second sense (or set of related senses) attributed to the proto-scene is the *The A-B-C Trajectory Cluster (2)*. This set of multiple meanings is comprised of five senses, as follows: On-the-other-side-of, Above-and-beyond (Excess I), Completion, Transfer and Temporal (TYLER & EVANS 2003, p. 80). Figure 3.17 illustrates the spatial representation of the *A-B-C Trajectory Cluster.*

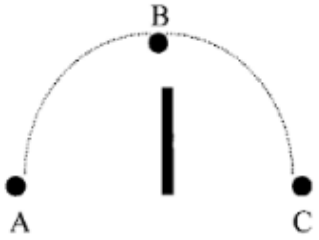



FIGURE 3.17 - Schematization of The cat jumped over the wall. 1
Source: TYLER & EVANS, 2001, p. 71

In figure 3.17, a spatial representation of the *A-B-C Trajectory Cluster* is provided. In fact, as Tyler and Evans (2003) claim, "the five distinct senses in the A-B-C Trajectory Cluster (On-the-other-side-of, Above-and-beyond (Excess I), Completion, Transfer and Temporal) all derive from reanalysis of the complex conceptualization" (p. 80) illustrated in the figure above.

The sentence *The cat jumped over the wall* is an example of a complex conceptualisation entailing a starting point, point A, TRs subject to force dynamics (TALMY,

2000)[2], as they are not able to hover and must return to the ground, LMs constrain motion forward, and "*over* is used to designate the key spatial configuration, is that when the motion is complete, the TR is located on the other side of the LM relative to the starting point of the trajectory" (p. 81). Therefore, the *On-the-other-side-of Sense (2.A)* arises.

In the *Above-and-beyond (Excess I) Sense (2.B)*, the use of *over* walks hand in hand with what is schematised by the proto-scene, but implicatures are necessary for the conceptualisation of the LM as an aim or target and of the trajectory of the TR moving "beyond the intended or desired point" (p. 83). In the example *The arrow flew over the target and landed in the woods* (p. 83), the scholars explain that a different sense arose, once it cannot be grasped from the context. Furthermore, through reanalysis, the implicatures of the LM as a target and of the TR moving beyond such target originate that distinct sense.

The *Completion Sense (2.C)* encompasses the end point of the trajectory as the completion of a process. The authors "suggest that the Completion Sense associated with *over* has arisen as a result of the implicature of completion being reanalysed as distinct from the complex conceptualization" (p. 85) represented in figure 3.17. Through reanalysis, the end point of a trajectory is associated with completion of motion. Reanalysis of the spatial final position of the TR in a trajectory would lead to the conceptualisation of an idea of completion. Thus, sentences such as *The cat's jump is over* and *The film/game/play is over* (p. 85) both encompass the idea of a finished or completed event.

In the *Transfer Sense (2.D)*, an implicature bridges the gap between the schematic conceptualisation of the A-B-C Trajectory depicted in picture 3.17 – "with a TR moving from one point to another" (p.87) – and a sense of completion. By means of the example *Sally turned the keys to the office over to the janitor* (p. 86), the scholars suggest that the spatial scene may be conceptualised as the TR being transferred from point A to point C. "Thus, change in position can often give rise to the implicature that transfer has taken place" (p. 87).

The *Temporal Sense (2.E)* encompasses the particle over mediating "a temporal relation between a particular TR and a period of duration", such as in the following sentence: *The festival will take place over the weekend* (p. 88). The temporal sense arises from the

[2] Force dynamics is a concept discussed by Talmy (2000), which has do to with "how entities interact with respect to force" (p. 409). The scholar adds that "included here is the exertion of force, resistance to such a force, the overcoming of such a resistance, blockage of the expression of force, removal of such blockage, and the alike" (p. 409). Once force may not be conceptualised by means of image schemas, as it is unlikely to be seen (being, rather, felt), such concept is quite relevant to this study, as the idea of force, or grabbing with the use of force are ideas encompassed by the primary sense of the verb *take*. This sense, in turn, plays an important role in the meaning of the multiword verb *take over*.

conceptualisation of the TR occurring "through time", *the weekend*, in relation to "the temporal LM", *the years* (p. 88).

In the *Covering Sense (3)*, the TR appears to larger that the LM. The sentence *The tablecloth is over the table* (p. 90) is the example the scholars provide to illustrate the TR, *the tablecloth*, higher than the LM, *the table* (p. 90). Figure 3.18 below depicts such spatial relationship between the TR and the LM.

FIGURE 3.18 - Covering sense 1
Source: TYLER & EVANS, 2003, p. 91

In turn, the *Examining Sense (4)* encompasses the vantage point being the one of the TR. "The TR's line of vision is directed at the LM". The example *Phyllis is standing over the entrance to the underground chamber* (p. 93) is used to illustrate a spatial scene from which an implicature arises and leads (in other uses) to the Examining Sense. In the sentence provided, the TR, *Phyllis*, is not examining the entrance, but "she is located such that she could examine it" (94). Figure 3.19 shows the schematisation from which the Examining Sense arises.

FIGURE 3.19 - Examining Sense 1
Source: TYLER & EVANS, 2003, p. 94

Once there is room left for an idea of examination, an implicature implying examination would give rise to the Examining Sense, such as in the following sentence: *Mary looked over the manuscript quite carefully* (p. 94). Thus, in this context, the TR, *Mary*, examines the LM, *the manuscript*.

The *vertical elevation or Up Cluster (5)* is the set of senses that are most concerned with the purposes of the present study. Among the four senses encompassed by the cluster, the Control Sense is the one that walks hand in hand with the uses of *over* in *take over* identified in the sample analysed. Figure 3.20 below depicts the Up Cluster spatial configuration.

FIGURE 3.20 - Up Cluster 1
Source: TYLER & EVANS, 2003, p. 94

As Tyler & Evans (2003) claim, the four senses – the More Sense, the Over-and-above (Excess II) Sense, the Control Sense, and the Preference Sense – stem from the conceptualisation in which the TR (the shaded sphere in figure 3.20 above) is higher than the LM (the vertical line in figure 3.20).

The first sense in the Up Cluster, the *More Sense (5.A)*, entails an implicature leading to a correlation between vertical elevation and greater quantity, such as in the sentence *Jerome found over forty kids of shells on the beach* (p. 97). Contrasting to Lakoff's (1987, 2006) theory of Conceptual Metaphor, which would explain such conceptualization of increase in quantity in terms of vertical elevation by means of the conceptual metaphor MORE IS UP, Tyler & Evans's (2001, 2003) work attribute such conceptualisation to an implicature that is "associated with being *over* is of having more of some entity. This implicature is conventionalized (via pragmatic strengthening) as attested by the following example" (p. 97).

In fact, the second sense in the Up Cluster, the *Over-and-above (Excess II) Sense (5.A.1)* is associated to the More Sense. The scholars propose a process of reanalysis of the idea of more, in which "an interpretation of 'too much'" alongside containment are added (p. 99). The sentence *The heavy rains caused the river to flow over its banks* illustrates a scene in which the TR, held by the LM, a container, exceeds the limits of such containment. Thus, "a

consequence of the capacity of the container being exceeded is that more of the TR becomes an excess of the TR, which results in spillage" (p. 99).

In turn, the *Control Sense (5.B)*, of paramount importance to the analysis carried out in the present study, involves a correlation between power/ control and vertical elevation led by an implicature – in contrast to an explanation by means of Conceptual metaphors (Lakoff, 1987). In sentences such as *She has a strange power over me* (TYLER & EVANS, 2003, p. 101), there is lack of spatial vertical elevation of the TR in relation to the LM; thus, by means of an implicature, the control of the TR, *She*, over the LM, *me*, is conceptualised as vertical elevation. Figure 3.21 depicts the schematisation of the Control Sense.

FIGURE 3.21 - Control Sense 1
Source: TYLER & EVANS, 2003, p. 102

As shown in the figure above, the shaded sphere, the TR, and the vertical bar, the LM, are within each other's sphere of influence. As Tyler & Evans' (2003) point out, the TR is not physically higher than the LM, but within the sphere of its influence, similarly to the example above, in which *she*, the TR is within reach of *me*. The implicature that correlates control or power to vertical elevation emerges from the human experience of physical control being exerted by one in a higher position in relation to the controlled person, for instance. Hence, "in physical combat, the victor or controller is often the one who finishes standing, in the up position; the loser finishes on the ground, physically lower than the controller" (p. 101).

The fifth sense that stems from the Up Cluster holds a correlation between preference and being higher (or lower, when there is not much preference). In a sentence such as *I would prefer tea over coffee* (p. 103), an implicature associating preference to vertical elevation arises from the conventionalised conceptualisation from experience which relates happiness to being up and greater quantity to being up (Such as in the More Sense). Given that positive feeling, such as happiness, as well as greater quantities, are more likely to be preferred and are

associated to being up, in the same vein, preference is associated to being up. “Hence, being *over* implicates a preferred state. This implicature of preference is conventionalized, allowing a preference interpretation” (TYLER & EVANS, 2003, p. 103).

Echoing Linder (1981), who addressed the idea of “spatial reflexivity” (TYLER & EVANS, 2003, p. 104), Tyler & Evans (2003) propose the *Reflexive Sense (6)* for *over*. In such sense, the same element performs the functions assumed by both the TR and the LM. Figure 3.22 depicts the schematisation of the Reflexive Sense.

FIGURE 3.22 - Reflexive Sense 1
Source: TYLER & EVANS, 2003, p. 104

The scholars further explain that “a spatial particle such as *over* is then utilized to mediate a spatial relation between the two positions, even though the same entity cannot simultaneously occupy two distinct spatial positions in the world” (p. 104). In *The fence fell* over (p. 104), it is possible to grasp that the same “entity” can be the TR and the LM.

Last but not least, the *The Repetition Sense (6.A)* “Adds an iterative meaning component to the use of *over*” (p. 104). This sense cannot be inferred from the proto-scene. The sentence *After the start, they started to race over* (p. 104), illustrates the scholars claim that the Repetition Sense is triggered by process verbs. Furthermore, this sense would only occur when the processes are “iterative and/ or voluntary” (p. 104).

Indeed, the studies developed by Lakoff (1987) and (Tyler & Evans 2001, 2003) are relevant to this study as a whole, as some specific elements of both theories were used in the analysis, as described in the following Chapter, regarding the methodological procedures adopted. In Lakoff’s (1987), case, the *Above* Schema (and *Above-Across* Schema) were directly applied to our analysis, to illustrate the spatial senses / schemas of *over* encompassed in the uses of *take over* observed. In turn, Tyler & Evan’s (2001, 2003) work, especially regarding the Principled Polysemy Network played an important role in the methodology adopted in the present study. Such network shows the way spatial and metaphorical senses stem from a proto-scene, being, therefore, equally important to our explanation of the

metaphorical extension of *over* entailing control. Furthermore, the criteria proposed by the scholars to determine whether a sense is distinct or not in the network for *over*, was also employed in our analysis in order to verify if the uses of *over* in *take over* (and of *take over* as well) were distinct or not.

# 4. THEORETICAL METHODOLOGICAL FRAMEWORK

In this chapter, the methodological procedures adopted in this study are presented. First, the corpus used in this research was briefly explained and its choice was justified in terms of the insertion of the present study in the field of Functional-Cognitive Linguistics. Next, the steps followed in the data collection and further analysis were described. Furthermore, it was attempted to demonstrate the way such procedures suited the purposes of the research – which, in turn, also aimed at analysing the semantic roles played by both the lexical verb and the particle in the multi-word verb *take over* by means of empirical data.

## 4.1. Use of corpus and Functional-Cognitive Linguistics

In order to suit the purposes of the present study, related to analyzing the roles played by the verb and the particle in the multi-word verb meaning based on real use of language, the examples used in the analysis are from data obtained in the Corpus of Contemporary American English (COCA). The analysis carried out in the present work has, as its starting point, quantitative data (14,128 concordance lines with occurrences of *take over*). After the identification of potentially recurrent patterns in the contribution of the verb and the particle to the multi-word verb meaning, an introspective analysis, of a qualitative nature was carried out. The qualitative analysis, which is the main part of this study, was carried out based on an initial quantitative examination of the data obtained. The data obtained from COCA are relevant for aligning this study with the empirical basis of the Functional-Cognitive state-of-the-art studies.

Compiled by Mark Davies, from Brigham Young University, COCA is "the largest freely-available corpus of English", available at http://corpus.byu.edu/coca/. It "contains 520 million words of text and is equally divided among spoken, fiction, popular magazines, newspapers, and academic texts" (COCA, 2017). Besides the fact that it is acclaimed in the academy, another reason for the choice for this corpus is its availability free of charge for researchers. Even though a discussion on text genres is not within the scope of this study, such range of domains was another interesting aspect that motivated the choice of the corpus. Figure 4.1 below shows the different domains and the amount of texts these domains are comprised of.

| | |
|---|---|
| SPOKEN | (109 million words [109,391,643])<br>Transcripts of unscripted conversation from more than 150 different TV and radio programs (examples: *All Things Considered* (NPR), *Newshour* (PBS), *Good Morning America* (ABC), *Today Show* (NBC), *60 minutes* (CBS), *Hannity and Colmes* (Fox), *Jerry Springer*, etc). |
| FICTION | (105 million words [104,900,827])<br>Short stories and plays from literary magazines, children's magazines, popular magazines, first chapters of first edition books 1990-present, and movie scripts. |
| MAGAZINES | (110 million words [110,110,637])<br>Nearly 100 different magazines, with a good mix (overall, and by year) between specific domains (news, health, home and gardening, women, financial, religion, sports, etc). A few examples are *Time, Men's Health, Good Housekeeping, Cosmopolitan, Fortune, Christian Century, Sports Illustrated*, etc. |
| NEWSPAPERS | (106 million words [105,963,844])<br>Ten newspapers from across the US, including: *USA Today, New York Times, Atlanta Journal Constitution, San Francisco Chronicle*, etc. In most cases, there is a good mix between different sections of the newspaper, such as local news, opinion, sports, financial, etc. |
| ACADEMIC | (103 million words [103,421,981])<br>Nearly 100 different peer-reviewed journals. These were selected to cover the entire range of the Library of Congress classification system (e.g. a certain percentage from B (philosophy, psychology, religion), D (world history), K (education), T (technology), etc.), both overall and by number of words per year. |

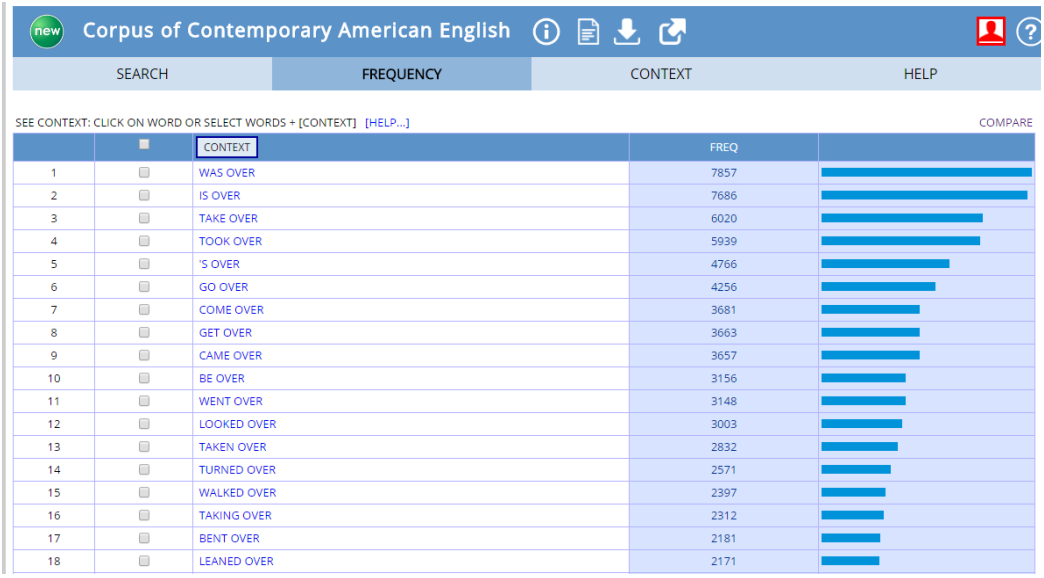
FIGURE 4.1 - Examples of texts that compose COCA 1
Source: BARBOSA, 2016, p. 45

Not only does the use of data from such a renowned corpus provide reliability to our analysis, as it encompasses real uses of language, but it also guides the analytical process itself. The patterns observed emerged from the uses of *take over* in the specific contexts provided by the corpus. The procedures adopted have to do with data collection, selection and analysis. The steps encompassed by the research methods are described in the following section, 4.2.

## 4.2. Research design and procedures

In this section, the research design is described. First, the process of data collection is described. Second, the procedures adopted in the analysis of the data collected are addressed.

The data was collected from COCA, from May to June, 2016. In this study, only the data from the written domains were gathered. An initial research was carried out on COCA in order to identify the five most frequent multi-word verbs with *over*, in both written and spoken domains, which were as follows, from the most to the least frequent one: *be over*, *take over*, *go over*, *come over*, and *get over*. Figure 4.2 illustrates the results obtained from such initial search. As different verb tenses encompass different entries in the corpus, all the entries of those five multi-word verbs were taken into account and the entries of the same verb were summed up.




| | | CONTEXT | FREQ | |
|---|---|---|---|---|
| 1 | | WAS OVER | 7857 | |
| 2 | | IS OVER | 7686 | |
| 3 | | TAKE OVER | 6020 | |
| 4 | | TOOK OVER | 5939 | |
| 5 | | 'S OVER | 4766 | |
| 6 | | GO OVER | 4256 | |
| 7 | | COME OVER | 3681 | |
| 8 | | GET OVER | 3663 | |
| 9 | | CAME OVER | 3657 | |
| 10 | | BE OVER | 3156 | |
| 11 | | WENT OVER | 3148 | |
| 12 | | LOOKED OVER | 3003 | |
| 13 | | TAKEN OVER | 2832 | |
| 14 | | TURNED OVER | 2571 | |
| 15 | | WALKED OVER | 2397 | |
| 16 | | TAKING OVER | 2312 | |
| 17 | | BENT OVER | 2181 | |
| 18 | | LEANED OVER | 2171 | |

FIGURE 4.2 – Entries of multiword-verbs with *over* from COCA 1
Source: COCA (2016)

COCA provides 29,133 occurrences of *be over*, 18,538 occurrences of *take over*, 10,738 occurrences of *go over*, 9,530 occurrences of *come over* and 5,244 occurrences of *get over*.

Despite the higher frequency of *be over*, the choice of *take over* as the multi-word verb to be the object of study of our analysis was based on the fact that it was the most recurrent productive multi-word verb with *over* in COCA. *Be over* held a sense of completion (e.g. *The honeymoon is over*), which was interesting for the purposes of this study, it also had uses in which the verb and the particle were syntactically next to each other, the particle was not related to the verb (e.g. *The political war is over populist and nationalistic policies*). By contrast, *take over* encompassed a majority of uses in which both verb and particle comprised a multi-word verb and formed a non-composite meaning, that is, the meaning of the multi-word verb *take over* was not merely a sum of the senses of both constituents.

After defining the multi-word verb to be the object of this study, we investigated the *semantic potential* (EVANS, 2006) of both the lexical verb and the particle. With regard to the verb, the Oxford dictionary *An Etymological Dictionary of the English Language* as well as the Online Etymology Dictionary - Etymonline[3] were the sources used. In relation to the particle, the earliest attested meaning of *over* presented by Tyler & Evans (2003), based on the *Oxford English Dictionary* was taken into account. Furthermore, in order to discuss the semantic role played by both *take* and *over* in *take over*, the meanings of such multi-word

[3] Available at: http://etymonline.com/

verb provided by the online Macmillan Dictionary[4] and by WordNet[5] – *A lexical database for English*, developed by Princeton University, were also considered.

The next step was to verify the frequency of *take over* only in the written domains provided by COCA, as the spoken one is not under the scope of this study. An overall number of 14,268 concordance lines with uses of *take over* were first obtained. Figure 4.3 below shows the frequency of the multi-word verb in the four written domains.

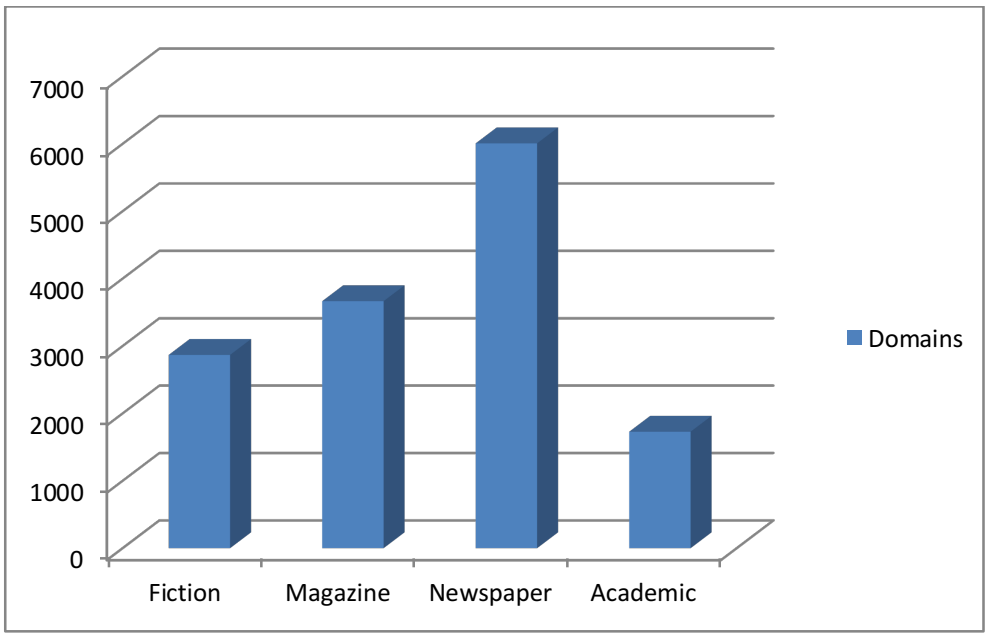



FIGURE 4.3 - Occurrences of *take over* per written domains 1
Source: ROSSINI (2017, this study), adapted from COCA (2016)

Although the uses of *take over* observed did not vary in the different domains, it was worth noting that the domain with the highest frequency of *take over* was the one encompassed by the press – magazine (3,665 occurrences) and newspaper (6,007 occurrences) – in contrast to the academic domain, with the lowest figures (1,728 occurrences).

Then, the concordance lines were manually copied and pasted onto an Excel spreadsheet. However, the concordance lines were verified one by one and, out of 14,268 obtained from COCA, 128 (0.98%) had to be removed from the spreadsheet, as they did not contain examples of *over* as a verb particle in the multi-word verb *take over*. In the following example, *Some of the actions they have taken over the last few weeks present a real and clear*

[4] Available at: http://www.macmillandictionary.com/

[5] Available at: http://wordnetweb.princeton.edu/perl/webwn

*danger*, *over* is not a verb particle of *take*. Concordance lines with a similar occurrence were left out of the data considered in the selection.

14,128 concordance lines remained on the spreadsheet. The next step was a random selection of 10% of the lines by means of the R[6] software for statistics purposes. By means of a programming script shown in figure 4.4 below, a new spreadsheet was automatically generated by the software. Such spreadsheet contained 10% of the 14,128 concordance lines, i.e. 1,412 concordance lines, randomly selected by the software. The data of the sample may be accessed on the CD accompanying the printed copy of this dissertation.

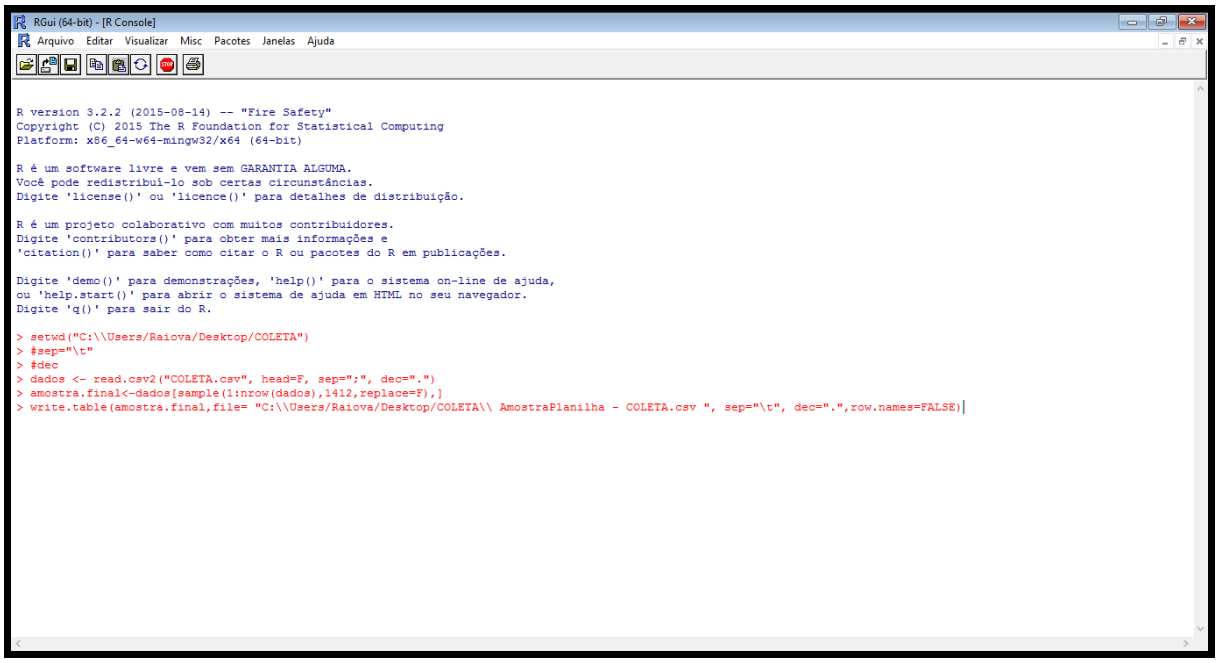



FIGURE 4.4 – Screenshot of the script used in R for random selection of concordance lines 1
Source: ROSSINI (2017, this study)

The following step was to identify, manually, the TRs and LMs of each use of *take over* in the 1,412 concordance lines obtained. It was aimed to determine whether the uses of such multi-word verb encompassed spatial or non-spatial content, for instance, in the contrasting examples taken from the sample: *residents of the neighborhood of Sellwood have reported swarms of tiny beetles taking over yards and gardens* and *Christopher Pappas took over as CEO*.

[6] Developed by John Chambers and other developers at Bell Laboratories in the project entitled *The R Project for Statistical Computing* , the R software stands as a renowned tool for statistical purposes, providing a wide range of resources, namely graphical and statistics techniques. The Free Software is available for download at https://www.r-project.org/.

After a preliminary analysis of the TRs and LMs of *take over* in each concordance line, a more introspective, qualitative analysis was carried out. First, it was noted the sense held by *take over* in each concordance line. We attempted to associate it to the senses proposed by both Lakoff (1987) and the senses encompassed by the Principled Polysemy Network developed by Tyler & Evans (2003), previously addressed in Chapter 3. Such senses were separated according to degrees of spatiality, from the ones with a higher degree to the ones which seemed to lack any trace of spatiality.

The following step was to, first, verify whether such senses were distinct or not. Second, the Principled Polysemy approach was used in order to accomplish such task. Despite the five criteria proposed Tyler & Evans (2003), as presented in Chapter 3, only the first criterion, with regard to the earliest attested meaning of an item was applied. In fact, it was sufficient to satisfy the procedure needs – to attest that the senses observed were not distinct as well as to verify the semantic potential of the verb and the particle in the multi-word verb.

The final procedure of this methodology was carrying out the inter-rater reliability, described in the following section

## 4.3. The Inter-Rater Reliability in this study

In order to help determine the consistence of the analysis carried in this study, an 'inter-rater reliability' procedure was implemented. Another researcher, a member of our research group, already familiar with the theoretical foundation of the study, agreed to check all the concordance lines analyzed. By doing this, it was possible to confirm their membership to the categories that had been assigned to them. The procedure aimed to reach an agreement of 86% (or more) between the two raters. It served the purpose of calibrating the analysis until an optimal point was reached.

In the next chapter, the analysis carried out as well as its results are addressed in more detail.

# 5. ANALYSIS AND DISCUSSION OF RESULTS

This chapter aims at providing an analysis of the uses of the multi-word verb *take over* in the data obtained from the Corpus of Contemporary American English – COCA, taking into account the processes that motivate the metaphorical extensions in the polysemy network of such verb. Thus, the role of both verb and particle in the non-composite meaning of the multi-word verb was also observed and especial focus was placed on the influence of *over* in the metaphorical senses of *take over*. Furthermore, it was aimed to explain the process in which metaphorical senses of the particle stem from a prototypical spatial one. As previously stated in the methodological procedures presented in Chapter 4, the semantic network for *over* proposed by Tyler & Evans (2003) was the main reference for identifying and analysing the senses of *take over* observed in the empirical data collected, once the spatial configurations of the TR and the LM it encompasses are relevant for a description of the influence of both *participants* in particle meanings.

However, the idea of image schemas for *over* alongside the theory of conceptual metaphor proposed by Lakoff (1987), and questioned by Tyler & Evans (2003), were of equal merit and also considered, once the image schemas proposed by the former stand as a starting point in the literature and the idea of conceptual metaphors might explain, in this study, the processes underlying the *reanalysis* and the implicature that lead to non-spatial meanings of *over* in the semantic network, as claimed by Tyler & Evans (2003).

The scholars present fourteen senses associated to *over* stemming from a proto-scene – of the TR being higher than the LM – of the earliest attested meaning of the particle related to being "above" or "higher than" (p. 64 – 65). The spatial configuration and relationship of both TR and LM are taken into account by the authors and stand as relevant elements in the proposed methodology for attesting different meanings, including non-spatial ones. Therefore, the proto-scene related to a primary sense of the particle is a key element in a discussion on the different or additional senses of *over*, be they spatial or non-spatial.

In order to analyse the influence of both lexical verb and particle in the non-composite meaning of *take over* in the sample obtained, alongside the role played by the non-spatial senses of *over* in the meanings of the multi-word verb, the starting point was the identification of the TR and LM in each concordance line, in order to verify potential patterns in their relationship and, thus, in the formation of polysemous meanings. Then, the earliest attested

senses for the verb *take*, for the particle *over*, and a potential primary sense for *take over* were addressed, as presented in section 5.1

With regard to a preliminary overview of TRs and LMs in the sample obtained, we aimed at verifying whether the TR – LM relationships in the uses of *take over* might have a spatial or non-spatial nature – table 1 in Appendix A provides an overview of sample sentences and their respective TRs, LMs and relationship between the TR and the LM. Excerpts (1) to (4) below illustrate the kind of relationship between the TR and LM that pervaded the sample analysed. The examples were randomly selected from the sample of 1,412 concordance lines from the Corpus of Contemporary American English (COCA).

Indeed, there seems to be a recurrent pattern in the relationship between TRs and LMs: TRs could be identified and so could be most of the LMs. When the latter was apparently omitted, it could be grasped from the context, such as in excerpt (1):

(1) *Not being able to see means your sense of touch will* ***take over****.*

Although the LM is not mentioned in the sentence, it is possible to infer that *your sense of touch*, the TR, will take over *you*/ *your mind* – a potential LM. Thus, the fact that the LM is not said in the sentence is not a constraint on comprehension.

Furthermore, there are a significant number of sentences with a clearly non-spatial relationship between the TR and the LM in contrast to sentences in which it is non-spatial, but with some degree of spatiality remaining. According to the semantic network proposed by Tyler & Evans (2003), the senses presented stem from a spatial proto-scene. However, the different nature (spatial and non-spatial) of the relationship between TRs and LMs led to a further step: analysing the "entirely" non-spatial uses of *over* in *take over* in contrast to the particle uses with some degree of spatiality, in order to verify whether the types of relationships between TRs and LMs remained similar in both cases – this analysis is provided in section 5.1.

Indeed, as Tyler & Evans (2003) claim, "the majority of distinct senses associated with *over* involve a spatial configuration in which the TR is higher than the LM" (p. 65). However, in most of the cases above, with the use of the multi-word verb *take over*, the TR does not seem to be physically at a higher position in contrast to the LM. Taking the example of excerpt (2) below, the TR (*feelings*) is not physically higher than the LM (*thinking*):

(2) *Talking and explaining help a child become a reflective person whose feelings don't* ***take over*** *his thinking.*

In fact, the sense held by the multi-word verb in excerpt (2) – influenced by the particle sense – may have more to do with an idea of power or "the TR and LM influencing each other" (TYLER & EVANS, 2003, p. 74) in contrast to a sentence such as *the bee is hovering* ***over*** *the flower* (p. 65), in which the TR (*bee*) is literally at a higher position in relation to the LM (*flower*). As pointed out by Tyler & Evans (2003), such meaning would be "derived from the proto-scene in a principled fashion" (p. 79) and "an upward orientation is meaningful in human experience. (…) An element in a vertically elevated position is experienced as being positive or superior" (p. 97). Therefore, according to the scholars, an implicature, via reanalysis, instead of conceptual metaphor (LAKOFF, 1987), would motivate the control sense associated with *over*.

By contrast, although excerpts (3) and (4) convey a metaphorical sense of *take over*, a certain degree of spatiality seems to be encompassed, especially by the particle *over*:

> (3) (…) *other ornamental plants) vying for the same space. They won't necessarily* ***take over*** *your garden, but before planting any of them, check* (…)
> (4) *School projects* ***took over*** *their dining room. A stack of construction paper here, a cluster of crayons* (…)

Unarguably, in both sentences, the control sense – which entails the TR and the LM being within each other's sphere of influence – appears to pervade. Nevertheless, there still seems to be some sort of spatial / physical element in the relationship between the TR and the LM. In excerpt (3), the physical presence of the TR (*they* – referring to the *ornamental plants* previously mentioned) is stated in relation to the LM (*your garden*). Similarly, in excerpt (4) the TR (*school projects*) was physically present in relation to the LM (*dining room*).

What is striking about those last uses of *over* in *take over* is that once again the prototypical configuration of proto-scene, in which the TR is higher than the LM, does not seem to be applied to this case. In a sentence such as (3), in which *plants* would take over *the garden*, the spatial scene does not provide elements that demonstrate the plants are higher than the garden itself, as they are part of it – although they are in vertical elevation in relation to the ground, they do not seem to be in such configuration in relation to the garden. In addition, excerpt (4) illustrates this point even more precisely, as one cannot claim that the *school projects* taking over *the dining room* are higher than the dining room – although they may be on the surface they are scattered over. In light of such configurations, one might

wonder whether the non-spatial extended sense of *over*, in *take over*, holds some degrees of spatiality depending on the context it is used – not to mention the contribution of the lexical verb, which also encompasses a physical sense associated to force dynamics in its primary sense. Such hypothesis might leave room for wondering whether the formation of metaphorical extensions out of spatial ones is a one-stage process or comprised of different stages with degrees of spatiality retained.

Therefore, a close look at the semantic network for *over* provided by Tyler & Evans (2003) alongside an explanation of the process underlying the non-spatial metaphorical sense of *take over*, not to mention how it stems from a physical proto-scene, stand as elements of extreme importance to the comprehension of such uses of the verb. It is addressed in more detail in section 5.2. Over the next section, 5.1, the roles of both verb and particle in multi-word verb meaning formation are discussed.

## 5.1. Senses of *take over*

In this section, senses of *take over*, attributed to it by dictionaries and observed in the empirical data collected are addressed. The sanctioning of a primary sense for *take over* is attempted, alongside a description of the control sense of *take over* encompassed in the verb occurrences in the sample analysed (section 5.1.1). Furthermore, degrees of spatial nuances are observed and discussed (in sections 5.1.2 and 5.1.3).

As stated in the Chapter 1, the non-composite meaning of multi-word verbs is formed by their elements and, according to Rudzka-Ostyn (2003), "it is not enough to know the separate meanings of a verb and a particle to understand the meaning of the phrasal verb resulting from the combination of both" (p. 5). Thus, the senses as well as the schemas underlying both verb and particle may play an important role in meaning formation.

In dictionaries and language database of English, such as the online Macmillan Dictionary and WordNet, *take over* has the non-spatial sense of taking control of something, such as in *IBM is taking over the smaller company* (Macmillan Dictionary, 2017), as well as of assuming, usurping, seizing (WordNet, 2017). Table 5.1 shows the senses attributed to *take over* from the online *Macmillan Dictionary*.

**Table 5.1:** Senses of *take over* 1

| | Senses | Examples |
|---|---|---|
| ***Take over*** | *to begin to do something that someone else was doing* | *Can you take over the cooking while I walk the dog?* |
| | *to take control of something* | *IBM is taking over the smaller company.* |

Source: ROSSINI (2017, this study) adapted from Macmillan Dictionary (2017)

Once the meanings of multi-word verbs are not a mere "sum" of the senses of their lexical verbs and particles, but non-composite meanings formed by both, understanding not only the meanings of *take over*, but also the ones held by its parts was vital for a discussion over the contribution of both *take* and *over* to the senses of the multi-word verb. Hence, by means of the earliest attested senses for the verb and the particle, we aimed at determining a potential earliest attested meaning for *take over*. In light of Tyler & Evans's (2003) criteria for determining distinct senses, it was important to have an identification of a potential earliest attested meaning for *take over*.

In order to accomplish such task, two etymological dictionaries – the *Online Etymological Dictionary*[7] and the *Oxford An etymological dictionary of the English language* (1953) – were used to attest the earliest meaning of *take*. In turn, the earliest attested meaning for *over* considered in the analysis was the one presented by Tyler & Evans (2003) based on the *Oxford English Dictionary*. The definition used by the scholars was taken into account, because it is used in the semantic network for *over*, also proposed by the scholars, which is of paramount importance to the process in which a non-spatial sense stems from a spatial one. Tyler & Evans's (2003) approach to *over* provides valuable insight for comprehension of the process bridging the gap between spatial and non-spatial senses.

With regard to the earliest attested meanings of the verb *take*, the *Oxford An etymological dictionary of the English language* presents the following earliest attested meaning for *take*: "to lay hold of, seize, grasp, get (Scand.)" (p. 627). With Scandinavian roots, this verb has to do with the ideas of *holding*, *getting*.

[7] Available at: http://www.etymonline.com/.

In the same vein, the definitions for *take* shown in the *Online Etymology Dictionary*[8] attest the ideas of *holding*, *seizing* or even *touching* to the verb:

> (…) late Old English *tacan* "to take, seize," from a Scandinavian source (such as Old Norse *taka* "take, grasp, lay hold," past tense *tok*, past participle *tekinn*; Swedish *ta*, past participle *tagit*), from Proto-Germanic **takan-* (source also of Middle Low German *tacken*, Middle Dutch *taken*, Gothic *tekan* "to touch"), from Germanic root **tak-* "to take," of uncertain origin, perhaps originally meaning "to touch." As the principal verb for "to take," it gradually replaced Middle English *nimen*, from Old English *niman*, from the usual West Germanic **nem-* root (source of German *nehmen*, Dutch *nemen*; see *nimble*). (Available at: http://www.etymonline.com/index.php?allowed_in_frame=0&search=take. Last access: January, 2017).

Thus, considering the early attested meanings of *take* provided by both etymology dictionaries, the primary sense for *take* considered in the analysis had to do with the idea of "laying hold of". As Tyler & Evans (2003) claim, early attested meanings tend to exist in contemporary uses. Regarding particles, "unlike words from many other word classes, the earliest attested sense for many spatial particles is still a major, active component of the synchronic semantic network of each particle" (p. 48). In order to verify if the attested meanings for *take* still remain in contemporary uses of the verb, the online version of the *Macmillan Dictionary* and the "lexical database for English", *WordNe*t, developed by Princeton University, were used.

Among the distinct entries for the verbs, in both sources, the potential primary sense of *take* seemed to still exist. Table 5.2 illustrates the entries of contemporary meanings of *take* that walked hand in hand with its etymology in both dictionaries.

**Table 5.2:** Contemporary senses of *take* 1

| | **Macmillan Dictionary** | **WordNet** |
|---|---|---|
| **Senses of *take*** | *Cause someone to move somewhere* | *Get hold of* |
| | *Cause someone or something to move* | *Assume, acquire* |

Source: ROSSINI (2017, this study) adapted from Macmillan Dictionary (2017) and WordNet (2017)

[8] Available at: http://www.etymonline.com/index.php?allowed_in_frame=0&search=take

Unarguably, it seems that the earliest attested meanings of *take* walk hand in hand with some of its current uses. Furthermore, the idea of "getting hold of" encompassed by the verb may walk hand in hand with the concept of *force dynamics* (TALMY, 2000).

With regard to the particle *over*, Tyler & Evans (2003) discuss its earliest attested meaning (according to the Oxford English Dictionary), which has to do with "above", or "higher than". Once such meaning encompasses a spatial configuration with the TR being higher than the LM, the *Above* Schema (LAKOFF, 1987) and the proto-scene for *over* (TYLER & EVANS, 2003), which entails that TR – LM spatial relationship, stand as viable schematic representations of the primary sense found. Once the primary sense, associated to the proto-scene is based on the earliest attested meaning of the particle, the scholars claim that:

> We essentially argued that all five of the criteria suggested that the proto-scene associated with *over* involved a spatial configuration in which the TR is located higher than the LM. Recall that evidence for this conclusion included the criterion that the diachronically earliest meaning associated with a particular spatial particle may constitute the primary sense (criterion 1). According to the *Oxford English Dictionary* (OED), the earliest meaning associated with the form *over* relates to higher than, or above. The OED relates *over* to the Old Teutonic preposition and adverb *ufa*, 'above', a cognate of the Sanskrit *upari* 'higher'. The form *over* derives from an earlier form *be-ufan*, which was a comparative form of *above*. Synchronically, this 'above' sense is still quite apparent, as is attested by the following sentences that involve *over* and describe spatial scenes in which the TR is higher than the LM. (TYLER & EVANS, 2003, p. 65)

By means of the etymological meaning attested to *over* by the Oxford English Dictionary, Tyler and Evans (2003) consider the ideas of being "above" or "higher than", as the earliest attested senses for *over*. In the same vein, the present research relies on such senses, as the network for *over* proposed by the scholars is used in the present analysis of the process underlying the metaphorical extensions of *over* out of an original spatial sense.

Taking those senses into account, as well as the primary senses of both lexical verb and particle that comprise the multi-word verb at stake, a likely primary sense of *take over* could be as the one illustrated in table 5.3. It also provides an excerpt from the research data in order to exemplify a potential influence of the primary spatial sense of *take* and of *over* in uses of *take over*.

**Table 5.3:** Potential primary sense of *take over* 1

| | **TAKE** | **OVER** | **EXAMPLE** |
|---|---|---|---|
| **Senses** | To lay hold of, seize | Vertical elevation: above, | *Bola Oyinbo, who described* |

| | | | |
|---|---|---|---|
| | | higher than | *himself as a leader of the 121 youths who* ***took over*** *the platform* (…) |
| **Schemas** | Force-dynamics | Above/ Above and Across | |
| **Spatial scenes** | Force-dynamics | TR higher than the LM | |

Source: ROSSINI (2017, this study)

Indeed, despite the fact that a more detailed analysis may be required in further studies, given the sense of *take over* associated to control alongside the primary senses of both *take* and *over*, it might be possible to observe the contribution of each constituent to the non-composite meaning of the multi-word verb. At first, the primary senses attested to the verb and the particle are spatial. Then, prior to a discussion on the process underlying the origins of a non-spatial sense out of a spatial scene, a potential primary sense attributed to *take over* could be associated to an idea of "grabbing", "holding" "vertical elevation" – however, once the actual use of the multi-word verb is non-spatial, an explanation the non-spatial meanings of *take over* triggered by the particle stands as a paramount element.

Regardless of the quite divergent approaches to the schematic representations of *over*, in terms of conceptualising it by means of schemas or spatial scenes, there seems to be some relative consensus with regard to the spatial relationship of TR and LM in the prototypical spatial original scene (the former being higher than the latter) as well as the fact that the control sense of *over* – thus, of *take over* – stems from a spatial image schema (LAKOFF, 1987) or proto-scene (TYLER & EVANS, 2003).

Although the meanings pervading the use of *over* in *take over* seem to stem from a spatial image schema (LAKOFF, 1987) or proto-scene (TYLER & EVANS, 2003), in the data obtained, it was possible to note senses formed influenced by the verb parts. Despite its various meanings, the verb *take* encompasses the quite interesting meanings of 'seizing or 'holding something', 'moving through a surface', as well as 'taking control of something over an opponent' (online Macmillan Dictionary, 2017). Thus, there would not be a schema involved, but force dynamics, as force may not be seen – hence, it is not imagetic or conceptualised by image schemas. Likewise, the particle *over* has a considerable range of meanings under its scope. The polysemy network proposed by Tyler and Evans (2003), for instance, depicts 15 senses (including the proto-scene) associated to this particle. The excerpts below, from the concordance lines obtained, exemplify the influence of both verb constituents in its whole meaning.

(5) *feeling that false sense of security as the sound of the jet engines* ***takes over****. Suddenly, there is an air pocket and they rock back and forth.*

(6) *they just let them go. They ignored the law and let their hearts* ***take over****.*

(7) *Chaos* ***took over****. Martha Bingham shouted her message*

(8) *But as electronics* ***takes over****, the book suffers some heavy blows, and literature feels them as well.*

(9) *I don't have cable so the Internet has* ***taken over*** *for television, movies, and sports.*

(10) *churches, synagogues and mosques were suppressed. Spiritual formation of children was* ***taken over*** *from religious institutions selected by parents and handed to schools and youth groups*

Indeed, as stated previously and according to the literature, the senses of multi-word verbs are non-composite meanings, based on the combination of their parts. Therefore, the slight variations in the senses of *take over* in the examples might be due to various reasons such as contextual features. However, taking into account the suggested primary sense of *take over* presented in this study, it may be possible to observe senses of both lexical verb and its particle in the meanings found in the examples.

Undoubtedly, all the sentences above encompass the idea of holding power, control or, most importantly, sphere of influence. In sentence (5), the *engines* had some influence (probably in terms of loud noise) over the passengers or the cabin. Similarly, in sentence (6), their *hearts* or emotion had strong influence in the situation, in sentence (7), *chaos* also pervaded the context, exerting influence, as well as in sentence (8), in which *electronics* had a status of power, predominance, influence in the market. Even though the LMs of those sentences were not clearly stated, it was possible to infer them and, as discussed in the introductory part of the present chapter. Moreover, neither does such feature seem to affect the relationship between TR and LM, nor are the meanings changed.

In addition, sentences (9) and (10) may have a more apparent influence or mark of the meanings of *take*. In sentence (9), *Internet* obviously exerts some influence, but, as it *has taken over for television*, the idea of assuming a role substituting something might also be present (not to mention the influence of the preposition *for*). In sentence (10), *spiritual*

*formation* was removed from *religious institutions* (not to mention the influence of the preposition *from*)

### 5.1.1. Control sense of *take over*

As previously mentioned, the non-composite meaning of a multi-word verb results from a configuration comprised of the senses and conceptualisations of both the verb and the particle. In the case of *take over*, given that *over* holds a control sense and the multi-word verb itself also presents senses related to control, it goes without saying that the particle influences the non-composite meaning of *take over*. In the 1,412 concordance lines analysed, control-related ideas, such as assuming power, control, a task, or influencing, were observed. However, whereas some senses are entirely non-spatial, others, despite being metaphorical, would encompass some spatial elements. Table 5.4 below illustrates the control-related senses of *take over* in the sample analysed.

**Table 5.4:** Control sense of *take over* 1

| EXAMPLES | TR | LM | RELATED SENSES |
|---|---|---|---|
| **the highest point is along the putt's line -- the spot where gravity** takes over **and moves the ball toward the hole.** | *Gravity* | *spot* | influence (the ball movement) |
| **Desperate for answers For the next seven months my symptoms worsened,** taking over **my life. I went from being a healthy, active, normal 30-year-old woman** | *Symptoms* | *my life* | Influence/ have an impact |
| **It only infuriated the Blues' fan base more when incoming owner Dave Checketts** took over **in July 2005** | *Dave Checketts* | *The Blues* | Assume power / control |
| **One had even offered to** take over **the Dunford Securities case.** | *One* | *the Dunford Securities case* | Assume control |
| **Scotty quickly** takes over **the dead man's console.** | *Scotty* | *console* | Assume control/ Appropriate |
| **the resentment on both sides the whites scared of the black migration** taking over **the jobs in the factories,** | *black migration* | *jobs* | Assuming/ take from |
| **is no longer the secular and democratic country** | *Party* | *country* | Assume power/ |

| | | | |
|---|---|---|---|
| **that it was when the party** took over**. The AKP has conquered the bureaucracy and changed Turkey's fundamental identity.** | | (implicit) | control |
| **in 1897, Edward** took over **management of H. M.'s business ventures, and assumed his brother's title of** | *Edward* | *management* | Assume a position/ power/ control |
| **Investigators identify up to 200 suspects after seizing computer equipment and** taking over **a child pornography Web site.** | *Investigators* | *website* | Monitor/ control |
| **Denise Legaux, 48, and her husband, Harold, 49,** took over **the family business in 1982 after his father died** | *Denise, Harold* | *family business* | Assumed control |
| **LOSSES BY the Penguins in the 25 regular-season games they played after Dan Bylsma** took over **as coach from Michel Therrien on Feb. 15.** | *Dan Bylsma* | *The Penguins* (implicit) | Assume a position replacing |
| **My emotions** took over**. I couldn't distinguish myself from the teenagers.** | *My emotions* | *Me/ my mind* (implicit) | Influence/ "control"/ dominate |

Source: Corpus of Contemporary American English - COCA (2016)

Despite the various nuances of the meanings of *take over* in the concordance lines obtained and shown in Table 5.4 above, the idea of control or sphere of influence seems to pervade such uses to a greater or lesser extent. For instance, in *the highest point is along the putt's line -- the spot where gravity **takes over** and moves the ball toward the hole*, the type of 'control' that the TR (*gravity*) has over the LM (*spot*) appears to be different from the type of control exerted by the TR in a sentence such as *Denise Legaux, 48, and her husband, Harold, 49, **took over** the family business in 1982*, in which in which *Denise and Harold* (TR) assumed control of *the family business* (LM). In fact, in the first sentence, it shall be considered that gravity (a force, not a moving entity) has some influence over the LM, causing the ball movement towards the hole. Then, regardless of the slight variations in the meaning of *take over* in both sentences, the idea of control and influence is still present in them. Other examples of influence, not necessarily control (in terms of assuming power or a position) of the TR over the LM are sentences such as *For the next seven months my symptoms worsened, **taking over** my life* – in which *the symptoms* (TR) affected or influenced *my life* (LM) – and *My emotions **took over*** – in which *my emotions* (TR) had some power over, influenced or affected *me* (LM).

With regard to assuming control, a role or a position, even though contextual variations might be at stake, it may not compromise the abstract configuration of the relationship between TR and LM. Regardless of the TR controlling equipment (such as in *Scotty quickly **takes over** the dead man's console*), assuming power, (such as in *(...) is no longer the secular and democratic country that it was when the party **took over***), or monitoring a website, (such as in *Investigators identify up to 200 suspects after seizing computer equipment and **taking over** a child pornography Web site*), the idea of control is encompassed by the verb uses.

However, as the control sense is not spatial, physical, and given that it is widely assumed in the literature that such sense is originated from a spatial scene, one might question how this process occurs. In other words, it could be worth discussing what elements may constitute the process of originating an abstract meaning from a physical spatial prototypical one. In section 5.2, the mechanisms underlying such process are discussed.

### 5.1.2. Spatial aspects in the sense of *take over*

As previously claimed, an idea of control, power or sphere of influence is encompassed by *over* in the uses of *take over* – and the multi-word verb also mirrors such senses of the particle. However, if there is a large number of uses that are thoroughly non-spatial, such as in *Edward **took over** management of H. M.'s business ventures* (from Table 5.2), fewer senses seemed to still encompass some degree of spatiality, although they were metaphorical. Table 5.5 below shows concordance lines from the sample analysed which encompass some spatial aspect in the senses conveyed.

**Table 5.5:** Spatiality in the senses of *take over* 1

| EXAMPLES | TR | LM | SENSES |
|---|---|---|---|
| I left my so-called materials on the table to save it from being **taken over** by the family sitting near me. | *Family* | *table* | occupy/ 'remove' |
| The newest bakery will **take over** a pair of conjoined historic buildings on Main Street | *Bakery* | *historic buildings* | Occupy |
| And then there was Josie's posse. They **took over** two tables, not because there were so many of them, but because they | *They* | *tables* | Occupy |

| | | | |
|---|---|---|---|
| house was sold to Darchei Noam, a Jewish study center, and then **taken over**, in the 1950's, by the East Side Hebrew Institute. | *House* | *East Side Hebrew Institute* | Occupy |
| residents of the neighborhood of Sellwood have reported swarms of tiny beetles **taking over** yards and gardens. | *Swarms* | *Yards and gardens* | occupy/ spread |
| completely renovated his dressing room/closet in his secluded Piedmont home. **Taking over** half of the laundry room, he now has a suit closet within his larger | *Suit closet* | *Laundry room* | Occupy |
| Bola Oyinbo, who described himself as a leader of the 121 youths who **took over** the platform, said that after four days of negotiations, his group was ready | *Youths* | *platform* | occupy/ invade |
| and the lounge that the petrologists had **taken over** as their computer and radio room. | *Petrologists* | *lounge* | Occupy |
| the good cells had multiplied and had **taken over** the cancer cells. | *good cells* | *cancer cells* | spread/ occupy |
| Don't expect much peace during the day, but when they **take over** the night too, that's bad. | *They* | *the night* | occupy/ take place |

Source: Corpus of Contemporary American English - COCA (2016)

As illustrated in Table 5.5, the idea of occupying a place pervades some of the senses of *take over* observed in the data obtained. Additionally, both TR and LM were stated in all the occurrences. Taking the example of *I left my so-called materials on the table to save it from being **taken over** by the family sitting near me*, a person prevented a situation in which the TR (*family sitting near me*) would take over, "grab", "occupy" the LM (*table*). Similarly, in *The newest bakery will **take over** a pair of conjoined historic buildings on Main Street,* a *bakery* (TR) occupied/ was installed in a *pair of two conjoined historic buildings* (LM); in *They **took over** two tables, they* (TR) occupied/ sat at *two tables* (LM); in *swarms of tiny beetles **taking over** yards and gardens*, *swarms of tiny beetles* (TR) were spread over *yards and gardens* (LM); in ***Taking over** half of the laundry room, he now has a suit closet within his larger (...)*, the *suit closet* (TR) occupied the *laundry room* (LM); in *youths who **took over** the platform*, *youths* (TR) occupied/ invaded the *platform* (LM).

All of the examples above considered, it appears that the non-spatial control sense held by *take over* may also entail some degrees of spatiality, for a greater or lesser extent. Regardless of the exact nature of such spatial retention, i.e., from the particle or from the

lexical verb, it was noted that an idea of spatiality would be more easily grasped in some sentences than in others. In contrast to a context in which someone takes over as the CEO of a company (with a non-spatial relationship between the TR, someone, and the LM, a company), a sentence such as *youths who **took over** the platform* (from Table 5.3 and discussed above) holds some degree of spatiality; although the TR, *youths*, may have some control over the LM, *the platform*, it was physically occupying the platform, probably, in vertical elevation in relation to it. Thus, there seems to be a contrast between the majority of metaphorical senses of *take over* observed, related to assuming power, position, a role, and some that, despite conveying a control-related sense, still encompassed some spatial aspect in the relationship between the TR and the LM.

Furthermore, other concordance lines analysed appeared to be "in between" in the spectrum of spatial aspects retention. Sentences such as *the good cells had multiplied and had **taken over** the cancer cells* and *Don't expect much peace during the day, but when they **take over** the night too, that's bad* (from Table 5.3) are more likely to leave more room for conceptualisation of their meanings and scenes by means of conceptual metaphors. In the first sentence, if, on the one hand, *good cells* (TR) may have spread and occupied the place once taken by *cancer cells* (LM), replacing them; on the other hand, the idea of sphere of influence or even of 'victory'/ defeat may be present if a conceptual metaphor such as 'diseases are battles' or 'diseases are enemies' is taken into account. In the second sentence, *they* (TR) would 'occupy' part of the *night* (LM) – in this case in particular, night could be conceptualised by means of the conceptual metaphor 'time is distance/ space'. Therefore, despite the metaphorical nature of LM, as well as of the verb use itself, the sense in the sentence seems to be still connected to the spatial sense of *take over* to a certain extent.

Then, in light of such apparent inconsistency in terms of configurations of TR and LM, section 5.1.4 provides a further discussion on 'transitional uses' of *take over* in the data obtained and 5.2 provides an attempt to explain such process.

### 5.1.3. Further insights on the transitional meaning of *take over*: from place to power

As seen in previous sections, in spite of the noticeably lower number of occurrences of *take over* with a spatial idea added to its control sense, it stands as an intriguing element to be analysed. It was noted that although some uses walked hand in hand with the vertical

elevation of the TR in relation to the LM in the proto-scene proposed by Tyler & Evans (2003), other uses, on the other hand, seemed to be closer to the control sense (without, necessarily, vertical elevation). One striking fact was that the context played an important role when the idea of control was at stake. When the prototypical control sense occurred, the context involved positions, functions, control or power explicitly expressed – and the LM was not mentioned in some cases, being easily grasped from the context.

Similarly, when the there was some degree or nuance of spatiality in the use of *take over*, it was mostly within a context of war or political conflicts. In such case, the idea of 'occupation' appeared to be strongly connected to the control sense. Excerpts (11) to (16) below show spatial meanings of *take over* which had some degree of control involved – these examples, randomly selected, among others, are illustrated in table 2, Appendix B.

(11) *the exiled Tutsi overran the country and by July 18 had **taken over** the capital and declared victory.*

(12) *from Saudi Arabia and the other emirate countries, if they are not also **taken over** by Saddam Hussein. It would pose an additional threat of instability in Iran*

(13) *army units and separatist fighters in one of the regions, Abkhazia, of **taking over** 13 villages and the Inguri hydropower plant, shifting the border of the Black sea*

(14) *soldiers of the Republican Guard dug new trenches and fortified old ones. Some **took over** houses close to the city's southern approaches.*

(15) *in the new Iraq. Following orders from their religious leaders, they have **taken over** neighborhoods in cities across the country, set up armed militias, organized public services*

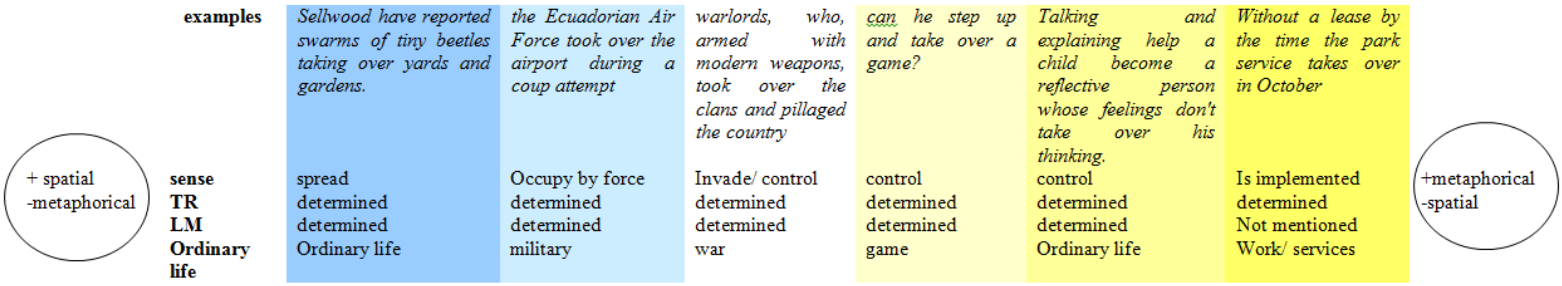
(16) *In February 2009, Huthi supporters attempted to **take over** various government installations in the district after accusing the government of supporting the Walid Amr*

As shown in the examples above, not only do the suggested senses encompass a spatial idea of occupation, but they are also related to a certain level of control. In sentence (11), for example, *the exiled Tutsi* (TR) *overran the country* (contextual information previously mentioned) and had taken over *the capital* (LM) *and declared victory*. The contextual information about the TR overrunning the country and declaring victory is quite relevant. It

leaves room for grasping the idea of invasion in the country and, what is more, evokes the sense of the victor being at higher position in relation to the defeated opponent.

Despite the fact that the literal physical elevation of the TR in relation to the LM might not be present in the scene, the context may provide information related to such spatial configuration. Moreover, such occupation, invasion of the area may also involve control, as the senses of city being invaded, occupied and, therefore, controlled by *the exiled Tutsi* might not be dissociated in the context. In a similar fashion, all the other sentences provided encompass a certain degree of control in light of a place physically occupied by force – what may be evoked by the spatial configuration entailed by the verb *take*, as well. In its earliest attested sense, the verb includes the idea of "laying hold" of and "seizing". Thus, in such context involving war and political tension, the metaphorical sense of control held by *take over*, with strong influence of *over*, also encompasses degrees of spatiality with potential contribution of both the particle (especially when vertical elevation of the TR in relation to the LM is involved) and the verb (by means of the idea of force encompassed by the primary sense of *take*).

Therefore, it was observed that the non-spatial control sense held by *take over* is comprised of different degrees of a spatial nuance. Figure 5.1 below illustrates such variation in degrees of spatiality and presence of the TR and the LM.




| | | | | | | |
|---|---|---|---|---|---|---|
| **examples** | *Sellwood have reported swarms of tiny beetles taking over yards and gardens.* | *the Ecuadorian Air Force took over the airport during a coup attempt* | *warlords, who, armed with modern weapons, took over the clans and pillaged the country* | *can he step up and take over a game?* | *Talking and explaining help a child become a reflective person whose feelings don't take over his thinking.* | *Without a lease by the time the park service takes over in October* |
| **sense** | spread | Occupy by force | Invade/ control | control | control | Is implemented |
| **TR** | determined | determined | determined | determined | determined | determined |
| **LM** | determined | determined | determined | determined | determined | Not mentioned |
| **Ordinary life** | Ordinary life | military | war | game | Ordinary life | Work/ services |

FIGURE 5.1 - Progression in meanings of *take over* 1
Source: ROSSINI (2017, this study)

Figure 5.1 summarises the progression in the nuances of the meanings of *take over* as well as their main senses and presence of TRs and LMs. As it is illustrated, there seems to be a progression in the senses of *take over*, from a more spatial nuance to a completely non-spatial nuance in the occurrence of the metaphorical sense.

With regard to the presence of spatial nuances in the metaphorical sense of control held by *take over*, excerpts (17) and (18) below illustrate contexts in which such sense walks

hand in hand with spatial elements in a context, even when the sentence is entirely metaphorical (in the case of excerpt 18).

> (17) *(...) the captain. But then the pirates came on board. " We're* ***taking over*** *this here ship, matey! " growled the head pirate, an ugly man (...).*
> (18) *(...) Some people took advantage of Essian. He* ***took over*** *a ship that was already sinking. It isn't easy for one guy to (...)*

Both excerpts show the correlation between the multi-word verb *take over* and the idea of assuming control or power. What makes the examples above such interesting cases to be discussed is exactly how *take over*, in an apparently less metaphorical context (17) in which pirates physically invaded and controlled a ship (thus some degree of spatiality may be involved in the context), could have the same meaning in an entirely metaphorical context, also involving ships (18). In the latter excerpt, a company or a situation that was in bad condition, doomed to failure, was conceptualised, via conceptual metaphor (such as COMPANIES ARE SHIPS) as a "sinking ship". These examples leave room for suggesting that, despite contextual aspects that may influence in presence or lack of spatial retention in the non-spatial sense of *take over*, the control sense is the sense pervading the uses of the multi-word verb.

Such feature sheds light on the question previously raised regarding the connection between the retention of spatial sense in the non-spatial senses of *take over*. It appears that, during the process in which the metaphorical sense extends from a spatial sense (in the case of the particle *over*, but also in the meaning of *take over* as a whole), aspects of spatiality are gradually "lost" according to the context.

Furthermore, such spatiality may be retained by the particle, as proposed by Jamrozik and Gentner's (2011) study – in the case of *over*, mainly when the primary spatial configuration of the TR being higher than the LM is at stake. Despite the fact that further studies may be necessary, the scholars' study suggests that aspects of spatial meanings might be retained by prepositions. Such assumption corroborates the retention of spatial aspect in the control sense of *take over* claimed in the present work. The scholars claim that

> Prepositions such as in and on convey not only spatial relationships between objects, but also abstract relationships, such as 'Mary is in love' and 'Tim's on a roll'. Although such uses are thought to be purely idiomatic, we hypothesized that these

> abstract, non-spatial relationships might preserve one specific aspect of prepositions' spatial meaning: the degree to which the figure or the ground controls the figure-ground relationship. (JAMROZIK & GENTNER, 2011, p. 1589)

Such assumption stands as enlightenment for further studies on the issue. However, the lexical verb *take* may also play a role in such spatial retention, once its primary sense of (physically) "grabbing", "holding", when control or occupation of an area physically occur by force. Regardless of the nature of the spatial nuance in *take over* it is, unarguably, a sense that, alongside the metaphorical use of *over*/ *take over*, stems from the same spatial proto-scene. In section 5.2, the processes underlying meaning formation in those cases posed by the empirical data obtained as well as the theoretical approaches advocated by Lakoff (1987) and Tyler & Evans (2003) are discussed.

## 5.2. Processes underlying the formation of the senses of *take over*

It goes without saying that meaning and use may be due to a number of reasons, from contextual factors, including bodily experience and semantic memory, to schematic representations the item at stake might have. In the case of *take over*, object of study of the present research, two general senses were found: a more recurrent non-spatial metaphorical use, encompassing a control sense, in contrast to a less recurrent non-spatial use with degrees of spatiality retained. Surprisingly, this sense entails different degrees of connection with the prototypical spatial sense as well as with the idea of control and influence. In other words, some control-related uses also seemed to have more to do with a spatial sense of 'occupation', 'being spread' and the TR, always clearly stated (not inferred), would be higher than the LM – although in some cases one could not assume it. Furthermore, other uses of *take over* had the idea of control or influence clearly associated to it, but still with some degree of spatiality remaining – and the context played an important role in such feature, as the sentences found with a background involving conflicts, wars, political issues, the idea of occupation by force also conveyed a clear idea of control. In order to explain how such meanings may be formed and related to each other, the concepts of image schemas and conceptual metaphor are addressed in section 5.2.1 and the concepts of implicature and reanalysis are discussed in section 5.2.2.

5.2.1. The role of image schemas and conceptual metaphor in the senses observed

As stated in the methodological procedures in Chapter 4, the image schemas alongside the theory of conceptual metaphor developed by Lakoff (1987) stand as an interesting theoretical framework for the development of the analysis of the present study. A starting point in the literature, the idealised Cognitive models (ICMs) and schemas proposed by Lakoff (and discussed in Chapter 3) provide an overview of the spatial configurations of TRs and LMs in the case of *over*. Among all the five schemas/ senses provided, the *Above* schema seems to walk hand in hand with the non-spatial control sense of *over*, as this schema illustrates the TR being higher than the LM. Figure 5.2 illustrates the *Above* schema.

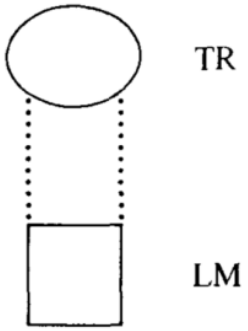



FIGURE 5.2 - *Above* schema 1
Source: LAKOFF (1987)

In fact, the schema above represents the schematic conceptualisation of spatial uses of *over*. In figure 5.2 the TR is higher than a vertical LM, without contact with it (and, if not static, at least it is not following a path). Such schema in particular may enrich an explanation of the relationship of the TR and the LM in the uses of *take over* observed as well as of the necessary mechanisms to allow the occurrence of a metaphorical extension of *over*, therefore of *take over*, stemming from a prototypical spatial sense.

As it could be noted in this Chapter, the empirical data obtained demonstrated that the control sense of *over* pervades and even influences the senses of *take over* (also entailing a sense of control). The *Above* Schema stands as the most suitable one to explain the metaphorical extensions of *over* from a spatial scene to a metaphorical sense, by means of conceptual metaphor(s), as this schema comprises vertical elevation of the TR in relation to the LM and, in turn, the control sense of *over* is conceptualised in terms of vertical elevation.

As the non-spatial sense of *take over* (without spatial retention) was noticeably prevalent and a core issue in this study is the influence of the metaphorical extensions of *over*

in the multi-word verb polysemy, the metaphorical use of *over* in *take over*, with the control sense, will be first addressed. The excerpts below, with the TRs in bold and the LMs underlined, illustrate the metaphorical relationship between these participants.

(19) ***Undersheriff James Dougan****, 46, takes over today for retiring Sheriff Philip Heffron. He will finish 2 years of 4-year term*

(20) ***We****'re expanding our operations. Taking over all of the drug business on the West Coast.*

(21) ***The IRA*** *would be able to take over the various political activities of the WNIA.*

(22) *(...) the way the Reagan administration's tilt toward Saddam Hussein increased after* ***George Bush*** *took over the White House in 1989.*

(23) *Once the habitats were established and self-sustaining,* ***they*** *took over control.*

All the excerpts above involve non-spatial relationships between the TR and the LM. In excerpt (19), for instance, the TR (***James Dougan***), is assuming a position, probably in a company or institution (inferred LM), replacing a colleague who retired. In this context, the idea of power or control is encompassed, rather than a physical configuration of the TR being higher than the LM. Excerpts (20), (21) and (22), in the same vein, present TRs influencing, controlling or assuming responsibilities in relation to a LM (mentioned in those cases). In turn, sentence (23) is even more explicit or emphatic with regard to the idea of assuming control, as the TR (***they***) held, reached, assumed, influenced the LM (*control*).

In light of the fact that the above uses of *take over* are comprised of metaphorical extensions of the physical sense/ configuration encompassing the *Above* sense, the idea of conceptual metaphors is likely to be relevant to the explanation of such process. Indeed, as widely claimed in the literature, including recent works of Tyler & Evans (2003) – which contest Lakoff's metaphorical approach to language – human bodily experience plays an important role in the way the world around us is conceptualised. Then, it is beyond dispute

that the idea of association between vertical elevation and power, control or influence (as addressed in Chapter 3 and in the following section).

Therefore, conceptual metaphors may effectively bridge the gap between spatial and non-spatial senses. For instance, it seems fairly reasonable to assume that the idea of 'vertical elevation is power', can be a conceptual metaphor underlying human association of power to vertical elevation.

In their turn, some senses of *take over* in the data analysed seemed to encompass some kind of spatial configuration, with potential contact or physical presence of physical TRs and LMs – and potentially triggered by a spatial nature of the lexical verb *take*, which entails the idea of force in some uses. However, regardless of such spatial nature of *take over*, to a greater or lesser degree, the idea of control or influence pervades the senses of the multi-word verb observed. The excerpts below illustrate such configuration of TRs (in bold) and LMs (underlined) uses of *take over* and the meanings emerging from it with degrees of spatiality.

> (24) *[I] had a weathered face when I was a kid and now* ***the wrinkles*** *had taken over, his blue eyes just peeking out from behind the lines in his face.*
>
> (25) *A little over a month ago, the Ecuadorian* ***Air Force*** *took over the airport during a coup attempt to oust President Rafael Correa.*
>
> (26) *He landed among upthrusts of stabbing weed and* ***the cloud-like brambles*** *that had taken over this ancient mansion.*
>
> (27) *Marine Corps ammunition boxes out to 8 Avenue de Brimont, Chatou.* ***We*** *took over half of the second floor -- the governess.*

Apart from sentence (24), in which the TR (***the wrinkles***) did not control the TR (*face* – mentioned previously), but was 'spread' over it, influencing it, sentences (25), (26) and (27) encompass the idea of physical occupation – which, if not triggered by *over* (associated to the non-spatial control sense here), is boosted by the lexical verb *take* (which may be related to 'holding', 'grabbing' or even 'occupying', in this context). While in (25) the TR was spread over the LM, in (sentences (26) and (27), the occupation occurred by force (invasion) – another likely influence of the lexical verb *take*.

Once there seems to be some contact between TRs and LMs in those sentences, and the idea of movement towards the LM (to invade, for example) might also be entailed, the *Above and across* schema (LAKOFF, 1987), addressed in Chapter 3, could be an interesting schematic representation for such uses of *take over*.

### 5.2.2. The role of implicature and reanalysis in the samples analysed

While calling into question the theory of conceptual metaphor as well as some aspects of the image schemas proposed by Lakoff (1987), not only do Tyler & Evans (2003) propose a semantic network for the particle *over*, but they also explain the process underlying the formation of distinct meanings. With regard to the control sense of the particle *over*, which applies to the use of *take over* in the present study, the authors point out that, out of a spatial proto-scene, with the vertical elevation of the TR in relation to the LM, there is the Up Cluster, which is comprised of four distinct senses and, at first, privileges a configuration of TR and LM similar to the one constituting the proto-scene. Figure 5.3 illustrates the scene encompassed by the Up Cluster.

FIGURE 5.3 - Up Cluster 1
Source: TYLER & EVANS (2003)

However, the sense that is of great interest to this study, the control sense, does not present such physical scene. Thus, in order to tackle this dilemma, the concepts of implicature and reanalysis are explored by the scholars.

Claiming that "an upward orientation is meaningful in human experience", adding that "an element in a vertically elevated position is experienced as being positive or superior" (p. 97), Tyler & Evans (2003) also draw attention to the fact that, indeed, "there is nothing in the proto-scene of *over* (…) which entails this construal" (p. 97). Hence, a mechanism is needed for bridging the gap between the prototypical spatial sense of *over*, usually associated with

being higher or *above*, and the non-spatial sense of the particle such as in the following sentence provided by the authors: *She has a strange power over me*.

The scholars suggest that such meaning of *over* "could not be derived from context" (p. 101), once it does not encompass vertical elevation of the TR, and it would be formed from "an independently motivated experiential correlation between control and vertical elevation" (p. 101) by means of an implicature. Additionally, the sufficiency of the conceptual metaphor theory (LAKOFF, 1987) in this type of analysis, is questioned, as:

> Our claim is that 'control' is a conventionalized meaning component associated with *over*, and hence, while this sense may be associated with other concepts/domains within the conceptual system, this sense is not motivated by virtue of a fixed knowledge structure inhering in long-term memory. (TYLER & EVANS, 2003, p. 101)

As demonstrated in the quotation above, to the scholars, human experience would stand out as motivation for the implicature and consequent reanalysis of the physical experience of being higher than someone or something as an idea of control. In other words, experience, semantic memory, and even encyclopaedic meaning may be concerned when it comes to conceptualising a non-spatial sense by means of a spatial one from human experience. For instance, "when one person is in physical control of another person, control has been experienced as the controller being physically higher". Moreover, "in physical combat the victor or controller is often the one who finishes standing, in the up position; the loser finishes on the ground, physically lower than the controller" – as conceptualised in the examples of section 5.1.4, in which it is illustrated that in contexts of war or conflicts, the contextual idea of combat led the spatial meaning of *take over* to be comprised by a sense of control, even though the TR was not necessarily higher than the LM, such as in the sentence *these warlords, who, armed with modern weapons,* ***took over*** *the clans and pillaged the country* (COCA, 2016). Figure 5.4 depicts the scene attributed to the control sense.

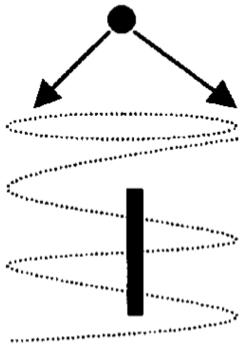


FIGURE 5.4 - Control Sense 1
Source: TYLER & EVANS (2003)

Unarguably, Tyler & Evans's (2003) approach to the motivation of the uses and meanings of *over* stands as a quite relevant tool for the present study. The scholars' work provides valuable insight and explanation to the senses of *take over* related to power and control. Furthermore, their semantic network and criteria for identifying a distinct sense of the particle at stake, not to mention the concept of a proto-scene, provides an improved visualisation of the connection between metaphorical non-spatial and spatial/ physical senses.

However, in the present research, despite the authors' "critique of metaphor approaches" – in their own words (TYLER & EVANS, 2003, p.101), both theories are of great value to the analysis attempted. What is more, taking into account the inherent nature of metaphor in human cognition and communication, widely discussed in the literature and already addressed in Chapter 1, one might wonder about the likelihood of dissociating metaphor from conceptualisation processes of (complex) human experience.

As discussed in the previous section, Lakoff's (1987) idea of conceptual metaphors is of paramount importance to our analysis as it provides valuable insight on the process underlying human conceptualisation of control by means of vertical elevation, later addressed by Tyler & Evans (2003). In fact, to suit the purposes of the present study, which are explaining the processes underlying the impact of TR and LM configurations on the polysemy of *take over*, either approaches are valuable, but for different stages of the process analysed: first, for explaining what motivates the non-spatial use of the verb (LAKOFF, 1987), then, to explain the spatial configurations and relationship between the novel meaning(s) and the proto-scene (TYLER & EVANS, 2003).

5.3. Proposed network for *take over*

Indeed, taking into account the semantic network proposed by Tyler & Evans (2003), the non-spatial control sense of *over* stems from the Up Cluster, which encompasses four non-spatial sentences. This cluster, in turn, is originated from the proto-scene. The occurrences of the control sense held by *take over* in the data analysed illustrate the influence of *over* in the non-composite meaning of the multi-word verb, as already mentioned in this study. With regard to the control sense of the particle, the scholars argue that this is a sense different from the spatial proto-scene for *over*, due to the fact that an implicature and reanalysis based on human experience and encyclopaedic knowledge leave room for conceptualising power, control as vertical elevation.

However, a question that apparently remains unanswered has to do with the 'position' assumed by the spatial nuance in the control sense of *take over* in the semantic network of this verb. One might question whether the spatial nuance in the sense of *take over* would encompass a distinct sense of this multi-word verb. Figure 5.5 below illustrates a suggested network for *take over*, based on the senses observed in the sample analysed. The starting point in the network was the potential primary sense for the verb based on the earliest attested meanings of its components.

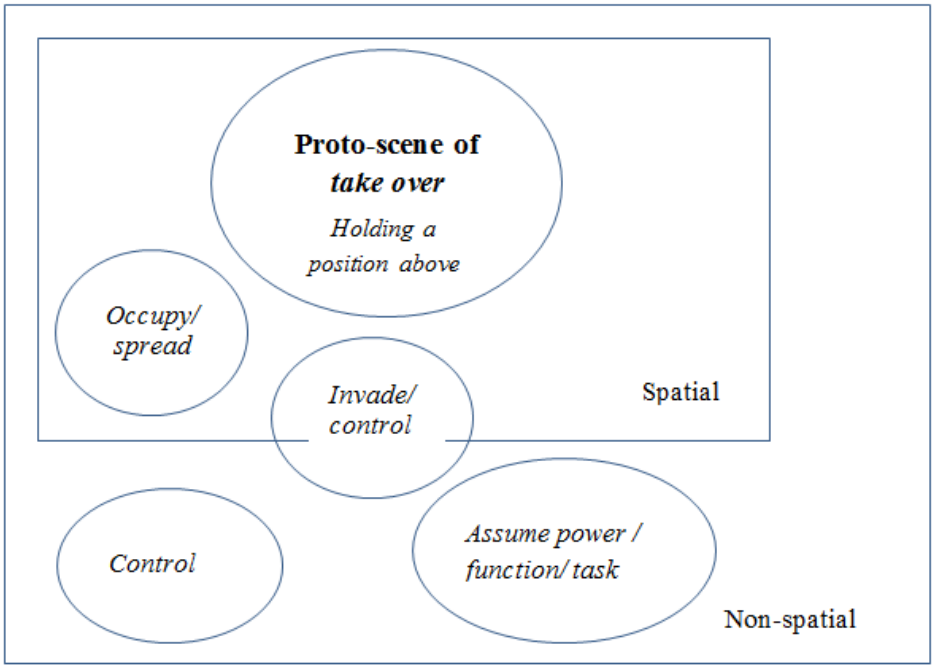



FIGURE 5.5 - Identified meanings of *take over* 1
Source: ROSSINI (2017, this study)

As shown by figure 5.5 above, the ideas of holding or assuming control, power or being within some sphere of influence pervade the use of take over observed in the concordance lines analysed. However, similarly to what occurs to the particle *over*, whose non-spatial control sense stems from a spatial primary sense, there seems to be a non-spatial consolidated use of *take over* which still seems to retain different degrees of spatial aspects according to some contexts. In the uses observed, when the contextual elements of war, conflicts or spatial occupation were at stake, more room was left for the arousal of the spatial aspect in the multi-word sense.

However, one might question whether the spatial nuances and the non-spatial control sense are distinct or not and the methodology provided by Tyler & Evans (2003) to suit such purpose would be quite valuable. The scholars suggested that

> a sense can only be considered to be distinct if (1) it adds additional meaning not already available from other senses contained in the network, and (2) some instances of the meaning component in question are context independent. (TYLER & EVANS, 2003, p. 69)

Indeed, as discussed previously, regardless of the mechanisms that lead the spatial proto-scene of *over* to its control sense, it is beyond dispute that the non-spatial metaphorical sense of the particle derives from such spatial scene. In the network provided by the scholars, this sense is a novel one in relation to the proto-scene, as they claim that in this sentence "She has a strange power over me", "clearly this sentence does not mean that the TR, *she*, is higher than but within reach of *me*, the LM". They add that "this meaning could not be derived from context, and is therefore suggestive, given our methodology, that it constitutes a distinct Control Sense instantiated in semantic memory" (p. 101). However, could one assume that the spatial sense (with slight variations over the spectrum found) is also a distinct sense in the case of *take over*?

Under the light of the methodology Tyler & Evans (2003) used for determining distinct senses for the particle *over*, we suggest that, in the same fashion, the multi-word verb *take over*, with semantic contribution of both the lexical verb, *take*, and its particle, *over*, presents the non-spatial sense of holding, grabbing or assuming power. The spatial ideas encompassed in some uses would not constitute distinct senses. Rather, they would be the result of a process in which a non-spatial metaphorical sense stems from a spatial scene. In

other words, the process of metaphorisation underlying both verb and particle in the formation of the non-spatial sense of *take over* might have a process in which spatial aspects are gradually lost – as depicted in figures 5.1 and 5.5.

## 5.4. Potential implications for language teaching: some further implications of this study

Despite the fact that this research does not rely on applied linguistics, it also suggests some activities for raising students' awareness of the roles played by both verb and particle in the control-related sense of *take over*, under the light of Functional-Cognitive Linguistics. As stated previously, in the present study, approaches to multi-word verbs and their apprehension might be a daunting task not only for students of English as a Foreign Language (EFL), but also for their teachers. Scholars such as Rudzka-Ostyn (2003), Kovács (2007) and Tyler & Evans (2005), have shed light on such issue. According to the latter:

> Any number of very real reasons exist as to why L2 learning presents tremendous challenges. However, instructed L2 learning has been further complicated by the fact that important elements of systematicity that exist in language have not been appropriately captured by the pedagogical grammars which underlie modern foreign language teaching textbooks and materials. (TYLER & EVANS, 2005, p. 259)

Indeed, lack of an awareness of how satellite-framed languages such as English are structured may contribute to such challenge. In other words, addressing the properties held by multi-word verbs, for instance, investigating the relationship between verb and particle in the non-composite meaning of the multi-word verb could play an important role in the teaching – learning process of such composite verbs. Rudzka-Ostyn (2003) enlightens scholars and teachers with regard to the importance of raising learners' awareness of the roles of both lexical verb and particle as well as of conceptual metaphor in the meanings of phrasal verbs.

Furthermore, as added by Tyler & Evans (2005), English prepositions are addressed in pedagogical material in "piece-meal fashion"; "when students (and their teachers) encounter varying uses of these forms, the systematic relations between multiple uses remain unexplained" (p. 259). Such fact, which may walk hand in hand with traditional accounts to language without focus on the contextual and experiential motivation, contrasts to recent cognitive approaches to grammar. As pointed out by Kovács (2007), Cognitive Linguistics, in

turn, takes into account the role played by motivation of language use, due to cognitive processes. According to the scholar, "one of the most important assumptions shared by all cognitive scholars is that meaning is so central to language that it must be a primary focus of study" (p. 144). Therefore, studies and material leaving room for reflection on language use as a result of motivation seem to be an interesting alternative to tackle such challenge in the long run.

In light of the issues raised above, as previously mentioned, despite not being a study relying on applied linguistics, the present research also provides some suggested exercises for raising students' awareness of the roles of verb and particle in the control-related sense of *take over*, from a Functional-Cognitive problems in a similar fashion to the studies and activities proposed by Barbosa (2015) and Barbosa (2016). Whereas the first scholar proposes, in her Master's dissertation, activities for raising students' awareness of the German particle *über*, the second scholar proposes activities regarding the particle *out* in *come out* – under the light of image schemas and conceptual metaphors motivating the metaphorical senses of such multi-word verb. Although plenty of room is left for future improvement, the sample lesson is based on examples randomly selected from the Corpus of Contemporary American English – COCA. Our attempt was to provide a contribution to pedagogical approaches to multi-word verbs in EFL teaching. The activity below is also provided in Appendix C, with its answer key.

### 5.4.1. Sample lesson on uses of *take over* from a Functional-Cognitive perspective.

Note: It is desirable that the teacher / instructor addresses the concepts of TR and LM. If they do not address the specific terminology, they may simply point out those elements and their spatial configuration when spatial scenes are involved.

**Step 1:** Raising the students' awareness of spatial and non-spatial uses of *over* (in general).

Show the students the following excerpts with uses of *over* (obtained from COCA). They should note whether such uses are abstract or not.

A. If I went somewhere else, I'd have to spend years learning the language. " Like many of the refugees I meet, he is educated: he was studying life sciences in Eritrea. He has been in the camp for a week and has already tried five times to **jump over** the fence; he shows me his bandaged hand as proof. He tells

me in detail about how he tries to get over fences, " crawling like a tiger " to avoid the attention of guards.

B. Where were they, to not come up, do an interception and try to figure out what was going on? This is absolutely extraordinary to have an airliner **fly over** that area without the Malaysian air force trying to understand what it was.

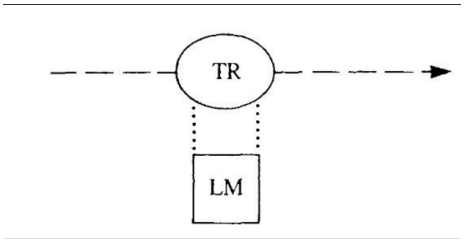
C. There was blood everywhere. It was very hard to determine what were gunshot wounds at that point. Once I stepped into the bathroom and looked back towards the shower door, you can plainly see the bullet hole through-- through the glass and through the towel that was **hanging over** the door.

D. As tour managers, students are in charge of all aspects of the band's travels. They have control **over** food and lodging, travel arrangements (e.g., car, bus, and/or train), hiring, securing venues, ticket pricing, and so on.

**Step 2:** Introducing image schemas

Show the students the schemas for *over* (Excess, for sentence A, *Above-across*, for sentence B, and *Above* for sentence C). Explain that these schemas are associated to those uses of *over* in the examples above.

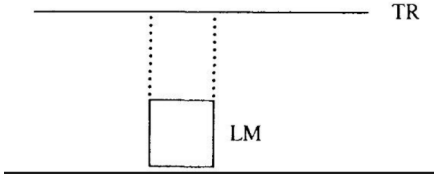
1. The *Above-across* Sense




The plane flew over. Schema 2

Source: LAKOFF, 1987, p. 419

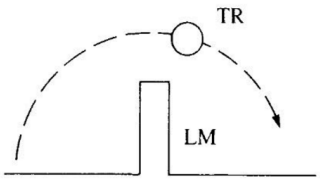
2. The *Above* Sense




The power line stretches over the yard. Schema 2

Source: LAKOFF, 1987, p. 426

3. The Excess Schema




The dog jumped over the fence.

Source: LAKOFF, 1987, p. 434

Call the students' attention to the spatial relationship between the elements, i.e., TR and LM, in the image schemas.

**Step 3:** Identifying the TR and the LM in uses of *over* in *take over*

Show the students the following excerpts from COCA with uses of *take over*. Ask them to identify the TR and the LM. Then, discuss whether their relationship is spatial or not.

A. And so, because of my husband's war with his father and their insane obsession with a mythical monster, we'd crossed the Atlantic at the very same time a real madman, a real monster, was attempting to **take over** the world for his own reasons of ego and pride.

B. Over the past century, he told me, the economy has moved from hardware to software, from atoms to bits, and people have spent more time at work in front of screens. But as computers **take over** more tasks previously considered the province of humans, the pendulum will swing back from bits to atoms, at least when it comes to how people spend their days.

C. In the sample garden plan, you can plant fast-growing radishes, lettuce and green onions underneath the tomatoes and peppers and harvest them four to five weeks before the tomato and pepper plants **take over** the space. This is getting double duty out of your beds.7. Utilize succession planting, which consists of planting a new crop as soon as you take out an early one.

D. He wrote a blog called the Claremont Conservative, where he pilloried campus figures, getting himself named " Most likely to **take over** the world " by the student newspaper.

**Step 4:** Raising awareness of the force dynamics encompassed by *take*

Explain that the verb *take* encompasses an idea of force in its ordinary use. Moreover, call the students' attention to the fact that both verb and particle may contribute to the multi-word verb meanings. Show the following examples to illustrate the ideas of "grabbing", "laying hold of" entailed by the lexical verb. Ask the students to note whether the uses of take are more spatial or more metaphorical.

A. " So can you read this? " he demanded. This time she didn't notice how strange he sounded because she was so surprised. He knew Hebrew, or at least she thought he did. He had a lot of Hebrew books. But she **took the paper** and started reading aloud.
B. During reciprocal peer tutoring, students form dyads and both students **take** turns acting as the tutor and the tutee
C. At this time introduce the characters and ask the student if he or she wants to **take** the role of the teacher and read the scenario out loud in order to help the teacher understand their thoughts and opinions regarding the situation in the pictures.
D. He said he was about due to go back to camp and that he wanted to take Cammie with him, but he needed some money, so he said that he took this gun from his home, and I asked him what kind and he said it was a Webley, a.45 Webley. He said that he **took the gun** and he stuck it in his pants, in his belt, under his jacket, and he said he went uptown looking for a place to rob.

**Step 5:** Taking a closer look at the non-spatial senses of *take over*

Considering that both *take* and *over* may have spatial senses alongside non-spatial senses and that both lexical verb and particle contribute to the non-composite meanings of *take over* (the teacher might consider it relevant to emphasise this to the students), the students are asked to identify the potential meanings of *take over* in the following contexts.

Furthermore, they may identify the TR, the LM and if the senses are spatial or metaphorical – in part 1 of the activity. In part 2, They may also identify the metaphor underlying the non-spatial uses of the multi-word verb (A-D), choosing the best option from a-c (Prior to this part, briefly explain to the students that the non-spatial metaphorical senses of over/ take over are motivated by metaphors. The teacher might find it relevant to provide examples of conceptual metaphors, such as HAPPY IS UP, CONTROL IS UP, LIFE AS A JOURNEY, BODIES ARE CONTAINERS).

Part 1:

A. This challenge seems hard enough for those within the field, and it's all the harder for those who have no programming experience. I read part of one classical-music whodunit (a slender genre) about a similarly radical conductor who **takes over** an orchestra and electrifies audiences with exciting programs - the author's idea of an exciting program was Schoenberg and Berg.

B. The fast-food chain has begun testing a simplified, less expensive version of Create Your Taste, a program that lets customers select from a menu of burger toppings. --Stephanie Strom Bristol-Myers Squibb's New Chief Giovanni Caforio is expected to **take over** on Tuesday as chief executive of the drug manufacturer Bristol-Myers Squibb at the company's annual shareholders' meeting.

C. He served as President George W. Bush's personal intelligence briefer in the first months of his presidency -- in those days, he could often be spotted at the Starbucks in Waco, Tex., catching up on his reading -- and was with him in the schoolhouse in Florida on the morning of Sept. 11, 2001, when the Bush presidency changed in an instant. Mr. Morell twice **took over** as acting C.I.A. director, first when Leon E. Panetta was appointed secretary of defense and then when retired Gen.

D. Johnson's appointment returned Perry to his previous status as assistant DA in the office. In one of her first official acts on the job, however, Johnson fired Perry, according to court records, and **took over** the Small case herself. Johnson declined to be interviewed by AJC/Channel 2 Action News reporters for this story.

Part 2:

The metaphor that seems to apply to contexts A – D above is:

a. BODIES ARE CONTAINERS
b. CONTROL IS UP
c. LIFE IS A JOURNEY
d. THEORIES ARE BUILDINGS

The sample lesson above was aimed to be a starting point in the process of raising students' awareness of the contribution of multi-word verb components to its non-composite meaning. Furthermore, it was possible to note that cognitive concepts such as image schemas, TR and LM and conceptual metaphor may be of great value to teachers' endeavour to address multi-word verbs from a Functional-Cognitive perspective. However, such activity may be adapted or even improved in order to suit different teachers' needs.

Under the light of the brief analysis carried out by the present study (considered 'brief', as plenty of room is left in the literature for further studies on the issue) alongside the suggested sample lesson above, we also aimed at echoing the Functional-Cognitive studies

with special focus on language use as motivated by experience and cognitive processes. Through observation of recurrent patterns emerging from language in meaningful contexts, one may start to grasp language and grammar as a continuum, highly motivated by experience.

## 5.5. Summary

After collecting and analysing qualitatively the data collected from the Corpus of Contemporary American English (COCA) under the light of the literature on Functional-Cognitive Linguistics, some quite interesting results were obtained.

Out of 1,412 concordance lines randomly selected (by means of the R software) from 14,128 lines obtained from COCA, the most recurrent use of *take over* had to do with an "entirely" non-spatial control sense – occurring in various contexts in which duties or power were assumed and influence exerted. The control sense of the particle *over* appeared to play a very important role in the multi-word verb sense, as the particle itself also encompasses a non-spatial control sense. Similarly, the lexical verb *take* also contributed to the non-composite meaning of *take over*. One may relate the verb primary sense of 'holding', 'seizing' to the idea of 'assuming', 'holding', 'seizing' power, control or influence held by *take over*.

Furthermore, the spatial (or non-spatial/ metaphorical) configuration of TRs and LMs play an important role in meaning formation; that is, the relationship between TRs and LMs influences meaning and is vital for an explanation of how such metaphorical meaning is formed – be it via the theory of conceptual metaphor (LAKOFF, 1987) or via implicature and reanalysis (TYLER & EVANS, 2003). LMs, in metaphorical extensions of *over*, therefore *take over*, were omitted in some cases, but could be recovered in the context or inferred; the resulting meaning or TR – LM configuration were not affected.

Although considerably less recurrent, the uses of *take over* that had some degree of spatiality was strongly connected to the ideas of spreading/ occupying; occupying by force, invading (therefore, controlling) – apart from the first idea of spreading, the senses of occupation by force and invasion pervaded sentences with specific contexts of war, conflicts, or army-related issues. Not only did the particle *over* seem to retain spatiality, as the relationship between the TR and the LM may retain some spatial aspect, but the verb take also

contributed to such spatial nuance in the control sense of *take* over. The contexts involving force may be associated to the spatial sense of take encompassing force and the ideas of 'holding', 'grabbing'.

In turn, the context was extremely relevant to the entire analysis and comprehension of the uses of *take over* in the data obtained. However, it spoke volumes about the relationship between spatial occupation by force and power when a context of war was at stake. The LM was explicitly mentioned when the uses of *take over* had spatial nuances. Moreover, there seemed to be a kind of gradation in the control uses of *take over* with degrees of spatiality; some uses seemed to be more attached than others to the prototypical spatial sense from the proto-scene proposed by Tyler & Evans (2003) – with vertical elevation of the TR in relation to the LM, as illustrated in figure 5.1.

Both theories developed by Lakoff (1987) and Tyler & Evans (2003) were of paramount importance to the present study. Despite their divergent perspectives with regard to image schemas in contrast to proto-scenes and, most importantly, conceptual metaphors in contrast to implicatures and reanalysis, those approaches were relevant to enlighten different stages of our analysis. On the one hand, Lakoff's theory enabled a comprehension of the process underlying the use, for instance, of the implicature proposed by Tyler & Evans (2003). These scholars, in turn, provide a useful semantic network for *over*, alongside an analysis of the spatial configurations of its senses, which played a fundamental role in the theoretical framework of our analysis.

Although there were slightly different nuances in the meanings of *take over* in the data analysed, all of them seem to stem from the same proto-scene/ prototypical spatial configuration. The various degrees of spatiality pervading the metaphorical sense of *take over* appear to be a characteristic of the process of metaphorisation of both the verb and the particle to form the multi-word verb meaning.

## 6. FINAL REMARKS

The present study attempted to contribute to studies on multi-word verbs by means of providing an analysis of the role played by both verb and particle in the non-spatial senses of *take over* under the light of Functional-Cognitive Linguistics.

This work relied on relevant studies in the literature, having as its starting point the account for *over* provided by Lakoff (1987) in his book entitled *Women, Fire and Dangerous Things*. Of equal merit is the considerably recent work of Tyler & Evans (2001, 2003). The polysemy network for *over* proposed by the scholars as well as their Principled Polysemy methodological approach to determining distinct senses for *over* were of paramount importance to suit the methodological purposes of the present study. They were used to explain the process in which the metaphorical extensions of *over* stem from a spatial prototypical sense and justify why the senses of take over observed, despite having nuances of spatiality in some cases, are not distinct.

In such introspective, qualitative analysis, a sample comprised of 1,412 concordance lines was randomly selected with the R software out of 14,128 occurrences obtained from the Corpus of Contemporary American English (COCA). First, the relationship between the TR and the LM in the lines analysed was taken into account, in order to verify potential patterns in terms of configuration, as well as spatial and non-spatial senses or scenes emerging from such relationship. The patterns observed had to do with the recurrent use of *take over* with the sense of "assuming power or control". However, in fewer occurrences, there seemed to be some degrees of spatial nuances pervading the control sense.

The main research questions that guided the analysis carried out were as follows:

1) How does the relationship between the TR and the LM contribute to the polysemy network of *take over*?

In relation to the first question, the non-spatial relationship between the TR and the LM pervades the control-related senses of *take over* observed. Despite the fact that some spatial nuances were observed in certain contexts, the configuration of the TR in relation to the LM remained the same in the occurrences analysed. Therefore, in the proposed semantic network for *take over*, there is, indeed, one sense (which is control-related), but with spatial nuances for a greater or lesser degree.

2) What is the role played by the primary senses of both verb and particle in the non-composite meanings of the multi-word verb?

Regarding the second question, in light of the literature revisited, such as Rudzka-Ostyn (2003), it goes without saying that the senses of *take over* are formed out of the interaction between its lexical verb and its particle, not being a mere sum of the meanings of its components. The primary senses of both *take* and the particle *over* stood as elements of great importance to sanctioning a potential primary sense for *take over*. Moreover, in the uses observed, it was possible to grasp some influence of such primary meanings in the senses of *take over* – even when metaphorisation may be at stake. For instance, the ideal of "holding" expressed by *take* alongside the idea of being above (extended to power or control) encompassed by *over* could be observed in the sense of "assuming control" conveyed by *take over*.

3)What may contribute to the retention of spatial aspect in metaphorical uses of *take over*?

As for the third question, in fact, the gradual spatial retention observed in the control sense of *take over* may be explained due to various factors, namely the context, the property of particles to retain spatiality as claimed by Jamrozik and Gentner's (2011), the contribution of the primary spatial sense of *take*. Although further studies might be necessary to explore such issue in depth, it was possible to note that, in the process of extension of meanings from a spatial sense to a non-spatial one, (first, regarding the particle and then regarding the multi-word verb as a whole), there seems to be a stage of gradual loss of spatial content. Although it was not possible to determine precisely when the lexical verb or the particle influenced such fact, it was observed that both constituents of the multi-word verb, in given contexts, played a role in the retention of spatial aspects in the already metaphorical non-spatial control sense of *take over*.

All of the above things considered, the present study demonstrated that, by means of empirical data, it is possible to observe the emergence of linguistic patterns of language in use. One contribution of this research to the field has to do with the light shed on the study of multi-word verbs from a Functional-Cognitive perspective, demonstrating the influence of both lexical verb and particle in the non-composite meaning of *take over*. However, plenty of room is still left for further studies on the issue. Not only could the process of spatial retention

be analysed in ore depth, but it could also be studied in relation to the phenomenon of grammaticalisation.

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## APPENDIX A – Sample identification of the TR and LM and their corresponding nature and context in the study initial stage

**Table 1:** TR and LM identification

| Context | Concordance lines | TR | LM | Nature |
|---|---|---|---|---|
| News | When Morrone came back to San Francisco and **took over** the kitchen at One Market, Zeitouni followed. | *Morrone* | *The kitchen* | Non-spatial |
| Mag | that form much loved by Latin Americans in which language **takes over** reality, a form they use constantly | *language* | *reality* | Non-spatial |
| News | There is no crown prince standing ready to **take over** the empire. | *(crown) prince* | *The empire* | Non-spatial |
| Fic | even after Our Lucy returned to San Juan to **take over** her uncle's grocery store. | *Lucy* | *Grocery store* | Non-spatial |
| Mag | Russia seemed the first place In human history where the proletariat had **taken over**. | *proletariat* | * *Russia* | Non-spatial |
| Acad | except for the Chinese people who **took over** the restaurant in my last year in the bush \ | *Chinese people* | *restaurant* | Non-spatial |
| News | Without a lease by the time the park service **takes over** in October | *Park service* | Not mentioned | Non-spatial |
| News | Soomro, the chairman of the upper house of parliament, was poised to **take over** in the interim. | *Soomro* | Not mentioned (implicit) ??? | Non-spatial |
| Mag | Talking and explaining help a child become a reflective person whose feelings don't **take over** his thinking. | *feelings* | *thinking* | Non-spatial |
| Mag | Not being able to see means your sense of touch will **take over**. | *Sense of touch* | Not mentioned (implicit) | Non-spatial |
| Mag | other ornamental plants) vying for the same space. They won't necessarily **take over** your garden, but before planting any of them, check | *Ornamental plants* | *Your garden* | Spatial |
| News | School projects **took over** their dining room. A stack of construction paper | *School projects* | *Dining room* | Spatial |

| | |
|---|---|
| | here, a cluster of crayons |

## APPENDIX B – Spatiality encompassed in the control sense of *take over*

**Table 2:** Control sense of *take over* encompassing spatiality

| EXAMPLE | TR | LM | SENSES |
|---|---|---|---|
| the exiled Tutsi overran the country and by July 18 had **taken over** the capital and declared victory. | *the exiled Tutsi* | *capital* | Occupy/ controlled |
| She closed her eyes and fought off a pained look that threatened to **take over** her face | *a pained look* | *her face* | "occupy" |
| from Saudi Arabia and the other emirate countries, if they are not also **taken over** by Saddam Hussein. It would pose an additional threat of instability in Iran | *Saddam Hussein* | *Saudi Arabia and the other emirate countries* | control/ invade/ occupy |
| army units and separatist fighters in one of the regions, Abkhazia, of **taking over** 13 villages and the Inguri hydropower plant, shifting the border of the Black sea | *army units and separatist fighters* | *13 villages and the Inguri hydropower plant* | Invade/ occupy/ control |
| soldiers of the Republican Guard dug new trenches and fortified old ones. Some **took over** houses close to the city's southern approaches. | *Some ( soldiers of the Republican Guard)* | *houses* | Invade/ occupy/ control |
| in the new Iraq. Following orders from their religious leaders, they have **taken over** neighborhoods in cities across the country, set up armed militias, organized public services | *they* | *neighborhoods* | Invade/ occupy/ control |
| In February 2009, Huthi supporters attempted to **take over** various government installations in the district after accusing the government of supporting the Walid Amr | *Huthi supporters* | *government installations* | Invade/ occupy/ control |
| have strong links with Al Qaeda, and have warned explicitly that they might **take over** a nuclear facility. Few doubt their chutzpah. | *they* | *a nuclear facility* | Invade/ occupy/ control |

| | | | | | |
|---|---|---|---|---|---|
| | stop the quarrels of these warlords, who, armed with modern weapons, **took over** the clans and pillaged the country to supply and pay their private armies. | *Who (warlords)* | *the clans* | Invade/ control | occupy/ |
| | of nearby well-tended row houses were moving to the suburbs. The dwellings were **taken over** by unsavory renters and, by the late' 80s, crack houses proliferated. | *unsavory renters* | *dwellings* | Invade/ control | occupy/ |
| | in concentration camps or were forced to flee the country, their property was **taken over** by Aryan Austrians, the great majority of whom refused to give it back after | *Aryan Austrians* | *their property* | Confiscate/ control | occupy/ |

**APPENDIX C – Proposed lesson for raising students' awareness of the control sense of take over from a Functional-Cognitive perspective with answer key**

Sample lesson on uses of *take over* from a Functional-Cognitive perspective.

Note: It is desirable that the teacher / instructor addresses the concepts of TR and LM. If they do not address the specific terminology, they may simply point out those elements and their spatial configuration when spatial scenes are involved.

**Step 1:** Raising the students' awareness of spatial and non-spatial uses of *over* (in general).

Show the students the following excerpts with uses of *over* (obtained from COCA). They should note whether such uses are abstract or not.

E. If I went somewhere else, I'd have to spend years learning the language. " Like many of the refugees I meet, he is educated: he was studying life sciences in Eritrea. He has been in the camp for a week and has already tried five times to **jump** **over** the fence; he shows me his bandaged hand as proof. He tells me in detail about how he tries to get over fences, " crawling like a tiger " to avoid the attention of guards.

F. Where were they, to not come up, do an interception and try to figure out what was going on? This is absolutely extraordinary to have an airliner **fly** **over** that area without the Malaysian air force trying to understand what it was.

G. There was blood everywhere. It was very hard to determine what were gunshot wounds at that point. Once I stepped into the bathroom and looked back towards the shower door, you can plainly see the bullet hole through-- through the glass and through the towel that was **hanging** **over** the door.

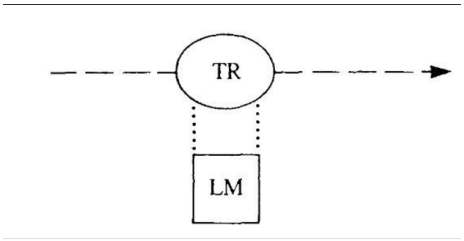
H. As tour managers, students are in charge of all aspects of the band's travels. They have control **over** food and lodging, travel arrangements (e.g., car, bus, and/or train), hiring, securing venues, ticket pricing, and so on.

**ANSWERS:** A: spatial, non-abstract; B: spatial, non-abstract; C: spatial, non-abstract; D: abstract, non-spatial

**Step 2:** Introducing image schemas

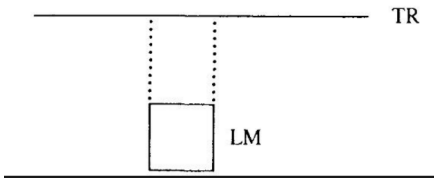
Show the students the schemas for *over* (Excess, for sentence A, *Above-across*, for sentence B, and *Above* for sentence C). Explain that these schemas are associated to those uses of *over* in the examples above.

4. The *Above-across* Sense



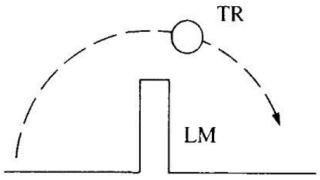

The plane flew over. Schema 3
Source: LAKOFF, 1987, p. 419

5. The *Above* Sense




The power line stretches over the yard. Schema 2
Source: LAKOFF, 1987, p. 426

6. The Excess Schema




The dog jumped over the fence.
Source: LAKOFF, 1987, p. 434

Call the students' attention to the spatial relationship between the elements, i.e., TR and LM, in the image schemas.

**Step 3:** Identifying the TR and the LM in uses of *over* in *take over*

Show the students the following excerpts from COCA with uses of *take over*. Ask them to identify the TR and the LM. Then, discuss whether their relationship is spatial or not.

E. And so, because of my husband's war with his father and their insane obsession with a mythical monster, we'd crossed the Atlantic at the very same time a real madman, a real monster, was attempting to **take over** the world for his own reasons of ego and pride.

F. Over the past century, he told me, the economy has moved from hardware to software, from atoms to bits, and people have spent more time at work in front of screens. But as computers **take over** more tasks previously considered the province of humans, the pendulum will swing back from bits to atoms, at least when it comes to how people spend their days.

G. In the sample garden plan, you can plant fast-growing radishes, lettuce and green onions underneath the tomatoes and peppers and harvest them four to five weeks before the tomato and pepper plants **take over** the space. This is getting double duty out of your beds.7. Utilize succession planting, which consists of planting a new crop as soon as you take out an early one.

H. He wrote a blog called the Claremont Conservative, where he pilloried campus figures, getting himself named " Most likely to **take over** the world " by the student newspaper.

**ANSWERS:** A: non-spatial. TR: a real madman, a real monster; LM: the world. B: non-spatial. TR: computers ; LM: more tasks. C: non-spatial (despite some degree of spatiality provided by the context). TR: the tomato and pepper plants; LM: the space. D: non-spatial. TR: he/ himself; LM: the world.

**Step 4:** Raising awareness of the force dynamics encompassed by *take*

Explain that the verb *take* encompasses an idea of force in its ordinary use. Moreover, call the students' attention to the fact that both verb and particle may contribute to the multi-word verb meanings. Show the following examples to illustrate the ideas of "grabbing", "laying hold of" entailed by the lexical verb. Ask the students to note whether the uses of take are more spatial or more metaphorical.

E. " So can you read this? " he demanded. This time she didn't notice how strange he sounded because she was so surprised. He knew Hebrew, or at least she thought he did. He had a lot of Hebrew books. But she **took the paper** and started reading aloud.

F. During reciprocal peer tutoring, students form dyads and both students **take** turns acting as the tutor and the tutee

G. At this time introduce the characters and ask the student if he or she wants to **take** the role of the teacher and read the scenario out loud in order to help the teacher understand their thoughts and opinions regarding the situation in the pictures.

H. He said he was about due to go back to camp and that he wanted to take Cammie with him, but he needed some money, so he said that he took this gun from his home, and I asked him what kind and he said it was a Webley, a.45 Webley. He said that he **took the gun** and he stuck it in his pants, in his belt, under his jacket, and he said he went uptown looking for a place to rob.

**ANSWERS:** A: spatial; B: non-spatial (metaphorical); C: non-spatial (metaphorical); D: spatial.

**Step 5:** Taking a closer look at the non-spatial senses of *take over*

Considering that both *take* and *over* may have spatial senses alongside non-spatial senses and that both lexical verb and particle contribute to the non-composite meanings of *take over* (the teacher might consider it relevant to emphasise this to the students), the students are asked to identify the potential meanings of *take over* in the following contexts.

Furthermore, they may identify the TR, the LM and if the senses are spatial or metaphorical – in part 1 of the activity. In part 2, They may also identify the metaphor underlying the non-spatial uses of the multi-word verb (A-D), choosing the best option from a-c (Prior to this

part, briefly explain to the students that the non-spatial metaphorical senses of *over*/ *take over* are motivated by metaphors. The teacher might find it relevant to provide examples

Part 1:

E. This challenge seems hard enough for those within the field, and it's all the harder for those who have no programming experience. I read part of one classical-music whodunit (a slender genre) about a similarly radical conductor who **takes over** an orchestra and electrifies audiences with exciting programs - the author's idea of an exciting program was Schoenberg and Berg.

F. The fast-food chain has begun testing a simplified, less expensive version of Create Your Taste, a program that lets customers select from a menu of burger toppings. --Stephanie Strom Bristol-Myers Squibb's New Chief Giovanni Caforio is expected to **take over** on Tuesday as chief executive of the drug manufacturer Bristol-Myers Squibb at the company's annual shareholders' meeting.

G. He served as President George W. Bush's personal intelligence briefer in the first months of his presidency -- in those days, he could often be spotted at the Starbucks in Waco, Tex., catching up on his reading -- and was with him in the schoolhouse in Florida on the morning of Sept. 11, 2001, when the Bush presidency changed in an instant. Mr. Morell twice **took over** as acting C.I.A. director, first when Leon E. Panetta was appointed secretary of defense and then when retired Gen.

H. Johnson's appointment returned Perry to his previous status as assistant DA in the office. In one of her first official acts on the job, however, Johnson fired Perry, according to court records, and **took over** the Small case herself. Johnson declined to be interviewed by AJC/Channel 2 Action News reporters for this story.

**ANSWERS:** A: assume control of/ a position, role in; TR radical conductor (who); LM: an orchestra; non-spatial TR – LM relationship.

B: assume a function, role; TR: Stephanie Strom Bristol-Myers Squibb's New Chief Giovanni Caforio; LM: (mentioned later) the drug manufacturer Bristol-Myers Squibb; non-spatial TR – LM relationship.

C: assume a function, role; TR: Mr. Morell; LM: (implicit) C.I.A.; non-spatial TR – LM relationship.

D: Assume a task; TR: Johnson; LM: the Small case; non-spatial TR – LM relationship.

Part 2:

The metaphor that seems to apply to contexts A – D above is:

e. BODIES ARE CONTAINERS
f. CONTROL IS UP
g. LIFE IS A JOURNEY
h. THEORIES ARE BUILDINGS

**ANSWER:** b