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Título de la tesis (español e inglés): Estudio contrastivo de la semántica de las preposiciones del inglés y el español: Un enfoque en lingüística cognitiva.

A contrastive study of the semantics of English and Spanish prepositions: A cognitive linguistic perspective.

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TITULO: *A contrastive study of the semantics of English and Spanish prepositions: A cognitive linguistic perspective*

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TÍTULO DE LA TESIS: Estudio contrastivo de la semántica de las preposiciones del inglés y el español: Un enfoque en lingüística cognitiva.

A contrastive study of the semantics of English and Spanish prepositions: A cognitive linguistic perspective.

DOCTORANDO/A: Javier Andrés Morras Cortés

INFORME RAZONADO DEL/DE LOS DIRECTOR/ES DE LA TESIS

(se hará mención a la evolución y desarrollo de la tesis, así como a trabajos y publicaciones derivados de la misma).

El doctorando, D. Javier Andrés Morras Cortés, ha cumplido escrupulosamente las fases de su plan de formación y de su plan de investigación, así como la memoria de su proyecto. El cumplimiento del plan de formación queda acreditado por las actividades registradas en el Documento de Actividades realizadas y validadas que se adjunta con la solicitud de admisión de la tesis doctoral. El cumplimiento del plan de investigación se plasma en la realización, siguiendo el ritmo previsto en el mismo, de las diversas fases de la investigación, que han culminado con la redacción de la tesis doctoral. A lo largo de ese proceso de investigación, el doctorando ha enviado cuatro artículos sobre aspectos parciales de la temática de la tesis doctoral, o sobre cuestiones relacionadas con ella, a revistas indexadas, de los que dos ya han sido publicados, uno ya está en prensa y otro ha sido aceptado para publicación. Asimismo, ha presentado ponencias sobre los resultados iniciales de su investigación o sobre cuestiones relacionadas, en varios seminarios y congresos nacionales e internacionales, como queda reflejado en el Documento de Actividades arriba mencionado. El doctorando ha seguido meticulosamente mis sugerencias sobre los sucesivos borradores del trabajo, en la fase de redacción de la tesis doctoral.

La tesis es un trabajo de investigación original, cuya temática fue propuesta por el propio doctorando y aceptada por quien suscribe. Estudia sistemáticamente la base semántico-conceptual de cinco preposiciones inglesas y de tres preposiciones españolas semánticamente semejantes. El modelo de análisis seguido, en el que combina el modelo cognitivista de Vyv Evans con el de Langacker y con las teorías de la metáfora y metonimia de Lakoff y otros especialistas, le permite identificar y explicar una gran variedad de significados de esas preposiciones y la conexión entre ellos, además de describir con gran precisión los contrastes entre las preposiciones inglesas y españolas y sugerir las aplicaciones de su investigación a la enseñanza. Es una tesis de gran calidad, que no pudo ser propuesta para mención internacional por falta de tiempo y de financiación para la preceptiva estancia internacional durante la fase de elaboración del trabajo. A lo largo de los tres años de formación e investigación que culminan en este trabajo, he podido comprobar la seria vocación investigadora de este doctorando, su impresionante conocimiento de la bibliografía especializada, y su gran capacidad analítica. Cabe destacar el hecho de que, habiendo realizado un máster de

investigación pre-doctoral en la Universidad de Bangor bajo la dirección del reconocido lingüista Vyv Evans, haya escogido la Universidad de Córdoba para realizar su doctorado, y a quien suscribe como su director de tesis.

Por todo ello, se autoriza la presentación de la tesis doctoral.

Córdoba, 25 de octubre de 2019

Firma del director

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To Celeste and Paz

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Table of Contents

Chapter 1: Introduction	1
1.1 Spatial semantics and closed-class items	1
1.2.1 Going further than TIME IS SPACE: temporal structure as a type of conceptual structure	8
1.1.2 Conceptual metaphor in temporal conceptualizations	10
1.3 Methodological tools and thesis structure	12
1.4 Summary	14
Chapter 2: Theoretical background	15
2.1. Space and Time in Cognitive Linguistics	15
2.1.1 Temporal structure	21
2.2 Cognitive Grammar	25
2.2.1 Trajector and Landmark	28
2.3. Lexical Concepts and Cognitive Models Theory (LCCM)	31
2.3.1 Lexical representation and meaning determination	36
2.4 Metaphor	38
2.5 Metonymy	42
2.6 Summary	46
Chapter 3: Methodology	47
3.1 The role of introspection	48
3.2 The utility of corpora	49
3.3 Presentation of the analysis	51

3.4 Further methodologies	53
3.5 Identifying figurative language	55
3.6 Summary	63
Chapter 4: <i>Between, among, amid, and entre</i>	64
4.1 Spatial lexical concepts for <i>between</i>	63
4.1.1 Non-spatial lexical concepts for <i>between</i>	70
4.1.2 [TEMPORAL DISTANCE] lexical concept for <i>between</i>	81
4.2 Spatial lexical concepts for <i>among</i>	85
4.2.1 Non-spatial lexical concepts for <i>among</i>	90
4.3 Spatial lexical concepts for <i>amid</i>	98
4.3.1 Figurative lexical concepts for <i>amid</i>	102
4.4 Spatial lexical concepts for <i>entre</i>	108
4.4.1 Figurative lexical concepts for <i>entre</i>	116
4.4.2 Temporal behavior of <i>entre</i>	127
4.5 Summary	131
Chapter 5: <i>To and a</i>	132
5.1 Spatial lexical concepts for <i>to</i>	132
5.1.1 Non-spatial lexical concepts for <i>to</i>	140
5.1.2 Complementation	147
5.1.3 Futurity	150
5.1.4 Temporal domain of <i>to</i>	152
5.2 Spatial lexical concepts for <i>a</i>	158

5.2.1 Non-spatial domains of <i>a</i>	173
5.2.2 Complementation	177
5.2.3 Temporal domain of <i>a</i>	181
5.3 Summary	186
Chapter 6: <i>For</i> and <i>para</i>	187
6.1 Spatial lexical concepts for <i>for</i>	187
6.1.1 Non-spatial lexical concepts of <i>for</i>	197
6.1.2 Temporal domain of <i>for</i>	208
6.1.3 <i>For...to</i> construction	213
6.2 Spatial lexical concepts for <i>para</i>	215
6.2.1 Non-spatial domains of <i>para</i>	222
6.2.2 Temporal behavior of <i>para</i>	228
6.3 Summary	234
Chapter 7: Discussion	235
7.1. Word meaning and spatio-conceptual structure	240
7.1.1 The functional nature behind spatial semantics	249
7.1.2 Polysemy and conceptual activation (active zone)	250
7.2 Contribution of the research	256
7.2.1 Limitations	257
7.3 Pedagogical implications	258
7.3.1 Pedagogical Applications	266
7.3.2 Classroom content presentation and assessment	268
7.3.3 Classroom activities	271

7.4 Psycholinguistic validation proposal for the English prepositions <i>between</i> , <i>among</i> , <i>amid</i> , and their Spanish equivalent <i>entre</i> .	277
7.4.1 Separation	278
7.4.2 Inclusion	280
7.4.3 Central position	280
7.4.4 Spanish <i>entre</i>	281
7.5 Summary	283
Chapter 8: Conclusions	284
8.1 Spatio-conceptual structure as schematic non-linguistic knowledge	284
8.1.1 Non-metaphorical representations for non-spatial conceptualizations	287
8.2 Temporal structure as schematic scaffolding for temporal usages	288
8.3 Insights, implications and applications of the conceptual bases	294
8.4 Suggestions for further research	295
8.5 Summary	297
<i>Appendix A</i>	298
<i>Appendix B</i>	299
<i>Appendix C</i>	300
<i>References</i>	301

Abstract:

The present investigation intends to explore the semantics of some English and Spanish prepositions. For the English language, the prepositions to be analyzed are *between*, *among*, and *amid* (chapter 4), *to* (chapter 5), and *for* (chapter 6). These English prepositions are then contrasted with their Spanish equivalents; these are *entre* (usually equivalent to *between*, *among*, and *amid* in chapter 4), *a* (usually equivalent to English *to* in chapter 5), and *para* (usually equivalent to *for* in chapter 6). This contrastive analysis, in turn, might shed light on the conceptual differences and similarities that are exhibited by these two prepositional sets. The differences and similarities will be spotted by focusing on the semantic units that populate the conceptual basis of each preposition. The term *conceptual basis* (Morras 2018; Morras and Barcelona 2019) must be understood as the semantic or meaning potential (in the sense of Allwood 2003) that words facilitate access to. The semantic units that populate the conceptual basis of each preposition are referred to here as (conceptual) *parameters* (Morras, in press). These are phenomenology-based structures, akin to image schemas (Johnson 1987), that constitute the bedrock of word meaning and figurative reasoning (Lakoff 1990).

The methodology used to pin down the parameters for each preposition is based on corpus work. Doing a manual search in the concordance section of two databases, the *British National Corpus (BNC)* for the English prepositions, and the *Spanish Web 2011 (esTenTen11, Eu + Am)* for the Spanish ones, the present research intends to keep up with the spirit of the usage-based approach to language and cognition by analyzing real instances of language use. In addition, data drawn from dictionaries (the *Cambridge (online) English Dictionary (CED)* for English, and the *Diccionario de la Lengua Española (DLE)* for Spanish) was analyzed to propose the conceptual parameters that may constitute each conceptual basis.

The cognitivist approach adopted in this research comes from important advances in the cognitive sciences (e.g., Allwood 2003; Clark 2003; Rice 1992; Slobin 2003; Talmy 2000) that point to the close link between linguistic structure and encyclopedic knowledge (Langacker 1987) or conceptual structure. In this line, the investigation reported here intends to shed some light on the schematic type of conceptual structure that is accessed via

closed-class items and its role in embodied simulations. Following Talmy (2000), words can be broadly divided into open-class, and closed-class. Open-class words, traditionally referred to as content words, offer access points (in the sense of Langacker 1987) to a type of conceptual structure that is highly rich. Hence, open-class items such as nouns, verbs, and adjectives are thought of as offering *wide access* (Talmy 2007) to conceptual structure. On the contrary, closed-class items, traditionally known as functional words, are claimed (e.g., Talmy 2007) to offer *narrower* access to conceptual structure. In sum, the differences between wide and narrow access is reflected in the conceptual richness or schematicity that words facilitate access to. It follows that the semantic units that primarily constitute the conceptual basis of an open-class item can be associated with what is known as cognitive models and frames (Barsalou 1992, 1999), whereas the semantic units that populate the conceptual basis of a closed-class item are associated with conceptual parameters. The interplay between these two types of word classes gives rise to a cognitive representation (in Talmy's 2000 parlance) where closed-class elements offer a "semantic scaffolding" for the rich conceptual material that is accessed via open-class items.

The idea formulated above goes contrary to the claims of some cognitive linguists (especially Evans 2009, 2013), who maintain a sort of strict dichotomy between open and closed-class items by claiming that closed-class items, such as prepositions, conjunctions, and "particles", do not offer access to conceptual structure but encode purely linguistic content. While I agree with the idea that there must be something that is unique about the linguistic system (see Morras, in press), closed-class items do offer access to conceptual structure. The difference lies in the type of conceptual structure that is accessed. This is precisely the reason why the present research introduces the notion of conceptual parameter: Because it captures the schematic conceptual material that constitutes the 'semantic scaffolding' of a linguistic event. This will allow us to appreciate the contribution that closed-class elements have in embodied simulations. Following Lawrence Barsalou (1999), all concepts are simulators and hence, form part of an embodied simulation. These include manners (e.g., *clumsily*), relations (e.g., *between*), properties (e.g., *blue*), among others.

The analysis presented in chapters 4, 5, and 6 provides a view of word meaning as being constituted by two important representational levels which are related to what Talmy (2007) refers to as the first condition of attending (of the first and second levels of isolation). The first level of isolation within the first condition of attending relates to the lexical representation level of words. At this level, we can appreciate the meaning potential of words that is captured by the notion of conceptual basis, as we shall see in more detail later. This conceptual basis must be stored in long-term semantic memory and represents the mental units that constitute the mental lexico-grammatical system (using Panther's 2006 term) of a person – that is, the semantics of words in complete isolation. On the other hand, there is the second level of isolation for linguistic analysis, and this is concerned with what Allwood (2003) refers to as *meaning determination*. Meaning determination has to do with the contextual realization of a word. It is only in context that words acquire their (situated) semantics: certain semantic attributes within the conceptual basis of a given word get activated or highlighted in a situated linguistic event, while others remain backgrounded.

The analysis of the prepositions selected starts with a thorough description of their spatial roots in order to propose their respective conceptual basis and appreciate how parameters get activated differently depending on the linguistic contexts that the preposition is integrated with. After that, the research presents non-spatial and temporal usages, which crucially, are motivated by the spatio-conceptual structure that comes from the conceptual basis of the preposition. An important aspect to highlight about this second part of the analysis, is that temporal and other non-spatial usages are treated in separate sections. This is because the present research assumes that the domain of time exhibits its own structure, which can be qualitatively distinguished from the properties of space, as we shall see in chapter 2. This type of conceptual structure that is inherently temporal in nature, emerges as a result of temporal reference (Evans 2013). Whenever we deal with temporal reference as in *See you at noon*, there must be (schematic) temporal structure involved. This is clearly not the case as in an utterance such as *Those countries are at war*, in which the preposition *at* establishes a (non-spatial) relation between some countries and a state of warfare, rather than a relation between an event and its temporal reference. This issue will be further developed throughout the investigation.

To sum up, the approach adopted here intends to shed light on the spatio-conceptual structuring of some English and Spanish prepositions and its role in non-spatial and temporal usages. It also offers an alternative view for language teaching, in that it sees language as flexible and structured at the same time, as opposed to the rigid view of language as dictionary-like entries in the mind, and the meaningless character of syntax. The usage-based approach to language and cognition assumes word meaning as being encyclopedic-like in character, as well as fostering a thorough description of phenomenological structures as essential if we seriously want to fully apprehend the area of spatial semantics. Some of the implications that this approach may bring to students, teachers, and researchers in language teaching are developed in chapter 7, along with possible applications of cognitive-linguistic methods in the classroom that can be extracted from the analysis presented in chapters 4, 5, and 6. Lastly, the conceptual bases are formulated in such a way that can they be psychologically validated through experimental methods. A sample (in chapter 7) of some conceptual parameters of *between*, *among*, *amid*, and *entre*, is provided to show this point.

Finally, the investigation ends with some concluding remarks, among them the importance of a thorough understanding and description of the spatial semantics of prepositions to approach a more psychologically plausible theory of language and provide adequate explanations for non-spatial and temporal usages; the idea that time exhibits its own structure and that this is reflected in temporal linguistic constructions; the pedagogical implications and applications that the present account might offer; and the psycholinguistic experimentation that could be carried out using this approach.

Keywords: conceptual basis, conceptual parameters, trajector, landmark, conceptual structure, temporal structure

Resumen:

La presente investigación pretende explorar la semántica de algunas preposiciones del inglés y el español. Las preposiciones inglesas que serán analizadas son *between*, *among*, *amid* (capítulo 4), *to* (capítulo 5), y *for* (capítulo 6). Estas preposiciones serán seguidamente contrastadas con sus equivalentes del español; estos son *entre* (equivalente usualmente a *between*, *among*, y *amid* en el capítulo 4), *a* (equivalente usualmente al inglés *to* en el capítulo 5), y *para* (equivalente usualmente a *for* en el capítulo 6). Dicho análisis contrastivo podría arrojar luz sobre las diferencias y similitudes conceptuales que son exhibidas por estos dos grupos preposicionales. Estas diferencias y similitudes emergen a través de un enfoque en las unidades semánticas que conforman la base conceptual de cada preposición. El término *base conceptual* (Morrás 2018; Morras y Barcelona 2019) debe ser entendido como el potencial semántico o de significado (en el sentido de Allwood 2003) al que las palabras ofrecen acceso. Las unidades semánticas que conforman la base conceptual de cada preposición son entendidas como parámetros conceptuales (Morrás, in press). Estos son estructuras emergentes basadas en la fenomenología, parecidos a los esquemas de imágenes (Johnson 1987), los cuales constituyen el cimiento del significado verbal y el razonamiento figurativo (Lakoff 1990).

La metodología ocupada para identificar los parámetros de cada preposición está basada en corpus. Utilizando una búsqueda manual en la sección de concordancia de dos bases de datos, el *British National Corpus (BNC)* para las preposiciones inglesas, y el *Spanish Web 2011 (esTenTen11, Eu + Am)* para las del idioma español, la presente investigación intenta mantener el espíritu del estudio del lenguaje basado en el uso a través de un análisis de ejemplos reales de uso de lenguaje. También fue analizada información proveniente de diccionarios (el *Cambridge (online) English Dictionary (CED)* para el inglés, y el *Diccionario de la Lengua Española (DLE)* para el español) de manera de sugerir los parámetros conceptuales que podrían constituir cada base conceptual.

La postura cognitivista adoptada en esta investigación proviene de importantes avances en las ciencias cognitivas (ej., Allwood 2003; Clark 2003; Rice 1992; Slobin 2003; Talmy 2000) los cuales apuntan a una estrecha relación entre la estructura lingüística y el conocimiento enciclopédico (Langacker 1987) o estructura conceptual. En este sentido, la

investigación pretende arrojar luz sobre la estructura conceptual esquemática que es facilitada a través de clase cerrada, y su rol en las simulaciones corporeizadas. Siguiendo a Talmy (2000), las palabras pueden ser ampliamente divididas bajo la clase abierta o cerrada. Las palabras de la clase abierta, tradicionalmente conocidas como palabras de contenido, ofrecen puntos de acceso (en el sentido de Langacker 1987) a un tipo de estructura conceptual la cual es altamente rica. Por ende, las palabras de la clase abierta, tales como sustantivos, verbos, y adjetivos, ofrecen un acceso *amplio* (Talmy 2007) a la estructura conceptual. Por el contrario, las palabras de la clase cerrada, tradicionalmente llamadas palabras funcionales, ofrecerían un acceso más *estrecho* a la estructura conceptual. Para resumir, la diferencia entre acceso amplio y estrecho se ve reflejada en la riqueza o esquematicidad conceptual que es facilitada a través de las palabras. Las unidades semánticas que primordialmente constituyen la base conceptual de una palabra de la clase abierta son relacionadas con lo que se conoce como cuadros y modelos cognitivos (Barsalou 1992, 1999), mientras que las unidades semánticas que conforman la base conceptual de una palabra de la clase cerrada son asociadas con parámetros conceptuales. La interfaz entre estos dos tipos de palabras da como resultado una representación cognitiva (en el sentido de Talmy 2000) en donde los elementos de la clase cerrada brindan un tipo de “andamiaje semántico” para el rico material conceptual facilitado por la clase abierta.

La idea formulada arriba es contraria a los postulados de algunos lingüistas del paradigma cognitivista (especialmente Evans 2009, 2013) quienes mantienen una estricta dicotomía entre estos dos grupos de palabras, postulando que los elementos de la clase cerrada, como las preposiciones, conjunciones, y “partículas”, no ofrecen acceso a la estructura conceptual, sino que codifican exclusivamente contenido lingüístico. Si bien el presente autor está de acuerdo con que debe existir algo exclusivo del sistema lingüístico (véase Morras, in press), los elementos de la clase cerrada sí ofrecen acceso a la estructura conceptual. La diferencia radica en el *tipo* de estructura conceptual que es facilitada. Esta es precisamente la razón de introducir la noción de parámetro conceptual: el hecho de que captura el material conceptual esquemático que constituye el ‘andamiaje semántico’ de un evento lingüístico. Esto nos permitirá apreciar la contribución que las palabras de la clase cerrada tienen frente a las simulaciones corporeizadas. Siguiendo a Lawrence Barsalou (1999), todos los conceptos son simuladores, y, por ende, forman parte de una simulación

corporeizada. Estos conceptos incluyen maneras (ej., *inteligentemente*), relaciones (ej., *entre*), propiedades (ej., *azul*), entre otros.

El análisis presentado en los capítulos 4, 5, y 6, ofrece una visión del significado verbal que está constituido por dos importantes niveles de representación que están relacionados con lo que Talmy (2007) denomina primera condición de atención (del primer y segundo nivel de aislamiento). El primer nivel de aislamiento dentro de la primera condición de atención está relacionado con el nivel de representación léxico de una palabra. En este nivel podemos apreciar el potencial de significado de las palabras, el cual es capturado por la noción de base conceptual, como lo veremos en más detalle más adelante. Dicha base conceptual debe de ser almacenada en la memoria semántica de largo plazo y representa las unidades mentales que forman el sistema léxico-gramatical (usando el termino de Panther 2006) de una persona – quiere decir, la semántica de las palabras bajo completo aislamiento. Por el otro lado, está el segundo nivel de aislamiento para el análisis lingüístico; este concierne a lo que Allwood (2003) denomina *determinación del significado*. La determinación del significado tiene que ver con el uso contextual de una palabra. Las palabras adquieren su semántica (situada) solamente bajo contexto: sólo algunos atributos semánticos dentro de la base conceptual de una determinada palabra se activan en un uso lingüístico situado, mientras que los demás permanecen en su trasfondo.

El análisis de las preposiciones seleccionadas comienza con una detallada descripción de sus raíces espaciales. Esto nos permite proponer sus respectivas bases conceptuales y apreciar cómo los parámetros conceptuales se activan diferentemente dependiendo del contexto lingüístico en el cual la preposición se ve integrada. Después de esto, la investigación presenta usos no espaciales y temporales, que crucialmente son motivados por la estructura espacio-conceptual proveniente de la base conceptual de la preposición. Un punto importante por resaltar aquí respecto a la segunda parte del análisis concierne al tratamiento individualizado (en secciones separadas) de los usos preposicionales no espaciales y temporales. Esto se debe a que el presente trabajo asume que el dominio del tiempo exhibe su propia estructura, que puede ser cualitativamente distinta de la del dominio espacial, como lo veremos en el capítulo 2. Este tipo de estructura conceptual, que es inherentemente temporal por naturaleza, emerge como resultado de la referencia

temporal (Evans 2013). Cada vez que lidiamos con localización temporal, como en expresiones tales como *See you at noon*, debe de estar involucrada una estructura temporal (esquemática). Este claramente no es el caso de expresiones como *Those countries are at war*, en donde la preposición inglesa *at* establece una relación (no espacial) entre unos países y el estado de guerra, en vez de una relación entre un evento y su referente temporal. Este punto será desarrollado en profundidad a lo largo de la investigación.

Para resumir, la postura adoptada aquí intenta arrojar luz sobre la estructuración espacio-conceptual de algunas de las preposiciones del inglés y el español, y su rol en usos no espaciales y temporales. También ofrece una visión alternativa para la enseñanza de idiomas, puesto que ve el lenguaje como algo flexible y estructurado al mismo tiempo, contrario a la rígida visión del lenguaje como entradas de un diccionario en la mente, así como el carácter vacío de la sintaxis. La idea del lenguaje basado en el uso asume el significado verbal como algo enciclopédico por naturaleza, como también fomenta una descripción meticulosa de las estructuras fenomenológicas como esenciales si es que queremos en serio comprender en detalle el área de la semántica espacial. Algunas implicaciones que esta postura acarrearía para estudiantes, profesores, e investigadores del área de la enseñanza, son desarrolladas en el capítulo 7, junto con posibles aplicaciones de métodos de lingüística cognitiva en el aula que pueden ser extraídos de los capítulos 4, 5, y 6. Por último, las bases conceptuales son formuladas de tal manera de que puedan ser validadas psicológicamente a través de métodos experimentales. Un posible ejemplo (capítulo 7) de algunos parámetros conceptuales de *between*, *among*, *amid*, y *entre*, es presentado para mostrar este punto.

Finalmente, la investigación termina con algunos comentarios, entre ellos la importancia de un detallado conocimiento acerca de la semántica espacial de las preposiciones con objeto de acercarnos a una teoría del lenguaje que sea psicológicamente posible y provea explicaciones adecuadas para los usos preposicionales no espaciales y temporales; la idea de que el tiempo exhibe su propia estructura, que se refleja en construcciones lingüísticas temporales; las posibles implicaciones y aplicaciones pedagógicas que la presente visión podría ofrecer; y los experimentos psicolingüísticos que se podrían realizar utilizando este método.

Palabras clave: base conceptual, parámetros conceptuales, trayectoria, landmark, estructura conceptual, estructura temporal

Chapter 1: Introduction

The present study deals with the semantics of some English and Spanish prepositions, specifically *between*, *among*, *amid*, *to*, *for* (for English), and *entre*, *a*, and *para* (for Spanish). The research intends to provide an account of their spatial configuration in order to achieve a solid ground from which to apprehend better the partial structuring and supportive function of the spatio-conceptual structure underlying non-spatial and temporal prepositional usages. The study is expected to provide full details about the spatial, non-spatial and temporal behavior of the prepositions proposed.

I now provide a brief overview of the main ideas that drive this research.

1.1 Spatial semantics and closed-class items

Spatial semantics has been traditionally understood in terms of the simple relation model. That model states that prepositions encode purely spatio-geometric information. However, it turns out that functional elements and/or consequences (Herskovits 1985, 1986, 1988; Vandeloise 1991, 1994, 2003) are as important as spatio-geometric information to properly understand the semantics of preposition (as we shall see in more detail later). This fuller perspective in spatial semantics allows us to achieve a clearer account of the conceptual structuring of prepositions.

Prepositions are closed-class elements, which as opposed to open-class elements, offer a *narrow* access (in the sense of Talmy 2007) to conceptual structure. This narrow access is related to the type of information that these elements offer access to, namely a more schematic conceptual structure, compared to the rich conceptual structure that open-class elements such as nouns, verbs, and adjectives, provide access to. To see this point, consider the example below:

- (1) a. *She goes to the hospital*
b. *She goes to the beach*

Note that in (1) above the closed-class elements are put in italics to show the schematic content they encode. In the case of *she*, it can be glossed as [FEMALE AGENT], in the case of *to* it can be glossed as [MOTION TOWARD A GOAL], for *the* it can be [IDENTIFIABLE THING], and finally for the third-person suffix *-es* it can be [THIRD PERSON SINGULAR PRESENT

TENSE]. Note that even though these elements may provide basically the same conceptual content to each construction in (1), what makes the more prominent difference in each reading (and hence in each corresponding embodied simulation)¹ is the rich conceptual content provided (mainly) by the profile of the nominal elements that fill the NP2 slot,² here *the hospital* and *the beach* in (1a) and (1b), respectively. On the other hand, closed-class items also contribute to embodied simulations (i.e., in-reading), but their contribution plays the role of *conceptual scaffolding* (following Talmy 2000) for the richer conceptual content evoked by open-class elements. This interplay is what builds up a cognitive representation.

The distinction between closed-class and open-class items will be essential to understand how a cognitive representation (in the sense of Talmy 2000) takes place.³ After all, the human conceptual system is structured by many types of knowledge (Barsalou 1999, 2008), among them spatio-conceptual, temporal, and introspective structure.⁴ That conceptual structuring (in language and cognition) comes from the very same *situational content* but varies in its *situational focus* (Barsalou and Wiemer-Hastings 2005). The result of this is that words provide access points (Langacker 1987) to conceptual structure (or encyclopedic knowledge), which can be of different types depending on the grammatical category of a given morpheme.

¹ The notion of *embodied simulation*, in basic terms, has to do with the creation of mental experiences about perception and action in the absence of their manifestation. The embodied simulation theory (e.g., Bergen 2012) states that we use the same parts of the brain that are devoted to interacting with the world for different cognitive operations such as imagery, recall, and language comprehension. From this it follows that “We understand language by simulating in our mind what it would be like to experience the things that the language describes” (*ibid.*13).

² The term *profile* is used in Cognitive Grammar (Langacker 1987, 1991, 2008) to refer to the designatum of the scope of a predication (i.e., its base). The notion of *scope*, on the other hand, deals with an expression’s “coverage” (Langacker 2008: 62). It is the part or portion of the domains that are accessed in a linguistic event which is used as the basis for its meaning.

³ However, both classes are understood in this research as the two extremes of a continuum. The whole system then, is referred to here as *lexico-grammatical* system (a term taken from Panther 2006).

⁴ Introspective structure should be understood as a type of conceptual structure that emerges from the felt qualities of human experience (i.e., the aesthetics of phenomenological experience), including reflexive thinking.

The conceptual structure that constitutes the meaning potential (Allwood 2003) that words provide access to, is referred to in this research as *conceptual basis* – the semantic spectrum on the basis of which word meanings can be elaborated and extended.⁵ As noted earlier, there is a distinction between schematic and rich conceptual structure, which, I suggest, leads to the conceptual basis of a word being constituted by either *conceptual parameters* (see below) and/or *cognitive models* and *frames*. Cognitive models (Evans 2009; see also Lakoff’s 1987 ICMs) and frames (Barsalou 1992; Fillmore 1982; see also Schank and Abelson’s 1977 scripts) are rich non-linguistic bodies of knowledge which are interconnected in the human conceptual system as shown below for the open-class word *hospital*:

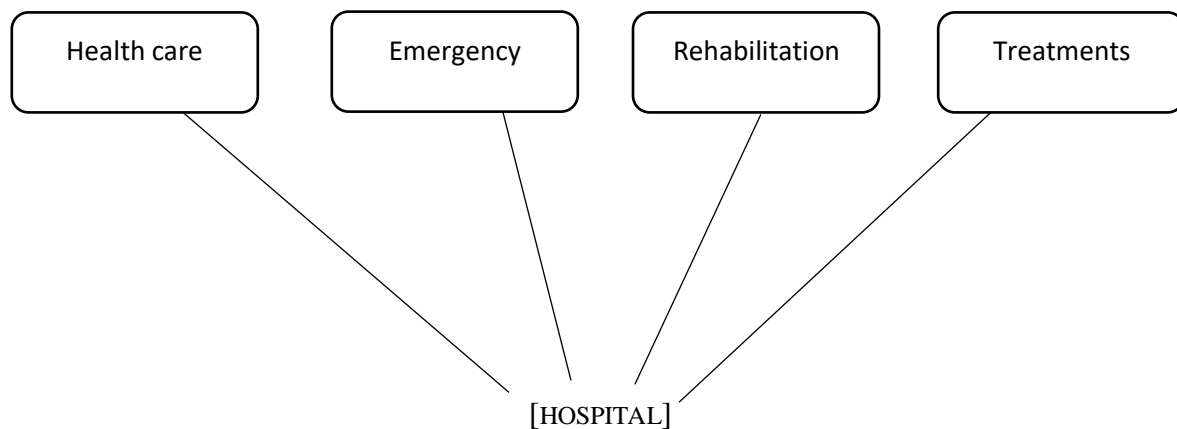


Figure 1.1. Partial conceptual basis for *hospital*

In figure 1.1 above, we can observe a partial conceptual basis for the [HOSPITAL] lexical concept,⁶ which at the very least, offers access to cognitive models such as *Health Care*, *Emergency*, *Rehabilitation* and *Treatment*, which can be further developed into secondary

⁵ Elaboration and extension must be understood as forming a continuum. The former deals with full schematicity and is a type of adjustment in the level of specificity that characterizes a given structure, whereas the latter has to do with partial schematicity (for details see Langacker 1987: 66-76).

⁶ Lexical concepts (Evans 2006, 2009, 2010a, 2010b, 2013) are bundles of different types of knowledge, including semantic parameters, that constitute the semantic pole of a symbolic unit. Lexical concepts are instances of language use, so they are treated interchangeably with the term *sense* in this research. Another key feature of lexical concepts is that they encode linguistic content (in the form of linguistic parameters [see Morras, in press]) and offer access to conceptual structure which varies in richness (cognitive models and frames for the rich conceptual material, and conceptual parameters for more schematic structures).

cognitive models such as types of rehabilitations and treatments. For instance, Health Care can be further developed into *Skin health*, *Dietary*, *Buccal health*, among others. This in turn, shows the highly rich conceptual content that can be accessed via open-class items such as *hospital*.

On the other hand, the present dissertation makes use of the notion of *conceptual parameter* as key to understanding the structuring of the conceptual bases of the propositions to be analyzed in chapters 4, 5, and 6. Parameters (following Evans 2009, 2010a, 2013) are part of the bundle of different types of schematic information that form the semantic core of a (closed-class) symbolic unit.⁷ Parameters serve to compress fine distinctions within the complexity of experience. However, this type of parameter is referred to in Morras (in press) as *conceptual parameter*: a highly schematic bundle of conceptual information that is phenomenologically based. Conceptual parameters embody the schematic structure that inheres in the conceptual system, so they are reflected in the semantics of closed-class items. This in turn, is one of the main reasons to support the idea that closed-class items offer a *narrower* access to conceptual structure, compared to the *wider* access offered by open-class items. This goes contrary to the position adopted by Evans (e.g., 2009, 2013) who claims that closed-class items do not offer access to conceptual structure.⁸

The second type of parameter that is identified in Morras (in press) is termed *linguistic parameter*. Linguistic parameters consist of bundles of highly schematic information that is purely linguistic – that is – encoded in and externalized via language. Following Langacker (e.g., 1987, 2008) symbolic units can profile either a thing or a relation. I use this terminology to suggest that the linguistic content that a word such as *hospital* or *at* encode, can be glossed as [THING] and [RELATION], respectively. At a higher level of organization, we can also appreciate the schematic content that might be exclusively encoded in language. This has been demonstrated by Adele Goldberg (1995) in her work on

⁷ Parameters also structure open-class items, but in a highly schematic way. For instance, the noun *hospital*, in addition to its cognitive models and frames, also encodes the parametric information of [THING]. This type of parameter has been referred to in Morras (in press) as *linguistic parameter*.

⁸ It must be added that conceptual parameters also structure open-class items. However, this type of schematic information is not as prominent as cognitive models and frames within the conceptual basis of an open-class item.

ditransitive constructions. For example, the linguistic content that is evoked by an utterance such as *Joe baked Mary a cake*, can be glossed as [X CAUSES Y TO RECEIVE Z].

As an example of how the complexity of experience might get parameterized,⁹ consider the conceptual basis of the preposition *at* proposed in Evans (2009:173):

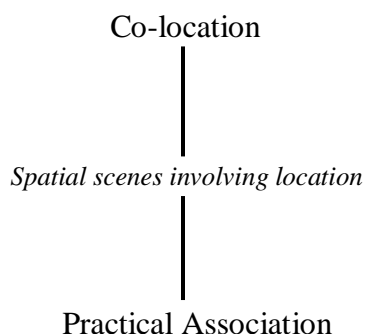


Figure 1.2. Conceptual basis for *at*

Note that in figure 1.2 above, the *proto-scene* of *at* is put in italics. Proto-scenes (following Tyler and Evans 2003a, 2003b) consist of humanly relevant phenomenological experiences that allow the abstraction of recurrent patterns and experiential structure in the form of conceptual parameters.¹⁰ The English preposition *at* is a relational unit that depicts a highly general way to locate things in space, hence, it can be posit that the humanly relevant scenes involving location in space give rise to (at least) two recurrent patterns that become parameterized. The Co-location parameter might be the core semantic value of *at*. But in addition to this, there is also another parameter that is non-spatial in nature, so it is relational. This functional factor in turn, can be categorized as an *added constraint* (in the sense of Herskovits 1985, 1986). To illustrate this idea, consider the following example:

- (2) a. They are *at* the supermarket
b. He is *at* his desk

⁹ In this research, parameterization is understood as the process in which experiential patterns and structures that are most recurrent within a proto-scene, become the conceptual parameters (or cognitive models and frames) of a given word's conceptual basis.

¹⁰ In the case of richer conceptual bases such as the ones of nouns as shown in figure 1.1 above for the word *hospital*, proto-scenes are also key for their conceptual development since they are built up by experiential structure that one acquires through *lived experience*.

In (2) we can locate each *trajector* (Langacker 1987, 1991, 2008) – the attentional figure in a relational profile – (*They* and *He* respectively) with respect to each *landmark* – the second most prominent entity in a construction (*supermarket* and *desk*) – by virtue of the relational unit *at* that establishes correspondence links between them (see section 2.2.1 in chapter 2). Correspondence links, in turn, indicate how component and composite structures fit together in a coherent semantic assembly. Such links allow the activation of the Co-location parameter (see figure 1.2 above). However, the activation of the Co-location parameter is not enough to fully understand the expressions in (2). It follows that in (2a) the group of people might not be solely located with respect to the supermarket, but also doing the shopping, working, or the like. By the same token, in example (2b) the man is not only located with respect to his desk, but he might also be in a position to work. Similar cases in which there are added constraints in prepositional usages are *at the university* and *at the cinema*, where there is a practical association between trajector and landmark. It follows that the parameter of Practical Association also gets activated for these spatial realizations.

As shown above, added constraints in prepositional usages amount to evidence against the rigid idea of prepositions as encoding purely spatio-geometric information. This is an issue that will be further developed in chapters 4, 5, 6, and 7.

1.2 From the spatial to the non-spatial in prepositional usages

The conceptual basis of *at* shown above, can in turn help us to apprehend better the processes that give rise to figurative understanding. For instance, in prepositional phrases such as *at peace/ease*, *at* establishes something more than a simple spatial relation between an attentional figure and its ground as in *She feels at ease practicing yoga*. It follows that *at* also allows a *non-spatial* relation between a state of existence (e.g., being at ease) and the attentional figure (here *She*). This means that the resulting composite conception (or part of it) in which *at* plays a non-spatial relational function could be glossed as [STATE OF EXISTENCE].¹¹ Crucially, however, the parameter that allows the establishment of

¹¹ [STATE OF EXISTENCE] is a term used in Evans (2009, 2010a) to describe some of the meanings that *at* can acquire at times, such as in *at rest/peace/ease/liberty*. Other lexical concepts that establish correspondence links with Practical Association are the [STATE OF MUTUAL RELATION] for cases involving *at*

correspondence links is Practical Association. As mentioned earlier, practical associations can be understood as the added constraints or functional elements/consequences that exist between a given attentional figure and its ground, and this is reflected in spatial and non-spatial conceptions.

Functional categories turn out to be particularly important when it comes to non-spatial usages. For instance, the parameter of Practical Association may receive a higher activation than Co-location. The parameter of Co-location, on the other hand, might structure the spatio-informational background of sentences such as *She's at ease practicing yoga*: while it is true that practicing yoga involves being in a sports center, gym, or any other place equipped to do so, the sentence just given can be uttered to someone to indicate a habitual behavior of a person, rather than to say that the person is in the gym practicing yoga right now. This, in turn, evokes a non-spatial feature related to a state of existence with respect to an activity.

Figure 1.3 below shows the relation between the [STATE OF EXISTENCE] lexical concept and the parameter of Practical Association. This correspondence, in turn, partly allows figurative extension.

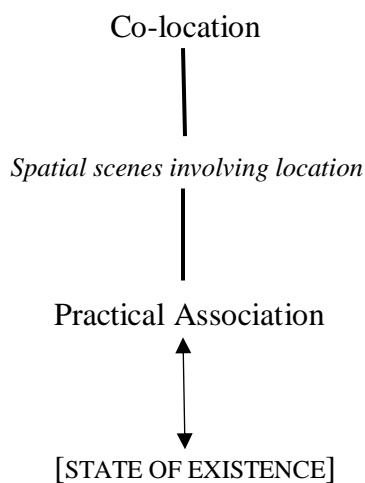


Figure 1.3. The parameter of Practical Association and its relationship with the [STATE OF EXISTENCE] non-spatial lexical concept of *at* (Adapted from Evans 2009, 2010a)

war/variance/strife, and the [AFFECTING EXTERNAL STATE] for cases that involve prepositional phrases such as *at peril/risk/hazard/expense*.

The correspondences between the Practical Association parameter and the [STATE OF EXISTENCE] lexical concept may in turn, be driven by the conceptual metaphor STATES ARE LOCATIONS (Lakoff 1990). It follows from this that conceptual metaphor is another type of knowledge that is involved in non-spatial and temporal conceptions as we shall see in more detail later.

1.2.1 Going further than TIME IS SPACE: temporal structure as a type of conceptual structure

The last main issue that this research intends to address is related to the temporal behavior of prepositions. This issue deserves great attention since we might not be dealing with exactly the same mechanisms when conceptualizing temporal scenes. One of the assumptions in this research is that time is more fundamental than space since it constitutes a temporal integrational system at the neuronal level (Pöppel 2004, 2009) that is independent of the cognitive acts and percepts – that is, this temporal operating platform may provide a logistical basis for conscious representation and a working platform for our phenomenal present. Time constitutes, at the neuro-cognitive level, a pre-semantic operation that is fundamental to conceptualization.¹²

In addition, evidence from neuropsychology suggest that time could be dissociated from space at the neurological level. In an experiment, David Kemmerer (2005) tested whether his 4 brain-injured patients (the injury was in the perisylvian region) could comprehend prepositional usages about space and time using the same prepositions (e.g., *at the park* vs. *at 2 o'clock*). It turns out that 2 patients understood the spatial senses and not the temporal ones, while the other 2 patients did vice versa. The results obtained amount to evidence that space and time are qualitatively distinct. The qualitatively unique *nature* of the domain of time gives rise to the temporal structure that inheres in the human conceptual system as one distinct type of knowledge. In addition, time exhibits *transience* (following Galton 2011; see also Evans 2013), which can be understood as the subjectively felt experience of the passing of time. Transience is assumed in this study to be the hallmark of the temporal domain. This is a purely temporal feature that is absent in the spatial realm.

¹² See Pöppel (2004) for what the role of the *3-second window* in temporal integration might be.

Temporal structure turns out to be key to conceptualize the temporal meanings of prepositions; for instance, in prepositional phrases that evoke temporal lexical concepts such as the ones below:

- (3) a. See you tomorrow *at* half past 5. [POINT IN TIME]
b. Can we meet *at* lunchtime? [PERIOD OF TIME]

In (3a), *at* functions as a temporal relational unit in that it helps to anchor the upcoming event (the meeting) to the temporal matrix, which is conceptualized extrinsically (i.e., by the use of clocks) – that is, independently of the subjective experience of time, whereas in (3b) the periodicity-based strategy used is concerned with an event-based cyclical concept such as {LUNCHTIME}.

The point I want to remark here is that in order to conceptualize (3a) (as well as (3b) and all the temporal instances of *at* we need *temporal cognition* (in the sense of Evans 2004, 2013, see also Galton 2011; Morras (to appear); Pöppel 2004, 2009) as a key requirement. As mentioned above, time might be even more basic than space to give life to consciousness itself due to its system of temporal integration known as the 3-second window (Pöppel 2004).

Note that temporal cognition can be reflected, at a schematic level, in temporal reference. For instance, in (3a), the temporal reference may encode a schematic temporal information that could be glossed as [TE FIXED TO AN RP WITHIN A TIME-RECKONING SYSTEM]. In this case the *target event* (TE), here the meeting between the two people, is fixed with respect to an RP (reference point), here *half past 5*. In (3a) we make use of the {TWELVE-HOUR CLOCK} where the *origo* (O) – the entity that starts the count in a periodicity-based system – is fixed as 12 a.m. Moreover, the O anchors the relationship between TE and RP to the transience type of *duration*.¹³ Time-reckoning systems are characterized by the use of clocks that either embody – like an hourglass – or metonymically symbolizes – like a clockface, the passage of time.

¹³ Following Evans (2013) there are three types of transience: *Duration*, *succession*, and *anisotropic*. These characterize the extrinsic, sequential, and deictic temporal frames of reference, respectively.

In addition to time-reckoning systems, we also make use of *event-reckoning* systems (based on calendars and cyclicity). This difference in turn, allows us to distinguish between two neuro-cognitive complex features that underlie this *periodicity-based* temporal strategy. This temporal strategy is based on *mensural* and *cyclical* time. In (3b) we make use of cyclical temporal units, in this case {DAY}, to understand – and hence, locate – events such as *lunch*. In (3b), *lunchtime* serves as an RP to locate the TE (the possible meeting) and further anchor it with help of an O (here {MIDNIGHT}) to the transience type of duration. The schematic temporal import in this case could be glossed as [TE FIXED TO AN RP WITHIN AN EVENT-RECKONING SYSTEM]. Time and event-reckoning systems and all their facets constitute what is known as the *extrinsic temporal frame of reference* (see Evans 2013: Ch.6). This type of temporal reference turns out to be key for a more complete understanding of temporal cognition and temporal linguistic realizations, as well shall see in more detail later.

1.1.2 Conceptual metaphor in temporal conceptualizations

Another mechanism that is involved in temporal (and non-spatial) conceptualizations is conceptual metaphor. I suggest that the metaphor LOCATION IN TIME IS LOCATION IN SPACE underdetermines the temporal realizations in the case of the English *at* shown above, as well as in the other cases presented in chapters 4, 5, and 6. The preposition *at* allows the establishment of correspondence links between the parameter of Co-location and the Event-Reckoning or Time-Reckoning parameters that result from sense-extension, but which, nevertheless, inhere in the human conceptual system in the form of temporal structure.

In (3a) there is activation (through extension) of the Time-Reckoning parameter, whereas in (3b) the parameter that gets activated is Event-Reckoning. Figure 1.4 below depicts this sense-extension and its relationship with two temporal lexical concepts for *at*:¹⁴

¹⁴ For further details on the temporal behavior of the English preposition *at*, see Morras (to appear).

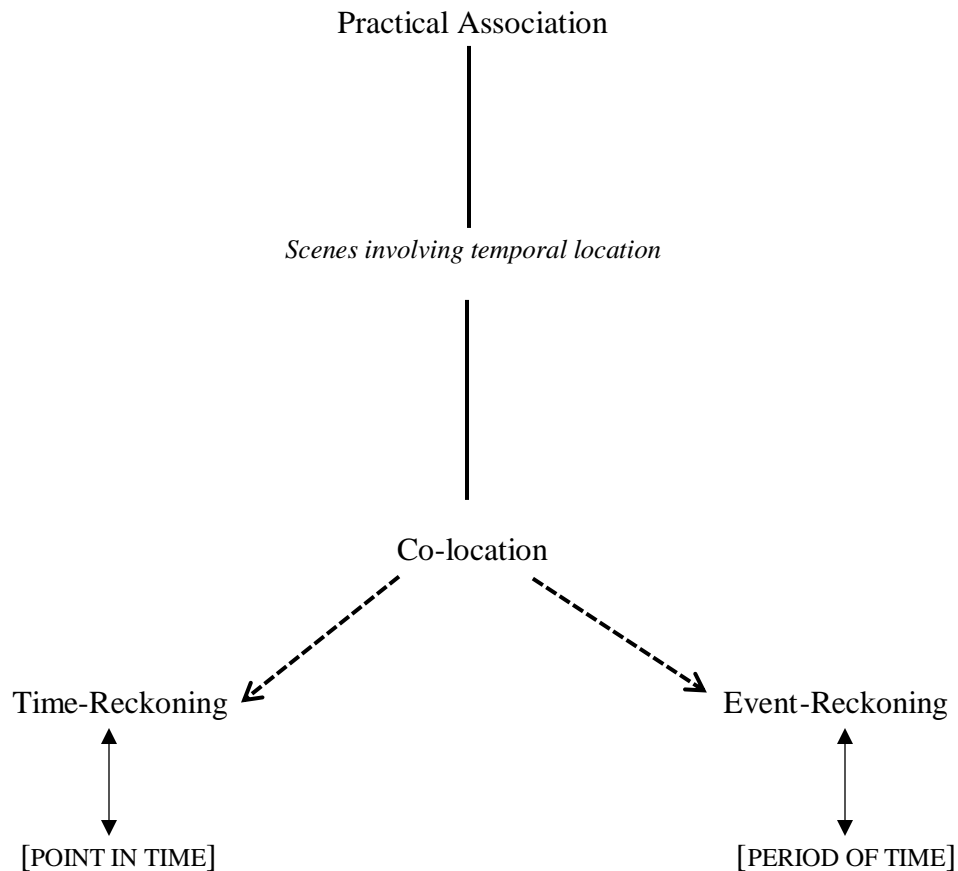


Figure 1.4. Sense-extension: Temporal units and their relationship with temporal lexical concepts for *at*

As shown above, the spatial, non-spatial, and temporal behavior of prepositions, can be better understood under the scope of some theories and constructs (and empirical evidence as well) from cognitive linguistics, cognitive psychology, and neuroscience. This in turn, might shed light on the *partial structuring* and *supportive role* of the domain of space with respect to the non-spatial and temporal domains. As we shall see in more detail later, there are more mechanisms involved in non-spatial and temporal understanding apart from metaphor and metonymy, mainly the conceptual structure that is purely temporal in nature, and the (direct) non-metaphoric concepts that are (mainly) based on introspective structure and subjective experience.

The type of analysis such as the one briefly introduced above might bring further benefits to areas such as language teaching and educational linguistics, since the conceptual bases to be presented throughout this research can be applied to English, Spanish, and linguistics lessons. In addition, the parameters proposed for each conceptual basis can be

experimentally validated by experts in the area. These two ideas, among others that the present investigation intends to show, are further developed in sections 7.3. and 7.4 in chapter 7.

1.3 Methodological tools and thesis structure

The examples that will be shown in the analysis (chapters 4, 5, and 6) have been taken from two corpora: the *British National Corpus (BNC)* and the *Spanish Web 2011 (esTenTen11, Eu + Am)*. The idea behind using corpora is not statistical but rather naturalistically-driven – it is simply used as a way to keep on with the usage-based approach that characterizes the Cognitive Linguistics enterprise. The research reported here presents an analysis based on real instances of language use instead of made-up examples.

In addition to this, another type of source of data has been used for this study, namely the dictionaries – specifically the *Cambridge (Online) English Dictionary* (monolingual version, *CED* from now) and the *Diccionario de la Lengua Española (DLE* from now). In conjunction, corpus work and the use of reliable dictionaries helped the present author to pin down the semantic parameters that may constitute the conceptual bases of the prepositions *between*, *among*, *amid*, *for*, *to*, and *entre*, *a*, and *para*. Further details are provided in chapter 3 which is concerned with methodology.

The thesis is divided as follows. Chapter 2 presents the theoretical background; in this chapter some key theories and constructs from Cognitive Linguistics will be introduced. Ideas and theories such as *parameters*, *lexical concepts*, *metaphor*, *metonymy*, *Cognitive Grammar*, *temporal reference*, among others, are essential to enrich and hence provide an elegant semantic account of the prepositions selected, as well as to familiarize the reader with a cognitivist perspective on language and cognition. Chapter 3 deals with methodological issues; in this chapter the main emphasis is given to introspection as the main tool for analytical thought, along with corpus work. Then in chapters 4, 5, and 6, a cognitive linguistic analysis is presented for each preposition proposed. The first ones are *between*, *among*, and *amid* (chapter 4) considering they exhibit semantic overlap, followed

by their Spanish equivalent *entre*.¹⁵ After that, I present the case of *to* and its Spanish equivalent *a* (chapter 5), finishing with *for* and its Spanish equivalent *para* (chapter 6). Then in chapter 7, some remarks that are extracted from the analysis are placed at the front, among them the importance of context in the meaning determination of a word's conceptual basis, the importance of phenomenology for the emergence of spatio-conceptual structure, the nature of temporal structure in human cognition, also some pedagogical applications that might be carried out using the conceptual bases suggested, and proposals for psychological validations of some of the conceptual parameters proposed in the analysis. Finally, chapter 8 presents concluding remarks.

Lastly, I want to emphasize that the present research is driven by a willingness to approach a psychologically real understanding of the spatial, non-spatial, and temporal behavior of prepositions by showing how the type of conceptual structure that comes from each domain complements each other while exhibiting their own conceptual character.¹⁶

¹⁵ See Morras (2018) and Morras and Barcelona (2019) for an overview of the spatial, non-spatial, and temporal behavior of the Spanish preposition *entre* and its English equivalents.

¹⁶ This research has been inspired by some great advances in the cognitive sciences, I am particularly grateful to so many scholars that have provided elegant theories, constructs, and insight during the past 50 years or so. We now know considerably more about the foundational roles of space and time in human cognition, and that even though they might be intertwined at the conceptual level, each has a neuro-cognitive basis that makes them qualitatively distinct. As mentioned earlier, the system of temporal integration at the neuronal level might provide a pre-semantic window that is fundamental for conceptualization; this makes time more “basic” – so to speak – than space. On the other hand, non-spatial or abstract concepts also have a phenomenologically real structuring; for instance, {SADNESS}. Following Lawrence Barsalou (1999), we do have a non-metaphorical understanding of what the feeling of sadness is. After all, for figurative language understanding to be interpreted as in an utterance such as *she's down today* (i.e., [SAD]), we need a non-metaphorical concept of {SADNESS} – whose structuring is mainly introspective in character – for the mapping to occur in the first place (see also Murphy 1996 for such a view).

1.4 Summary

This introductory chapter has been mainly intended to provide a general picture of the main research focus: the spatial, non-spatial and temporal realizations of some English and Spanish prepositions under the scope of cognitive linguistics. The main idea behind this is to show that the non-spatial and temporal conceptualizations of the prepositions analyzed are not entirely motivated by spatio-conceptual structure. This in turn, is due to temporal and introspective structures as types of knowledge that inhere in the conceptual system. The contrastive analysis presented in chapters 4, 5, and 6, will also show conceptual differences and similarities between English and Spanish prepositional vehicles. This might bring benefits for students and language teachers who are looking for a more realistic account of lexical representation (i.e., the conceptual basis of a word) and meaning determination (i.e., the contextual realization of a word's conceptual basis). The linguistic examples that are subject to scrutiny in the analysis have been taken from the *BNC* and the *Spanish Web 2011* (*esTenTen11*, *Eu + Am*) corpora for English and Spanish prepositions, respectively. This is intended to stay in line with the usage-based approach that is fostered in cognitive linguistics. The *CED* and the *DLE* have also been used.

Chapter 2: Theoretical Background

The present study is inspired by some cognitive linguistic and cognitive psychology tenets, among others that come from the wide field of the cognitive sciences. I hereby shall provide some essential grounds for positioning the reader on the right track and allow him to make the most of the linguistic analysis presented in chapters 4, 5, and 6 in terms of comprehension and utility. Thus, I will here provide a brief description and discussion of the main theoretical tools and constructs that this research is mainly based on so as to familiarize the reader with its theoretical *core*. However, additional theoretical notions related to the ones discussed in this section, will also be introduced as we go through in later chapters.

The main constructs and theories that are applied in this research and briefly examined below are:

Space and Time in Cognitive Linguistics

Cognitive Grammar (Langacker 1987, 1991, 2008)

Trajectory and Landmark (Langacker 1987, 2008)

Correspondences, Profile determinant and Elaboration (Langacker 1987, 2008)

Lexical Concepts and Cognitive Models Theory (LCCM) (Evans 2006, 2009, 2013)

Metaphor (Lakoff and Johnson 1980, 1999) and *Metonymy* (Barcelona 2000a, 2011, 2015; Lakoff and Johnson 1980; Ruiz de Mendoza 2017) theories.

I now proceed to introduce the constructs and theories one by one.

2.1. Space and Time in Cognitive Linguistics

Fundamental to the understanding of human cognition is the study of space and time as two of the main foundations of the human mind. We live in a three-dimensional world – hence, we navigate space in any direction to accomplish our daily goals such as going for some groceries to the supermarket or take the bus to go to college. On the other hand, we also have “the event” in which all others unfold (in the sense of Evans 2004, 2013), which is time. We move in space *through* time, and these two fundamental domains end up

structuring the human conceptual system via *affordances* (Gibson 1979), which are the possible interactions (with objects) in space.

Spatial thinking is essential for survival. Where to go to find food, water, and go back to our shelter is elementary to survival. Owing to the centrality of the conceptual structure provided by the domain of space, spatial thinking becomes the foundation for other conceptual domains which are amply illustrated in the way we talk and reason (e.g., Lakoff and Johnson 1980, 1999; Talmy 1983). How things are apprehended and which spatial frame of reference (Levinson 2003) is deployed will depend on the type of space: how it is perceived and how it serves to successful navigation. Following Barbara Tversky (2008), there are three fundamental types of spatial structures or “spaces” – in Tversky’s parlance – and these are the *space of the body*, the *space around the body*, and the *space for navigation*.

The space of the body is the first we encounter since birth (or even before) – the very repository of our organs and brain. It projects spatial particles such as {up} and {down} (vertical plane), {left} and {right} (transversal plane), and {front}, {back} (sagittal plane). This space not only consists of the constituent structure of matter, in this case the human body, but also of space itself. This type of space allows us to “keep track of where body parts are relative to one another” (*ibid.* 204), through proprioception,¹⁷ in the case of our own body, and through vision, in the case of other bodies.

The space around the body has to do with the space immediately surrounding the human body – the space of “actual or potential perception and action” (*ibid.* 204): the one within our visual scope and/or hand-reachable distance.

Finally, the last type of space that constitutes the core of our spatial cognition and human conceptual system in general, is the space of navigation and it deals with experience itself like wandering through a museum or hiking on the mountains. This type of space is apparently “too large to be perceived from a single place” (*ibid.* 205), hence, it is constructed from separate pieces of experience.

¹⁷ Proprioception can be understood as the ability to sense stimuli arising within the body regarding position, motion, and equilibrium.

The three types of spatio-conceptual knowledge mentioned above are what mainly allow us to develop the concepts the way we do. For instance, the concept of {gravity} is entrenched in the human mind because of the morphology of our bodies (i.e., embodiment), as well as because of the Earth's gravity field which attracts all objects to its surface: if we drop an apple, it falls. By the same token, if we fully extend our arms in front of us and try to stay in that position for 10 minutes, we will soon feel the gravity pull (so we will get tired). This, in turn, can be explained in terms of *force dynamics* (Talmy 2000) in that there is an *agonist* (the force we generate by lifting our arms and keeping them straight) and an *antagonist*. This latter notion exhibits in this case a tendency to rest so it represents the resistance that the agonist must bear or break. On the contrary, if our bodies were a sort of gas with no transversal, vertical, or sagittal plane, we would have no concepts such as {left} or {front}, nor would we experience gravity in the way we normally do.

Human spatial navigation is thus the key to understanding most of the *encyclopedic knowledge* that human beings must acquire. Encyclopedic knowledge, following Ronald Langacker (1987), is the accumulation of non-linguistic coherent semantic units that are categorized and linked to each other by virtue of the type of experiences we encounter in our daily lives. Encyclopedic knowledge is akin to what Barsalou (1999, 2003, 2008) refers to as the *human conceptual system*, which, to put in just a few words, is the very repository of the mind (see also Mandler 1992, 2004). Therefore, the acquisition of this system and/or knowledge, comes from navigation in space and experiences of different types. Navigation involves the three “types of spaces” mentioned above, but it will be generalized now for understanding purposes. Such navigation is deeply linked to the affordances (Gibson 1979) that space offers, which makes us develop, change or even replace, a given concept in our mental repository. Under this *enactive approach* to concepts and cognition (see Thompson 2005, 2007; Di Paolo and Thompson 2014; Varela, Thompson and Rosch 1991 for such a view; see also Barsalou 2003) categorization is not seen as taxonomic but action-environment oriented. This is not to say that we do not have a taxonomic and “concept-stable” organization: we do in fact, but this information is used as a conceptual bedrock for situated interactions with the environment. Take for instance the prototype for {dog}, which for some people might be a *German shepherd*, whereas for other people it can be a *Cocker Spaniel*. But now if we say *She's taking her dog to the pet hairdresser*, we probably

imagine, as a prototype of a dog that needs more attention in its hair than others, a *Poodle*, rather than, say, a *Doberman* or a *Pitbull*.

Concepts behave similarly to categorization: they can of course exhibit a sort of stable knowledge, but they are not fixed. On the contrary, new experiences can either change a given concept or even replace it. For instance, we could use a screwdriver, which is a tool prototypically used for driving screws, to take out a piece of wood from an old kitchen cabin. In this case something that is used for a supposedly “structured” thing can be used for another.

Before the development of more complex concepts such as {happiness} or {sadness} in the road to a fully functional conceptual system, we acquire what in cognitive psychology, philosophy and cognitive linguistics is referred to as *image schemas* (e.g., Johnson 1987, 2007; Hampe 2005; Lakoff 1987; Mandler 1992, 2004).¹⁸ Image schemas are schematic representations of spatial relations we encounter every day that are pre-conceptual in origin. For example, consider the image schema of {container}, which is a ubiquitous spatial experience we encounter daily. We enter and get out of our rooms, we put the food in the fridge and take it out when hungry, among many other humanly relevant interactions involving containers. The space of the body can be also understood as the container of all the necessary organs, including flesh and bones, as previously seen.

More examples of image schemas, originally proposed by the philosopher Mark Johnson (1987: 126), are {contact}, {center/periphery}, {pressure}, {balance}, {mass/count}, {path}, among many others. These are the first concepts we acquire; they come in the form of image-schematic structure and eventually structure word meaning and metaphorical reasoning (Evans 2010c; Johnson 1987; Mandler 1992). To illustrate, take as an example a verb such as *jump*. It consists of image-schematic structure in the form of {up – down}. Image schemas are then embodied in word meaning since they are acquired way before the linguistic system is fully developed. Under this vision, it should not be surprising that symbolic units – for example, words, are *access sites* to conceptual structure. The linguistic

¹⁸ The braces ({}) are used in this dissertation to indicate concepts and image schemas (i.e. conceptual level) whereas the square brackets are used to indicate a *lexical* concept – that is, at the level of the linguistic system.

system has evolved to narrow down (i.e. specify) the rich conceptual material of the much older conceptual system (Evans 2009, 2013, 2014).

The embodied character of image-schematic structure is provided by what Tyler and Evans (2003a, 2003b) term *proto-scenes*, which as mentioned in the previous chapter, are humanly relevant interactions in space from which abstractions and functional categories are acquired. If we go back to our example of the importance of containers in our daily lives, we can see how we abstract away some notions through our experiences with containers. For instance, when we are just one-year-old infants or younger, we already understand that a container can transport the thing contained or that a container that is not transparent (such as a black box), can occlude the contained entity because we cannot see the object inside. Those things become abstractions that are acquired from phenomenological experience. When these abstractions are prominent enough, to the point they can build the conceptual basis of a word, they become *conceptual parameters*. To illustrate this point, consider the conceptual basis of the English preposition *in* below, taken from the work of Evans (2009, 2010a, 2015a):

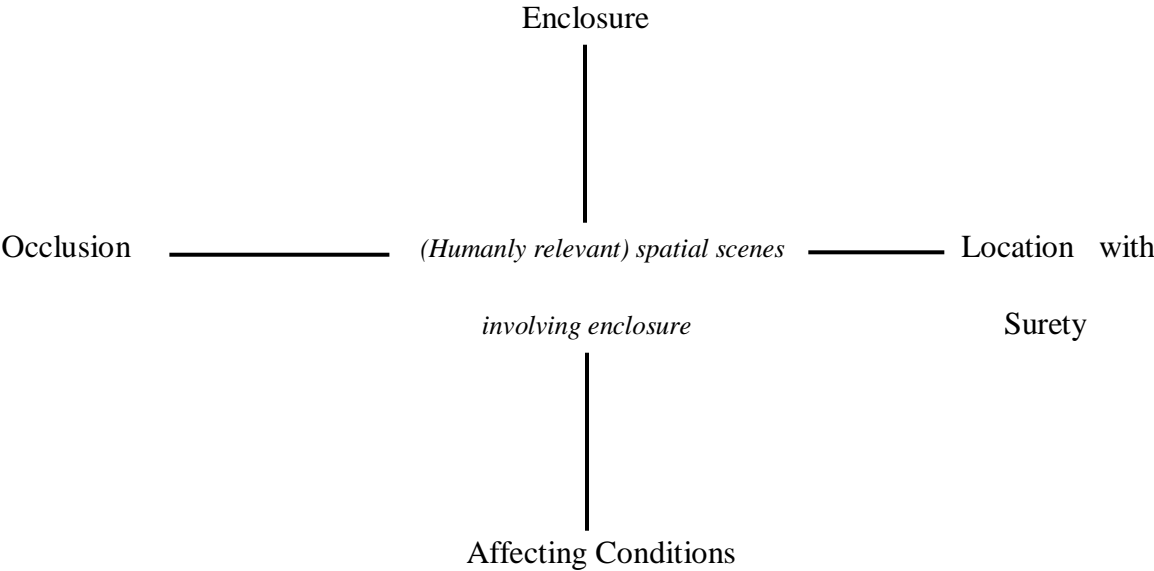


Figure 2.1. Conceptual basis for the English preposition *in*

Figure 2.1 above represents the conceptual basis of the English preposition *in* which is motivated and structured by humanly relevant interactions in space that involve containers

(the proto-scene of *in*).¹⁹ Note how image schemas such as {enclosure} and {occlusion} are highly relevant for the structuring of the conceptual basis of *in*, to the point they become parameterized. Parameters in this sense are bundles of schematic information that are stored in long-term semantic memory. They are not necessarily related to spatio-geometric information only but also integrate functionality and introspective structure, along with perceptual, temporal, and event-like structure; this in turn, is reflected in some parameters such as *Affecting Conditions* and *Location with Surety*, which emerge as functional consequences of phenomenological experience.²⁰ As pointed out earlier, all concepts are developed through perception, situated action, and introspection (Barsalou 1999, 2003, 2008; Barsalou and Wiemer-Hastings 2005) – that is, all concepts come from the same *situational content*.

The image schema of {enclosure}, then, due to its highly relevant role in the proto-scene of *in*, becomes parameterized into the *Enclosure* parameter. Its highly relevant role is reflected in the notion of containment: a container has a volumetric interior wherein different things can be stored. The second parameter depicted in figure 2.1 is *Occlusion*, and it has to do with the fact that many containers do not allow us to see what is inside unless the container is made of glass or any other transparent material. The third parameter is *Location with Surety*, and it arises as a *functional consequence* of an object being placed inside a container. When we put things in containers, we can move the container, so the things inside will also move along. Lastly, the conceptual basis of *in* is also partially structured by the *Affecting Conditions* parameter. This can be apprehended as another functional consequence that has to do with the conditions that a given container offer to the entity contained. For example, if we store a dish of pasta with tomato sauce in the oven on a hot day, it will be sour at night because the oven offers certain affecting conditions that are not suitable for storing food on a hot day. On the contrary, if we store the pasta and tomato sauce dish in the fridge on a hot day, it will be still edible at night since a refrigerator does

¹⁹ As introduced in chapter 1, the construct of *conceptual basis* is the one used in this research to refer to the *meaning potential* (Allwood 2003) or *semantic spectrum* (Evans 2015a) that words provide access to.

²⁰ *Location with Surety* is a parameter coined by Evans (2009, 2010a, 2015a) to refer to the capacity of some containers to transport the object(s) they contain.

offer proper conditions for food storage. In this case, an oven and a refrigerator are two different containers that offer distinct affecting conditions to the entity that is inside.

We can see that parameters are multifaceted in the sense that they are spatial and non-spatial. Importantly, however, the majority, if not all of them, are motivated by image-schematic structure. This structure might be the one that is invariantly mapped (in the sense of Lakoff 1990) when we move from the spatial to the non-spatial domain. This invariance facilitates metaphorical understanding. For instance, consider an expression like *He's in love*, in which the relational unit *in*, rather than establishing a link between the man and a concrete thing, it establishes a relation between a person and a psychosomatic state, here *love*. That figurative conception in turn, is motivated by the conceptual basis of *in* depicted in figure 2.1 above, particularly by the activation of the Affecting Conditions parameter, which eventually provides access to the [psychosomatic state] lexical concept of *in* in *He's in love*. The conceptual metaphor underlying these non-spatial usages of *in* can be states are locations.

In the final analysis, we can see that non-spatial (and temporal) conceptions are ultimately supported and partially structured by spatio-conceptual structure.

2.1.1 Temporal structure

At the outset of section 2.1, we started talking about time as ‘*the event*’ in which all others unfold.²¹ Traditionally, the domain of time has been widely understood by virtue of spatio-conceptual structure. Lakoff and Johnson (1980, 1999) argue that time is understood in terms of space like in the moving time (e.g., *Christmas is approaching*) and moving ego (e.g., *We are approaching Christmas*) metaphors. By the same token, Moore (2006) argues that time can also be understood as objects in a sequence (e.g., *lunch comes after breakfast*). However, such a view depicts the domain of time as something that apparently lacks its own structure – hence, it describes it as something that seems to be less phenomenologically real than space. I argue, on the contrary (following Evans 2004, 2013; Galton 2011; Pöppel 2004, 2009), that time does have its own structure, and that this

²¹ We might also define time as a dimension.

conceptual structure is qualitatively distinct from the one that comes from space.²² This is the issue I now turn to briefly explore.

One of the main differences between space and time, following Galton (2011), is that the domain of time exhibits something that space does not, and this is *transience*. Recall from chapter 1 that transience is the hallmark of time, and hence part of its inalienable character. Transience can be understood as the passing of time: the phenomenologically real experience of feeling how time is required for any event as something which underlies them no matter what the conceptual nature of the event is. Transience can be further divided into three types (according to Evans 2013): (i) duration, (ii) succession, and (iii) anisotropic. In addition, Galton (2011) proposes three parameters for comparing time and space. These are *quantity*, *linearity* and *directedness*. Let us take a look at each aspect.

Quantity

Quantity must be understood as the *magnitude* that relates to the quantifiability of a given substrate – the conceptual structure that makes up the domain, which in the case of space is *matter*. From this, two broad types of matter can be distinguished: discrete entities, such as objects, and mass entities, such as fluids. The substrate that makes up a domain allows us to quantify it. In the domain of space this relates to the property of *extension* which manifests itself in the three-dimensional character of space, involving *length* (one dimension), *area* (two dimensions), and *volume* (three dimensions).

On the other hand, the substrate of time is *action* (Talmy 2000). This substrate can also be broadly divided into *bounded* versus *unbounded*;²³ this, in turn, is analogous to the distinction between discrete versus mass things in space. The means of “cutting up” action into amounts (i.e., quantify) is *duration* rather than extension. While temporal duration can be measured using measuring systems such as clocks, duration can also be estimated without such systems. Human beings appear to reliably distinguish periods of different temporal magnitudes: it is different to go to the cinema for a couple of hours (even though time flies when we are having fun (i.e., *temporal compression*)), than waiting for our turn

²² However, we do tend to apprehend time in terms of space due to temporal experience being fundamental to the construction of events.

²³ This is reflected in language by the grammatical distinction between perfective and imperfective aspect.

for 5 minutes in a supermarket counter (in this case time drags when we are bored or waiting (i.e., *temporal protraction*)).

Lastly, unlike the property of extension, which is exhibited by the spatial substrate matter, the quantification of the temporal domain (duration) is unidimensional considering the fact that time always moves forward and never stops or goes back.

Linearity

The second aspect for presenting a qualitative distinction between the foundations of human cognition, here space and time, is linearity. This notion can also be understood as *dimensionality* (in the sense of Evans 2013). This relates to the *constituent structure* of matter (in the case of space) that involves three distinct planes with respect to which points can be located. As pointed out above, our representation of space is three dimensional since it involves the transversal, sagittal, and vertical planes. On the contrary, the constituent structure of action in the domain of time, involves *succession*. Succession in this view must be understood as “the (sequential) relationship that holds between different units and sub-units of action” (*ibid.* 64), so our representation of time is unidimensional since it involves a relationship between units of action in a sequence. From a phenomenological perspective, we can observe that time exhibits dimensionality, just like space does, but the temporal dimensionality provides a one-dimensional constituent structure due to its sequential relationship between events.

Directedness

The last aspect is directedness. This relates to the *symmetry* of the substrate in each domain. The domain of space is symmetric (i.e., isotropic), that means it has no inherent asymmetry since it is possible to proceed in any direction: we can indeed navigate space from side to side and forward or back. On the other hand, time is asymmetric (i.e., anisotropic). To understand anisotropy, consider the thermodynamic property of matter: a cup of coffee cools down and cannot spontaneously heat up again.²⁴ By the same token, and

²⁴ Temporal units must necessarily occur in indefinite succession and this succession cannot be reverted or undone; this explains why the past moment when the coffee was hot cannot reoccur spontaneously, or why if it is 7.30pm on October 3, 2019, it cannot be 2.30 pm again on the same day a few hours later.

at the macroscopic level of matter, the anisotropic nature of time has led some scholars like Sir Arthur Eddington to coin the term “the arrow of time” (1928). Time is then experienced as anisotropic at the subjective level from a phenomenological perspective. This relates to the anticipation of a future event, the actual experience of the event or *nowness* (James [1890]/1950) and the recollection of the event as past. This feature of time is referred to by Evans (2013: 65) as *anisotropy*.²⁵

After having reviewed the three most important aspects to see qualitative differences between space and time, we can observe that they also meet at the conceptual level, considering that both can be scrutinized under the scope of quantity, linearity and directedness. Moreover, it is important to mention that space and time can sometimes be used interchangeably in linguistically mediated communication to express a similar conception. To illustrate this point, consider the following example:

- (1) a. Málaga is *200 kilometers* from Córdoba. **[distance]**
b. Málaga is *two hours* by car from Córdoba. **[distance]**

The conceptual phenomenon above is known as *conceptual alternativity* (Talmy 2000) and is used to express a similar conception using different domains of experience, in this case space in (1a) and time in (1b) are used to sanction the [distance] lexical concept. Note that without such conceptual “meeting point” between space and time, expressions like the ones in (1) would be impossible. Temporal and spatio-conceptual structures are interwoven in the human mind since they are the foundations of human cognition.²⁶

Now when it comes to temporal conceptions as in *Her birthday is **in** May* or *I did my homework **in** the morning*, we can observe that these instances are partly motivated by spatio-conceptual structure that comes in this case from the relational unit *in*. However,

²⁵ See also Husserl’s three-fold structure of time-consciousness (1991) which are *primal impression* – akin to what James ([1890]/1950) calls *nowness*, *retention*, which deals with the just-past event structure, and *protention*, which has to do with what happens in the immediate future.

²⁶ Since time and space regularly co-occur in the same scenario, one of them can be used to activate the other metonymically, as in (1b).

much temporal thinking is also needed to fully apprehend expressions like the ones just given. For instance, temporal concepts such as {month}, {morning}, {hour}, {week}, {day}, among others, are crucial to conceptually integrate *in* with its prepositional-landmark elements as in a prepositional phrase such as *in May* or *in the morning*. On the other hand, the preposition *in* might help us to understand a bounded temporal concept such as {month} or {morning} due to the spatio-conceptual structure it offers access to, particularly because of the parameter of Enclosure that gets activated and metaphorically interpreted (see figure 2.1 above) to conceptualize temporal borders.

Temporal reference is another pivotal factor that is assumed in this research as being part and parcel of the type of temporal structure that inheres in the human conceptual system. Following Evans (2013) there are three types of temporal frames of references – or t-FoR for short – these are *deictic* (ego-based), *sequential* (event-based), and *extrinsic* (periodicity-based). This latter temporal strategy is analogous to the absolute spatial frame of reference (see Levinson 2003).

In sum, we can observe that time is far from just “parasitic” with respect to space. Both domains manifest similarities (that is the main reason why time is often understood in terms of space), and differences. The main difference between these two domains is *transience*, a temporal feature *per excellence* that constitutes the hallmark of time and is absent in the spatial domain. However, spatio-conceptual and temporal structures seem to jointly work in the development of the human conceptual system. This makes us think about the possibility of positing a sort of “fourth-dimensional space-time continuum” (see Langacker 2012a).

2.2 Cognitive Grammar

The theory of Cognitive Grammar (CG for short) has been thoroughly developed by Roland Langacker (1987, 1991, 2008). This theory offers an alternative perspective to the generative tradition in linguistics (e.g., Chomsky 1965, 1995) since it reflects an intellectual trend in the study of language and mind that is not based on mechanistic conceptions but on biological systems and cognitive processes. CG is at odds with the (still) dominant mainstream in current linguistic theory that advocates a sharp separation between syntax and semantics. Syntax in CG is not apprehended as an autonomous system but is included, along with semantics and pragmatics, within the semantic pole of a *symbolic unit*. Words

are symbolic units in that they consist of a semantic pole, a phonological pole, and the relationship that holds between them. However, the conception of language as *symbolic* in CG goes beyond lexicon to grammar since morphological and syntactic structures are inherently symbolic as well (see also Goldberg 1995). Symbolic units, then, are deployed in CG for the representation of both lexical and grammatical structure. One of the simplest symbolic unit is a morpheme such as *table*, where semantic and phonological structure participate as unanalyzable wholes in a symbolic relationship. From this idea we can observe that a symbolic structure is bipolar in that it consists of a semantic pole, a phonological pole, and the association between them. Such a symbolic representation provides access points to conceptual structure.

Following Langacker (1987: 11-12) a symbolic unit in CG, embraces the spirit of Saussurean linguistics (Saussure 1916); nevertheless, there is a couple of points in which CG departs from classic Saussurean philosophy. The first one has to do with the already mentioned idea that morphological and syntactic structures are as symbolic as the lexical items they deploy. The second point concerns *arbitrariness*. In CG, a polymorphemic linguistic sign is by definition *non-arbitrary*, since it manifests a level of analyzability. For instance, consider the word *charger*, which is the form used in English to refer to a charging device. Given that *charge* means what it does, and so does the suffix *-er*, it is anything but arbitrary that their integration will yield the form *charger* as the thing which performs such an action. Note that form is *conventionalized* in that another form could have been perfectly chosen for the {charger} concept, but it is not arbitrary in the sense of being unmotivated. Arbitrariness, thus, must be understood, along with the notions of *conventionalization* (the speakers' agreement to employ a given form for a concept) and *entrenchment* (the linguistic mental representation of a given concept that is acquired through usage), as motivated, and as something that exhibits a degree of analyzability.

Another pivotal idea in CG is *designation* or *profiling*, which is characterized by the highlighting of some entity within a predication. From this idea, two main types of predicates can be spotted depending on the conceptual nature of the designated entity: a nominal predication or a relational predication. A nominal predication prototypically designates or profiles a thing (i.e., nouns), whereas a relational predication prototypically

profiles either a *process* or an *atemporal relation* (i.e., verbs, prepositions, adjectives, among other grammatical categories). It is important to mention, however, the notion of *base*, which is the conceptual “backup” that the profiled entity stands out against. Take for example the word *head*: it profiles a *thing* with respect to a presupposed mental representation of *body*. As Langacker (1987) puts in “The semantic value of an expression resides in neither the base nor the profile alone, but only in their combination; it derives from the designation of a specific entity identified and characterized by its position within a larger configuration” (*ibid.* 183).

The present dissertation is focused on prepositions. They are atemporal relational units that are *conceptually dependent* – that is, one cannot (fully) conceptualize them unless we take into consideration the entities that these atemporal relations interconnect. Hence, atemporal relational predications such as prepositions, put interconnections in the profile rather than in the base. The relational profile of a preposition can be apprehended as the link of the content evoked by the primary focus (trajector), which can either be a thing or a relation, and the secondary focus (landmark). This latter is generally characterized by simple nouns and nominals (Langacker 2008: 116).

Prepositions are considered atemporal because the temporal profile (i.e., temporal evolution) is not critical (as opposed to verbs). This can be exemplified in an utterance such as *the glass is **on** the table*, where the temporal profile is not necessarily positive (i.e., non-zero); on the contrary, it is being backgrounded since the strict correspondence between conceived time and processing time is suspended. Conceived time refers to the processing of an actual activity, whereas processing time deals with conceptual activity.

Atemporal relations profiled by prepositions can be simplex or complex depending on whether a composite conception – the very meaning of words in a situated linguistic event – reduces to a single consistent configuration. Simplex atemporal relations are also understood as *static relations*. We can find examples of these in the utterance just given above – *the glass is on the table* – where the preposition *on* serves as relational unit to specify the location of the glass with respect to the table: their interconnections are in the profile in a *summary* way, like when we see a picture of a glass that is on a table.

On the contrary, complex atemporal relations evoked by prepositions are considered in connection with processual predications as in *She's running along the track*, since they do not reduce to a single consistent configuration. Another example of that phenomenon is an utterance like *The cat jumped over the wall*, in which the preposition *over*, conveys path rather than location. The evolution of such a situation through time (i.e., conceived time) is doubtlessly an important facet of the perfective aspect of the utterance, but it is confined to the base and hence, left unprofiled. When we say *the cat jumped over the wall*, we evoke a *sequential scanning*. However, the specific semantic import of the highly polysemous English preposition *over* (for details see Brugman 1981) is at the expense of the *suspension* of sequential scanning – this in turn, is the main reason why prepositions are considered atemporal relational units. Prepositions generally behave in both ways depending on the conceptual nature of the elements they are integrated with in a composite structure. *Over* can also function as a simplex atemporal unit as in an expression such as *the picture is over the sofa*, where no sequential but summary scanning is involved.

Another example in which we can appreciate more clearly the atemporal character of complex relational predications evoked by prepositions is in an utterance such as *The road goes through the mountains*, where the preposition *through* is integrated in the prepositional phrase *through the mountains* which designates a series of distinct locative relationships between the trajector, here *the road*, and its landmark, here *the mountains*. Here the mental scanning is *fictive* in nature (so it inheres in the virtual plane) and occurs only in processing time rather than conceived time.

2.2.1 Trajector and Landmark

I now turn to briefly introduce the constructs of trajector (TR) and landmark (LM). This asymmetric alignment is fundamental to relational predications and underlies the notion of subject/object, among others. Trajector and landmark must be understood as the manifestation in language of a more basic cognitive ability known as *figure* (F) and *ground* (G) in the school of Gestalt psychology. Figure/ground relations have to do primarily with perceptual input, as when we pay attention to a bird flying in the sky – the bird becomes the attentional figure that is perceived against its background, that is, the sky.

It follows from this idea that the TR is the figure in a relational profile whereas the LM is the second most prominent entity in a given construction such as *the glass is on the table*, in which the nominal *the glass* functions as TR, whereas the nominal *the table* functions as LM. Such an alignment, in turn, is linked by the relational unit *on* that functions as simplex atemporal unit and elaboration site for these more conceptually autonomous structures. Note that the LM provides a reference point with respect to which the TR is situated. The notions of figure (F) and ground (G), and trajector (TR) and landmark (LM) are used interchangeably in this research.

An important aspect to highlight about the TR/LM alignment in prepositional items is that the TR, which does not have to necessarily be a mover (Langacker 2008: 72), has a peculiar nature in that it can be associated with a thing or a relation. On the other hand, the prepositional landmark is more “stable” since it is generally elaborated by things (i.e., simple nouns and nominals). For example, in an utterance such as *the glass is on the table*, the nominal profile of *the glass* elaborates the TR, and the nominal profile of *the table* elaborates the prepositional landmark. This type of TR could be treated as *nominal* TR due to its more autonomous nature since it designates a thing. On the other hand, we also encounter *relational* TRs as in utterances such as *She’s running along the track*, where the TR is elaborated by the clause *She’s running*, whereas the prepositional landmark is elaborated by the nominal profile evoked in *the track*. Note that in the former utterance the preposition *on* profiles a *simplex* atemporal relation, compared to the *complex* atemporal relation profiled by the preposition *along* in the latter utterance. This, in turn, might be key to distinguishing such a fine-grained conceptual behavior within the primary focal prominence that defines a (prepositional) TR.

It is also important to mention that the LM of prepositions, even though they tend to be elaborated by simple nouns and nominals, sometimes can also be relational as in *This glue is to fix the table*, where the nominal *This glue* elaborates the TR of *to* (nominal TR in this case), while its LM is elaborated by the clause *fix the table*.

According to Langacker (1987), a good point of divergence and reason why to prefer the construct of trajector/landmark alignment over subject/object is due to the focus on the internal structure of relational predications at any level of organization. It does not need to

be spelled out directly as traditionally understood wherein the subject and object are normally used for overt nominals such as noun phrases with specifiable roles in clause-level syntax. On the contrary, TR and LM are often relational rather than nominal in character.

Trajector and landmark will enormously help us to understand how the English and Spanish prepositional vehicles analyzed in this research are distributed in the linguistic examples provided in the analysis. However, in addition to trajector/landmark alignment, the present research also makes use of important *descriptive factors* within CG that allow us to fully apprehend the resulting alignment of the TR and its LM in a situated linguistic usage event. Such descriptive factors are *correspondences*, *profile determinacy*, and *elaboration*. They will be briefly introduced below.

Correspondences

Correspondence links between symbolic units are motivated by the substructures that these have in common. The sharing substructures of two component expressions can then be integrated in a coherent *semantic assembly*. To illustrate this point, consider the clause *the kitten is in the box*, where there are correspondence links between the TR of [is] and the profile of [the-kitten], as well as between the LM of [in] and the profile of [the-box]. Correspondences allow semantic assembly to form composite structures. These must be understood as structures that are built by superimposing (through the process of summation [Langacker 2012b]) corresponding entities to merge their specifications.

Elaboration

Elaboration occurs when correspondence links are established, so it fully fledges the semantic assembly of a composite structure. To illustrate how elaboration works, consider the prepositional landmark of the utterance just given above (*the kitty is in the box*), here the nominal *the box*. Once correspondence links are established between the LM of *in* and the profile of *the box*, the more conceptually dependent relational unit, here the preposition *in*, serves as elaboration site, or *e-site* for short, for the profile of the more conceptually autonomous nominal *the box*. This makes the conceptually autonomous predication spell out its properties in finer detail.

Profile Determinacy

A composite structure generally inherits the profile of one of its components. The inherent component structure's profile is termed the *profile determinant*. To illustrate, consider the clause *The toy is under the table*, in which [toy] serves as profile determinant due to its highly relevant role as main attentional figure in the composite structure which establishes correspondence links between its profile – here a *thing* – and the schematic trajector of the relational structure [under-the-table].²⁷ The same goes for head/modifier constructions such as *bad boys*. The head, here *boys*, is a type of figure that is usually considered as profile determinant, whereas the modifier, here *bad*, constitutes its ground. The head *boys* elaborates the TR of *bad* which serves as e-site due to its conceptual dependency on more conceptually autonomous structures such as the plural noun *boys*.

2.3. Lexical Concepts and Cognitive Models Theory (LCCM)

I now provide a brief description of LCCM theory. LCCM Theory is a theoretical account of lexical representation and semantic composition in language understanding. This theory derives its name from its two main theoretical constructs – cognitive models and lexical concepts. *Lexical concepts* in this account are units of semantic structure that exist as a natural part of the mental grammar and *sanction* specific instances of language use. In this dissertation, the lexical concept notion is used interchangeably with the one of *sense*. On the other hand, a *cognitive model* is a coherent body of non-linguistic knowledge that consists of a frame or a combination of related frames. Cognitive models provide rich conceptual content to embodied simulations (for details on lexical concepts and cognitive models see Evans 2009: Ch. 7 and 10).

LCCM offers a methodological framework for conducting semantic analysis of lexical concepts by providing the two constructs mentioned above, along with the one of *parameters*, which as mentioned earlier, are the semantic elements that make up the conceptual basis of a given word (and more complex symbolic assembles such as phrases and clauses).

²⁷ On the other hand, the profile determinant of the prepositional phrase *under the table* is the preposition *under* since it designates a spatial relation rather than the table.

Parameters are considered modal (following Barsalou 1999) since they might be represented in the same systems that produces them (i.e. sensory-motor mechanisms). A common representational system underlies perception (bottom-up processes) and cognition (top-down processes); this in turn, is reflected at the conceptual and linguistic levels, as we shall see below. As we recognize or produce linguistic expressions, or even imagine an event or a thing such as {tree}, the same neural connections in their respective areas (visual and motor cortices at the very least) fire up. The same neural connections also fire up when we directly perceive the world and move in space.

Parameters, on the other hand, are also *multimodal* in that they are structured by perceptual, introspective, and event-like conceptual knowledge. Abstract concepts may tend to be more structured by introspective and event-like structure whereas concrete concepts by perceptual structure (in addition to event-like and introspective structure) due to the immediacy of perception. In the case of atemporal relations encoded by prepositions, they might be mainly structured by perceptual and event-like structure. However, as we shall see in the linguistic analysis, there is also a degree of introspective structure at least in some of the prepositional vehicles analyzed. The English and Spanish prepositions *for* and *para* represent good linguistic evidence of this because they are generally used in situations that are related to purposes, intentions, and goals even though such usages are themselves spatially organized as shown in chapter 6.

Parameters can vary according to their level of schematicity as shown in the conceptual basis of the English preposition *in* in figure 2.1 above. The four parameters that, at the very least, make up its conceptual basis are more specific than say the parameter of *Relation*.²⁸ This type of parameter is a more schematic semantic element in that it is concerned with conceptual and grammatical functions – that is, what the preposition profiles at the highest level of schematicity.

²⁸ Due to its highly schematic nature, the parameter of (*atemporal*) *Relation* is not considered as a member of the conceptual basis of *in* depicted in figure 2.1. However, it is always encoded in linguistic communication. *Atemporal Relation* might function as background information in the form of parametric linguistic knowledge. See Morras (in press) for an account of parametric knowledge in linguistic structure.

Even though LCCM offers some constructs that are applied in this research such as lexical concepts and parameters, I depart from Evans's theory in some regards that I shall indicate below.

Lexical concepts are claimed to have bipartite organization: on the one hand they encode linguistic content, and on the other hand they facilitate access to conceptual structure. According to Evans (2006, 2009, 2010b, 2013), linguistic content represents the form that conceptual structure takes for direct encoding in language. For instance, a noun such as *girl* encodes linguistic content which can be labelled as [thing] and facilitates access to its cognitive model which in turn, provides unlimited possible simulations when that word is put in contexts as in *I like that **girl***, *Mark looks like a **girl***, or *That perfume is for **girls***. In each utterance, the noun *girl* acquires a different reading since different substructures or attributes get conceptually highlighted within its cognitive model.

Now the point in which I depart from Evans is that he maintains a sharp distinction between closed-class and open-class items (which I agree on but in a different way) and goes further by saying that open-class items, but not closed-class ones, facilitate access to conceptual structure – that is, cognitive models. It follows, according to LCCM, that lexical concepts that are paired with both lexical classes encode linguistic content, but only those lexical concepts that are paired with open-class words (i.e., open-class lexical concepts) facilitate access to conceptual structure. On the contrary, I think that both classes encode linguistic content and facilitate access to conceptual structure. However, the conceptual material that is accessed by each grammatical category seems to be of a different kind, as mentioned earlier in chapter 1.

Following Talmy (2000), the distinction between closed-class and open-class items helps us to understand the conceptual import afforded by the lexico-grammatical system. Open-class items seem to provide richer conceptual content whereas closed-class items are apprehended as providing a conceptual 'scaffolding' – so to speak – in that they provide access to a much more schematic content. To illustrate this point, consider the following example:

(1) *She painted the house*

In (1) above, the composite structure is built by the open-class elements *paint* and *house*, and the closed-class elements *she*, the *-ed* suffix, and *the*. Now if we consider the linguistic (and conceptual) schematic content encoded by the lexical concepts that are combined in (1), we could gloss it as [someone somethinged the something]. In this way, we can appreciate the schematic import of the semantic structure inherent in the combinatorial sequence of a pronoun, a regular past tense verb, a definite article, and a noun. On the other hand, the schematic meaning encoded in (1) provides access to conceptual structure in the form of simulators that allow embodied simulations to take place.²⁹ If we read or close our eyes and listen to the utterance in (1), we can indeed simulate a perfective event where someone did something to an entity (i.e. the painting event). This is precisely because words are access sites to conceptual structure.

Now my point here is that even though the open-class words *paint*, and *house* provide a richer conceptual content since their cognitive models are constituted by a large set of attributes and values, this may not preclude closed-class items such as *she*, *-ed*, and *the*, from being supported by schematic conceptual information. After all, simulators are *concepts* in our mental repository (Barsalou 1999), hence, they are based on encyclopedic knowledge and so provide access to conceptual structure. I here assume, therefore, that all words and morphemes facilitate access to their *conceptual basis*, and that conceptual bases are constituted by different types of conceptual structure depending on the grammatical category that a given (lexical or morphemic) construction belongs to. Cognitive models and frames capture the rich conceptual structure offered by open-class items, whereas conceptual parameters capture the nature of the schematic type of conceptual structure that is accessed via closed-class items. It follows from this that open-class words provide a *wider* access to conceptual structure, while closed-class items provide a *narrower* one (Talmy 2007).

²⁹ In this research symbolic units are assumed to develop together with what they represent in the conceptual system. This is akin to what Barsalou (1999) refers to as the associated perceptual symbols of linguistic units. There are correspondences between lexical concepts (i.e. word meaning) that populate the mental grammar, and non-lexical concepts – those stored in the older conceptual system. The linguistic system, in turn, seems to have been evolved later, to harness the conceptual content and make embodied simulation easier to achieve by linguistic index and control (see Evans 2014, 2015b).

As mentioned above, the difference between the conceptual bases of open and closed-class items is a matter of degree between schematic and rich conceptual content. This idea further points to different qualities or types of conceptual structures that our encyclopedic knowledge of the world – the human conceptual system – might be constituted of.

The rich conceptual import of open-class words can be appreciated if we replace the utterance in (1) with the one given below:

(2) *She smashed the guitar*

We can observe how expression in (2) encodes the same schematic content as (1) above ([someone did something to something]). However, the composite structure triggers a different *simulation* since it evokes a different perfective event in which the act of smashing, rather than painting, is involved. In LCCM Theory, simulations are triggered by a subset of lexical concepts, *open-class* lexical concepts. However, there seem to be situations in which closed-class elements play a more distinguishable role in embodied simulations. Following Barsalou (1999), word simulation not only has to do with entire things and events such as [tree] or [jump], but also with other aspects of simulations such as manners (e.g., *intelligently*), relations (e.g., *between*), time and aspect (e.g., *smashed*), among others. To illustrate this point, consider the following example:

- | | |
|--|--------------------------------|
| (3) a. I want <i>to</i> eat pizza | [desire] |
| b. She was attached <i>to</i> her mother | [emotional attachment] |
| c. My laptop is next <i>to</i> the TV | [location] |
| d. We are going <i>to</i> the beach | [motion towards a destination] |

In (3) above, we can observe how a closed-class prepositional vehicle such as *to*, activates different parameters within its conceptual basis (see figure 5.3 in chapter 5) depending on the linguistic context it is placed in. In (3a) there are correspondence links between the profile of *I want* and the TR of *to*, and between the profile of *eat pizza* and the prepositional landmark. The resulting composite conception evokes the [desire] lexical concept or sense that is partly sanctioned by *to* in a *distributed way* (in the sense of Sinha and Kuteva 1995). In (2b), the TR of *to* is elaborated by *She was attached*, whereas its prepositional landmark

is elaborated by the person to whom the subject's feelings are aimed at (her mother); the resulting sense is the one of [emotional attachment], in which *to* contributes schematically as the vector that characterizes the emotional linearity that goes from one person to another (i.e. transfer). In (3c), *to* activates its locative function, there is no vector whatsoever but a static relation in which the laptop (here the entity that elaborates the TR of *next to*) is located with respect to the TV (LM). Finally, in (3d), *to* behaves as a complex atemporal relation in that it encodes a sequence of an ongoing trip to a target destination that functions as prepositional landmark, here the profile of the nominal *the beach*.

As briefly shown above, open-class and closed-class words should be seen as forming a continuum in that we need both to achieve a *cognitive representation* (in the sense of Talmy 2000). The difference hinges in the degree of conceptual schematicity and richness that each lexical group contributes to embodied simulations. Closed-class items are indeed schematic and serve as scaffolding for meaning construction; nevertheless, they work out simulators since they are *concepts* themselves. We would not say, for instance, that the [forward motion] lexical concept, which is encoded by the preposition *to*, is not a concept. On the contrary, it is maybe one of the first concepts we acquire in the early stages of life considering the importance of navigating space to achieve our daily goals. Furthermore, {forward motion} could be considered an attribute of the spatial navigation frame that may background the conceptual basis of the English preposition *to*. It follows that *to* does facilitate access to conceptual structure – that is, non-linguistic knowledge inherent in the human conceptual system. Even though the content offered by *to* is more schematic than saying, *chair*, which exhibits a conceptually richer simulator due to the affordances it offers in our daily lives: we can see chairs and interact with them in a considerable different way we apprehend a concept such as {forward motion}, which is more based on proprioception. Now when it comes to imagery, it is also easier to evoke a mental picture of a chair than if we try to imagine a closed-class vehicle such as *to*. Nevertheless, we can still think of a concept such as *to* even though the simulation we might evoke would be something like a schematic forward vector rather than a mental picture with all its vivid details.

2.3.1 Lexical representation and meaning determination

I now want to briefly address how words are represented in our mental linguistic system and how they are narrowed down conceptually for communicative purposes. To do so, one of the main constructs presented in this research is the one of *conceptual basis*, which must be understood as the meaning potential that words provide access to. Such potential varies depending on the grammatical category that a given morpheme is member of, as shown earlier. A conceptual basis is built through *proto-scenes* (Tyler and Evans 2003a, 2003b). Recall that these are humanly relevant scenes in which abstractions and functional categories are acquired and hence, parameterized in thought and language. It follows that the most relevant experiential aspects of a given proto-scene become the parameters (and cognitive models) of a word's conceptual basis.³⁰ Conceptual bases are not static but dynamic, just as concepts and categorization are since they can sanction a proliferation of senses in novel contexts of use. Moreover, conceptual bases also provide a psychologically real account for the processes of elaboration and extension, which deal with literal and figurative understanding, respectively.

Conceptual bases exist at the level of the lexical representation since they constitute the conceptual/linguistic substrate that inhabits in the mental lexicon and is stored in long-term semantic memory (as captured in figures 1.1, 1.2, and 2.1 above). Put it differently, they are the knowledge we have about what words mean in the absence of any context – under the first condition of attending (in the sense of Talmy 2007) within introspection. For instance, if we say the word *chair* or *to*, there is indeed something that tells us what they mean. This in turn, is due to the conceptual basis we have for each word in our mind as a proficient or native speaker of English. However, there is a clear difference in how we simulate isolated words such as *chair* and *to*. The former is richer due to the cognitive models that compose its conceptual basis – it offers a wider access to conceptual structure – whereas the closed-class item *to* offers a narrower access, and this is indeed reflected in the schematic structure in terms of the parameterized spatio-conceptual structure that is offered by this preposition.

³⁰ Cognitive models are conceptually richer than conceptual parameters. Recall that conceptual parameters are constituted by a more schematic type of conceptual structure – they compress the complexity of experience into semantic units for linguistically mediated communication. At an even higher schematic level, we can also consider the parameter of [RELATION] as the linguistic nature that prepositions, among other grammatical categories, exhibit.

On the other hand, and this is related to a more complex level of organization due to lexical integration, there is *meaning determination*. This notion is taken from the work of Jens Allwood (2003) and must be understood as the realization of a symbolic unit in context. This in turn, is consonant with Langacker's (e.g., 1987, 2008, 2009) idea of *active zones*. The present research takes a somehow nuanced perspective on the notion of active zone since it is seen as a *highlighting process* that deals with the specific parameters and/or cognitive models of a word's conceptual basis that are most directly involved in a given linguistic construction.³¹

Even though words should not be apprehended outside context, the distinction between lexical representation and meaning determination seems useful in that it provides insight on the conceptual and linguistic knowledge that populate our mental grammar. It suggests that there must be "something" about words that has to be stored in long-term semantic memory for recognition, imagination, and production. On the other hand, the notion of meaning determination provides good insight on how words acquire their *situated* semantics. After all, when words get integrated in a situated linguistic event, a substructure of each conceptual basis is the one that gets highlighted or activated. On this respect, and following Langacker (1987: 68-71), we can say that word sanctioning is generally partial.

2.4 Metaphor

I now turn to conceptual metaphor theory (Lakoff and Johnson 1980, 1999; see also Kövecses 1986, 2005) by providing a brief introduction and show how this theory will be used.

Metaphor has been traditionally seen in Linguistics and Philosophy as a matter of peripheral interest. However, cognitive-linguistic research on metaphor, particularly the pioneering work of Lakoff and Johnson (1980, 1999; see also Grady 1997 for primary

³¹ For Langacker himself (2000) *active zone* has to do with the 'parts' or 'portion' of an entity that participate most directly in a profiled relationship. For example, in a sentence such as *Your dog bit my cat*, the part of the dog that is most directly involved is {TEETH}, rather than say, {TAIL}. While I agree with Langacker's notion, the present investigation takes a nuanced perspective on this notion by considering the activation or highlighting of the conceptual parameters as another instance of active zone since it shows the semantic elements that are directly involved in a given profiled relationship while others remain backgrounded.

metaphors, and Barcelona 2000b for the interaction of metaphor and metonymy) has demonstrated the central role that metaphor has not only in language, but also in human thought and action. Metaphor is pervasive in our everyday life to the point that it is considered as a key component of our human conceptual system. Due to the metaphorical nature of a large part of our conceptual system, language is an important source of evidence to understand what that system is like. To provide an idea of how a concept can be understood metaphorically, I cite an example taken from Lakoff and Johnson (1980: 4) about the concept of {argument} that in some Western cultures is apprehended as {war}:

argument is war

Your claims are *indefensible*

He *attacked every weak point* in my argument

She *demolished* his argument

I've never *won* an argument with her

We can observe that many of the things we do in an argument are partially structured by the concept of {war}. Therefore, {argument} is the target domain – the concept we aim to understand – whereas {war} constitutes the source domain – the domain from which we can extract attributes and values in order to generate the metaphorical mapping. Such a metaphorical mapping highlights the most relevant aspects of the source domain (while hiding others) to apprehend the target concept. This selective process is due to the “invariance principle” (Lakoff 1990), which stipulates that metaphorical mappings preserve the image-schematic structure of the source domain. Source domain inferences in the form of image-schematic structure help to fully flesh the understanding of the target domain (*ibid.* 54). Note that the words in italics in the example just given above are precisely the attributes that are taken from the concept of {war}. Such attributes do help structuring other concepts such as {argument}. The {argument} concept exhibits *metaphorical coherence* (see Lakoff and Johnson 1980: Ch. 16) to be understood in terms of war since an argument is understood as a verbal fight in which there is a winner and a loser.

However, a caveat is in order when we represent abstract concepts such as {argument} or even more abstract ones such as {anger} in terms of a hot fluid exploding in a container

(Lakoff and Johnson 1980), and it has to do with the necessity of a direct, non-metaphorical representation of an abstract domain since metaphor itself is not sufficient for representing abstract concepts (Barsalou et al. 1993, Barsalou 1999; see also Murphy 1996). This idea is not of course to deny the major role of metaphor in elaborating and construing abstract concepts. On the contrary, it complements our understanding of how abstract concepts are structured in the human mind. Following Barsalou (1999), the necessity of a direct, non-metaphorical representation of an abstract domain is important for two reasons. The first one is that it constitutes the most basic understanding of the domain. To know that an argument is like a war or that anger is like a hot fluid in a container, does not exhaust our notions of argument and anger: those concepts exist independently in the conceptual system even though they are conceptualized in an easier way through metaphorical mappings – that is precisely why metaphor *facilitates* rather than completely structures abstract concepts.

The second reason for advocating the existence of a basic direct, non-metaphorical representation of abstract concepts is that such a representation *guides* the mapping of a concrete domain onto it. This idea is endorsed by the fact that a concrete domain, as in the metaphor love is a journey, here *journey*, cannot be mapped systematically onto an abstract domain, here *love*, if this target domain is “contentless”.

Some research on emotions (e.g., Mandler 1975) has shown that people have *direct knowledge* of emotions such as {anger}. Such direct knowledge comes from three sources of experience. First, *anger* involves the perception that an event’s goal has been blocked. Second, the perception of an event’s goal being blocked, triggers the experience of intense affective states. The third source of experience involves the subject’s behavioral responses, such as seeking revenge, expressing disapproval, among other responses. In sum, each of these three aspects of anger make people develop a concept of it through *direct* experience.

When people (metaphorically) think of a concept such as {anger}, that understanding elaborates and extends the direct concept, making it more accessible and cognition friendly. Furthermore, metaphor (and metonymy) often involve polysemy (Lakoff 1990, 1993) as in an utterance such as *Ralph exploded with anger* in which the past-tense verb *exploded* points to a figurative meaning rather than its literal one: a person clearly cannot explode due to anger. On the contrary, it points to an intensification – linguistically speaking – of

such a mental state. Under this context, the verb *explode* activates a simulation of angry behavior which comes from direct phenomenological and subjective experience. This activation might be due to the extension of the *Explosion* cognitive model that may populate the conceptual basis of *explode*, but which, nevertheless, needs conceptual metaphor for its proper interpretation in the non-spatial domain since we are dealing in this case with a psychological state rather than with an explosive event.

Metaphorical understanding is doubtlessly critical to understanding the meaning extension exhibited by the English and Spanish prepositions analyzed in this research. To illustrate this point, consider the following example with the English preposition *in* (Spanish *en*), which even though it is not considered in the linguistic analysis of the present study, is a good linguistic example considering that its conceptual basis was already presented in figure 2.1 above:

- (4) a. The students are *in* the classroom [location]
(Los estudiantes están *en* el aula)
- b. They are *in* trouble [psychological state]
(Ellos están *en* problemas)

In (4) above, the English preposition *in* and its Spanish equivalent *en* establish a relation between the TR and the LM. In (4a), the profile of *the students* establishes correspondence links with the TR of *in* – hence, *in* serves as e-site and its TR is elaborated. On the other hand, the prepositional landmark of *in* is elaborated by the nominal *the classroom* due to correspondence links between the nominal's profile and the LM of *in*. The resulting composite structure yields [location] as main lexical concept. Now if we take a look at the conceptual basis of *in* in figure 2.1 above, we can observe that there is conceptual activation of the parameter of Enclosure, since the students are located inside the classroom, probably for a lesson. There might also be activation of the parameter of Occlusion unless the classroom walls are made of transparent glass or the classroom is equipped with windows, so one could see the students inside when walk past.

On the other hand, (4b) evokes a completely different scene, even though it employs the same relational unit, here the preposition *in* and its Spanish equivalent *en*. In (4b), *they*

profiles a group of two or more people; this profile establishes correspondence links with the TR of *in* and hence elaborates it, whereas its prepositional landmark is elaborated by the noun *trouble*. The resulting composite conception yields a scene in which the prototypical three-dimensional locative function of *in*, and *en*, is not the highlighted aspect of their conceptual basis. Rather, the parameter that receives primary activation is the one of Affecting Conditions. Such a motivation comes from the very nature of containers: they provide affecting conditions to the entity contained. As mentioned earlier, it is not the same leaving fresh food in the oven rather than leaving it in the fridge. They are different types of containers and hence provide different affecting conditions to the food stored. In addition to this activation, the Affecting Conditions parameter also becomes metaphorically extended so as to apprehend the [psychological state] lexical concept.³²

To sum up, metaphorical understanding is crucial for non-spatial usages of prepositions. Nevertheless, this is not the whole story; we do need non-metaphorical representations of abstract concepts such as [trouble] and [love] as well. What metaphorical understanding brings to the front, is a key aspect that *facilitates* the conceptualization of abstract (and temporal) concepts and which is based on more concrete human experience. Recall that all the concepts that inhabit our human conceptual system are derived from the same *situational content* (Barsalou and Wiemer-Hastings 2005), but their *situational focus* varies depending on how much perceptual, introspective, and event-like structure is embedded in each concept.

2.5 Metonymy

Metonymy is a conceptual process that is entrenched in human language, thought and action. Just like metaphor, metonymic concepts structure and give its nature to the human conceptual system. However, metonymic patterns seem to be more basic than metaphorical ones. As a matter of fact, some scholars have even come to suggest, as a plausible hypothesis, that metonymic patterns regularly motivate metaphor (Barcelona 2000a) and

³² Moreover, metonymy is instrumental (following Barcelona 2000a, 2011) in extracting the abstract correlation between some elements of the target's conceptual structure and a similar element in the source's conceptual structure in (4b). Here the Affecting Conditions parameter is the semantic element that connects containers with emotional states.

grammar (Barcelona 2009; Langacker 2009), an idea that seems indeed plausible if we assume the more basic and essential role of metonymy in human thought and action. This in turn, might be due to the more specific scope, hence informative aspect of metonymies. Metonymies not only serve a referential function, but also provide an easier, quicker initial understanding of the concept that is being activated. Such a function is carried out through *mental access*: concept A provides access to and *activates* the semantically related concept B. This is called by Barcelona (2009, 2011) the “inferential” function of metonymy, and he, following Panther and Thornburg (2007), claims that metonymy is a basic inferential mechanism.

To illustrate a metonymic pattern that is reflected in language, consider a nowadays classic example taken from the work of Lakoff and Johnson (1980: 35):

(5) The *ham sandwich* asked for his check.

In (5) above, *the ham sandwich* stands for the customer who asked for the sandwich and is waiting for his check. Note also that there is *conceptual coherence* between the two entities that constitute the metonymic relation.

It is important to mention that example (5) should not be considered a part for whole metonymy,³³ since we are not exactly dealing with either a metonymic *expansion* or *reduction* (in the sense of Ruiz de Mendoza 2017) of the same entity but only with conceptual relatedness or correspondences between two different entities – in this case the customer and the sandwich ordered.³⁴ In a sentence such as *There are a lot of good heads in the university*, in which *good heads* stands for smart people – that is, we refer to one type of entity by mentioning one of its salient parts. By and large, we can say that one of the most general properties of metonymy is the notion of *mental access*, which is provided by one

³³ Following Lakoff and Johnson (1980), PART FOR WHOLE metonymies are included as special ones since they have been referred to by rhetoricians as *synecdoche*. However, in the present research metonymic patterns are not treated under a different label. PART FOR WHOLE metonymies maintain the same essence of this cognitive operation, which is mental access and activation.

³⁴ On the issue of the convenience to maintain the tripartite distinction between WHOLE FOR PART, PART FOR WHOLE and PART FOR PART, see Barcelona (2019).

element (or a facet of it) with respect to another semantically related entity (for a detailed analysis of the properties of metonymy and the main types thereof, see Barcelona 2011).

As mentioned at the outset of this section, metonymic patterns appear to be more basic than metaphorical ones, and this is reflected in the way we think and act.³⁵ For instance, everyone knows the voice of their best friend. So, if we hear the voice of our best friend saying “*Ey, it’s me!*” while knocking the door, we would immediately know that it is her. In this case, the mind processes a voice for person (best friend) metonymy. Moreover, the way in which our best friend knocks the door, might be another metonymic *cue* considering that people generally know plenty of things about their best friend, including their behavior. Furthermore, this *metonymic contingency* is also reflected in the animal kingdom in the way animals recognize each other just by listening to each other in the jungle. Such a primitive and essential animal and human capacity, in turn, might provide a line of evidence to demonstrate the more basic role of metonymy in human cognition. Metonymy is manifest in lower-semantic levels such as *index* and *icon*: both consist in a relationship between two entities in which one provides mental access to the other. This highly entrenched status and level of pervasiveness of metonymy in everyday life, has led some scholars such as Langacker (2009) and Barcelona (p.c.) to think about metonymic constraints in active zones. After all, if the role of metonymy in human cognition is pivotal due to its existence at more basic semantic levels, then the fact should not surprise us that it is also present at the highest semantic level – here the symbolic system of language.

It may be a plausible idea to think of active zones as being motivated by metonymic processes. If we consider that words are access points to conceptual structure, which takes the form of a word’s conceptual basis, and that some parameters and/or cognitive models (depending on the grammatical category of the symbolic unit) get activated due to context while others are backgrounded, then we can observe that there is a narrowing-down process that is concerned with the *active zones* of the conceptual basis, as exemplified in the introductory examples given for *in* and *to* above.

³⁵ Recall that metonymies are more specific since they exhibit a narrower scope than metaphors: they not only provide specific reference but facilitate understanding. They are *mental shortcuts*.

Note that there is indeed a *reductive operation* when we listen to a sentence and process it. This process might be two-fold: first we access the *conceptual unit* – here the coherent semantic assembly of the words’ conceptual bases in discourse – and then, the parameters and cognitive models that are most directly involved get highlighted.³⁶ It follows that such a reductive operation is a metonymic pattern which is characterized by the whole for part metonymy: a cognitive *zooming-in* operation, as when we say *I hurt my arm*, in which the whole arm is profiled; however, its active zone concerns the area in which the injury or bruise is located.

The theories and constructs presented in this chapter constitute the theoretical foundation to appreciate in the best way possible the linguistic analysis provided in chapters 4, 5, and 6. As mentioned in chapter 1, the analysis is about the English prepositions *between*, *among*, *amid*, *to*, and *for*; and their Spanish equivalents *entre*, *a*, and *para*.

The next chapter is devoted to discussing the methodology followed in the research reported in this dissertation.

³⁶ Those processes might occur almost in tandem. A difference in *processing* time might exist.

2.6 Summary

The theories and constructs shown in this chapter represent the core theoretical ground from which this investigation has been carried out. Space and time are the foundations of human cognition. They both have their own conceptual structure, which can be labeled as spatio-conceptual and temporal, respectively. The chapter presented the theory of CG, this provides elegant constructs for the linguistic analysis presented in chapters 4, 5, and 6, especially *trajector* and *landmark* alignment, *correspondence links*, and *elaboration*. LCCM theory, which is a theory inspired by CG (among other theories such as Conceptual Blending [Fauconnier and Turner 2002]), also provides us with sophisticated tools for analytical thought, particularly the ones of *parameters* and *lexical concepts*. Finally, the theories of Conceptual Metaphor and Metonymy were briefly introduced. Both figurative tropes structure the conceptual system, but metonymy seems to be more basic than metaphor due to its informative and referential character and because it is present in lower semantic levels such as index and icon. Metaphor and metonymy also help us to apprehend more clearly processes of semantic extension and temporal conceptualizations of linguistic constructions. Furthermore, metonymic features might drive the active zones of a word's conceptual basis.

Chapter 3: Methodology

The ideas and theories about conceptual structuring in language that come from the Cognitive Linguistics enterprise have been mainly posited on traditional grounds – that is, introspection and theoretical analysis. These are standard methodological tools in the field of linguistics overall. However, work in areas such as corpus linguistics (e.g., Stefanowitsch 2003; Grondelaers 2000) and experimental methods (e.g., Carlson and Kenny 2006; Carlson-Radvansky, Covey, and Lattanzi 1999) have provided new insights and perspectives to the understanding of language and cognition. It follows that these additional methodologies, among others, can provide unique contributions to the whole picture: the nature of conceptual organization in language.

The present investigation makes use of real instances of language use. The analysis presents actual usage – as it appears in corpora in the form of spontaneous, non-elicited language data. This methodological decision is in line with one of the main tenets in cognitive linguistics: the usage-based approach.

We have combined this corpus-based approach with *analytical thought*. This involves the systematic use of abstraction, comparison, and reasoning. This activity is by itself introspective in character. Introspection is key for the semantic analysis presented in chapters 4, 5, and 6 – as it has been for the development of cognitive linguistics. Following Talmy (2007), linguistic introspection is the conscious attention that a language user directs to particular aspects of language. Attention can be paid at three different conditions of attending. The first deals with conceptual content associated with linguistic representations, the second is concerned with the various aspects of language occurring while one is engaged in linguistically mediated communication – that is, at the discourse level. The third and last condition of attending deals with the memory trace of different aspects of language that were just manifested (*ibid.* xiii-xvi).

The research reported in this dissertation deals exclusively with the first condition of attending since it intends to show the mental representations of the prepositions at the level of the lexical representation – the conceptual content in isolation – as well as their context-induced interpretations (i.e., meaning determination) due to lexical integration.

3.1 The role of introspection

According to Talmy (2007), meaning is not the only area of language for whose study introspection is virtually inevitable, but it also has the advantage over other methodologies of providing direct access to analytical thought. Introspection can actually access different types of meanings depending on the grammatical category under scrutiny. In the present study we deal with prepositions, which compared to grammatical categories such as nouns, verbs, adjectives (and adverbs), offer a narrower access to conceptual structure.³⁷ For instance, one can readily attend to the meaning of the open-class word *table*, one can also readily simulate a table and describe it in the mind if one is asked to do so. On the other hand, attending to the meaning of a closed-class word such as *to*, requires much attention to the parameters that constitute its conceptual basis.³⁸ The meaning of a closed-class element is more schematic than the rich conceptual content evoked by open-class elements. This, in turn, is linguistic evidence that the conceptual system might be constituted by more than one type of conceptual structure, among them spatio-conceptual, temporal, and introspective. Words offer access to conceptual structure of different kinds (as briefly shown for the noun *hospital* and the preposition *at* in chapter 1). It seems that the wider the access point is, the richer the conceptual structure provided. This notion is indeed consonant with the view of closed-class elements as “semantic scaffolding” (Talmy 2000) for the richer conceptual content provided by open-class elements in order to create a cognitive representation.

³⁷ As mentioned in chapter 2, this idea goes contrary to Evans (e.g., 2009, 2010b, 2013) in that he claims that closed-class lexical concepts do not provide access points to conceptual structure but encode purely linguistic content. While I agree that words do have purely linguistic content that might be encoded in a parametric fashion (i.e., linguistic parameters), closed-class items offer a *narrow* access to conceptual structure. The (conceptual) parameters shown for the conceptual bases in this research are in fact a product of this narrow access in that they manifest a more schematic conceptual content – compared to the richer (and so less schematic) conceptual structure that is mainly offered by nouns, verbs, and adjectives. Hence, open-class items offer a *wider* access to this conceptual structure (which in turn, can be of different types).

³⁸ By the same token, in the case we close our eyes and try to imagine the preposition *to* in isolation, we might not get a mental simulation as rich as if we imagine a *table*.

Within the first condition of attending, the focus can fall on the isolation of a preposition such as *to*, as well as on its contextual linguistic realizations and the meaning of the whole phrase or sentence in which this element is integrated. This first level of isolation is treated in the present study as *lexical representation* – the semantic spectrum of words which has been formalized in this study (as well as elsewhere [e.g., Morras 2018; Morras and Barcelona 2019]) as *conceptual basis*. The conceptual bases of the words that populate a speaker’s mental lexicon, are ultimately stored in long-term semantic memory. The attempt to describe lexical representation in terms of the conceptual basis proposed for each preposition, has been done in support for the idea that there must be something in the mental lexicon that is readily accessed through language and allows a proliferation of meanings when engaged in different contexts. This is an issue that will be further developed in the analysis.

At the second level of isolation, we can study the linguistic realization of a word’s conceptual basis – that is, the semantics that words achieve once they are put in context. For instance, we can think of the closed-class item *over* as a schematic relational unit that links two things in which the TR is (prototypically) in a higher position with respect to its LM as in *There are black clouds over the city*. The composite conception might sanction the [ABOVE] lexical concept – a simplex atemporal scene that involves summary scanning. Now, if we put the same preposition in a different context such as in *Joe jumped over his neighbor’s fence to get his soccer ball*, rather than summary scanning, *over* is integrated in a sequential operation, so it activates different parameters of its conceptual basis. In this case, the lexical concept that is sanctioned might be glossed as [CHANGE OF LOCATION] since it involves the change of location of the TR (Joe) – it starts at point A, passes point B (the fence),³⁹ and finally arrives at point C.

As shown above, the two levels of isolation – what is referred to in this study as lexical representation and meaning determination – are the two main analytical constructs to study the spatial, non-spatial, and temporal behavior of the prepositions proposed in this research.

3.2 The utility of corpora

³⁹ To pass point B, the TR must move up and then down that LM.

The use of dictionaries complements analytical thought in a thorough semantic analysis. This method can be considered as a type of corpus work that can address questions regarding the polysemous senses that a particular word can have – an issue that is also briefly addressed in this research since the analysis deals with the *active zones* (Langacker 1987, 2000, 2008, 2009) of prepositions, among other things. Recall from the previous chapter that the notion of active zone is treated somehow differently in this research. Here it is understood as the highlighting of one or more parameters or cognitive models of a word's conceptual basis that are most directly involved in a given construction.

To analyze the semantics of prepositions and try to pin down the conceptual parameters that might constitute their respective conceptual basis, two dictionaries has been made use of. For the English prepositions the present author used the *Cambridge (Online) English Dictionary* (or CED for short), whereas for the Spanish prepositions the *Diccionario de la Lengua Española (DLE)* was used. In addition, other works have also been used to propose the conceptual bases presented in chapters 4, 5, and 6, notably the work of Ramón Trujillo (1971) for the Spanish *entre* (equivalent to *between*, *among* and *amid*), and Tyler and Evans (2003a) and Wierzbicka (1988) for *to* (Spanish *a*) and *for* (Spanish *para*).

A further supplement to analytical thought is the use of corpora. As mentioned above, cognitive linguistics is usage-based, so it should complement its introspective nature with methodologies that focus on naturalistically produced speech, such as audiovisual recordings and corpora.⁴⁰ Even though corpora are mainly used for linguistic phenomena whose range of instantiation or frequency is the issue (for such a case see Grondelaers, Geeraerts, and Speelman 2007), they can also help us to map out the different realizations of a linguistic symbol. Doing a *manual search* in the concordance section, the present author intended just that: To go through several examples, paying special attention to the conceptual nature of the trajector/landmark alignment of the prepositions under scrutiny.

The two corpora that were used for this research are the *British National Corpus (BNC)* for the English prepositions, and the *Spanish Web 2011 (esTenTen11, Eu + Am)* for the Spanish ones.

⁴⁰ A drawback, however, is that in the corpus database the text is captured segmentally, leaving aside expressive accompaniments and the timing of the components. This is not so in audiovisual recordings.

As noted above, corpus work is not only used for statistical purposes, but also for obtaining real instances of language-in-use as raw material for analytical thought, among other uses. Statistical findings are not the main aim of the present research. Corpus work in this study is used exclusively to keep up with the spirit of the usage-based approach to language and conceptual structuring by analyzing real (rather than invented) instances of spatial, non-spatial, and temporal usages of the English and Spanish prepositions.

In sum, the combination of introspection under the first condition of attending, with the use of dictionaries and corpora, are the main tools to attempt to arrive at the nature of the lexical representation and meaning determination of the English and Spanish prepositions selected. It follows from this that the correct use of ‘introspection’, following (Talmy 2007), involves grounding one’s analyses on real representative, naturally occurring data. For the lexical representation level, I propose a number of conceptual bases as a way to understand (and identify) the parameters that, at the very least, should constitute the meaning spectrum of a preposition. This representational level in turn, will be key to shed some light on the contextual realizations of prepositions (i.e., their meaning determination).

3.3 Presentation of the analysis

In the analysis, which covers chapters 4, 5, and 6, I first consider the spatial structure that underlies the conceptual basis of each preposition. Dictionaries and examples taken from corpora will be essential to posit the conceptual parameters that may constitute each conceptual basis. The conceptual basis in turn, allows us to apprehend in a better way the phenomenological structuring of spatial language underlying the semantics of prepositions. Once we get to a thorough spatial analysis, the parameters that were identified as constituting the conceptual basis of each preposition will be used to show how they motivate non-spatial and temporal usages. In addition, Conceptual Metaphor (Lakoff and Johnson 1980; 1999) and metonymy (Barcelona 2011, 2015) theories will be applied to investigate how we move from the spatial to the non-spatial, and on how we conceptualize temporal expressions by recruiting spatio-conceptual structure.

Once a comparison between some spatial and non-spatial lexical concepts for each preposition is provided, I will proceed to show their temporal behavior. To do so, the conceptual basis will again help us to apprehend the temporal semantics of prepositions

since, as we shall see, there is spatio-conceptual structure that is mapped from the spatial domain to the temporal one.

I want to highlight at this point that even though temporal concepts are inherently non-spatial, the present investigation treats them as being purely temporal.⁴¹ This is due to temporal structure partly constituting the human conceptual system (as introspective structure partly does as well). Hence, we speak of the temporal domain whenever we deal with *temporal reference*. As seen in chapter 2, the domain of time is not fully motivated by spatio-conceptual structure, and it might not even be close to that, as some authors have suggested otherwise (e.g., Lakoff and Johnson 1999).⁴² It turns out that there is much more temporal structure in the human conceptual system than previously thought. Recall that time is as foundational for human cognition as space, and it might be even more if we assume that time is “*the event*” in which all others unfold. Moreover, and as previously mentioned, time constitutes an integrational system (the 3-second window) at the neuronal level that is essential for conceptualization due to its pre-semantic character (see Pöppel 2004, 2009).

To identify the temporal structure that underlies the temporal usages of the prepositions presented in this research, I consider some temporal concepts such as *extrinsic temporal reference* and *transience*. Extrinsic temporal reference is analogous (even though not completely) to its spatial counterpart – an absolute spatial coordinate system that makes use of fixed bearings. Time can also be seen in an absolute manner by using periodicity-based systems that fix events within a temporal matrix, irrespective of subjective experience. On the other hand, transience is *the* feature that differentiates time from space. Recall that transience can be understood in terms of the subjectively felt experience of the passage of time and that the type of transience that is involved in extrinsic temporal reference is *duration*. These two temporal concepts, along with some others that will be introduced

⁴¹ This is the main reason why non-spatial and temporal usages are treated in separate sections in the present dissertation.

⁴² Even though Lakoff and Johnson do not claim that our understanding of time is *fully* motivated by space, they think it is *mostly* so. This view is at odds with the present research, since time seems to be even more basic than space for human cognition, and this is because time works at the neuro-cognitive level, as suggested by some neuroscientists such as Ernst Pöppel (e.g., 2004, 2009).

throughout the analysis, are based on recent findings in the cognitive sciences, particularly in areas such as philosophy (e.g., Galton 2011), neuroscience (e.g., Pöppel 2004, 2009; Walsh 2003), neuropsychology (e.g., Kemmerer 2005) and cognitive linguistics (e.g., Evans 2004, 2013; Morras 2018; Morras and Barcelona 2019; Sinha et al. 2016). These findings, among others, provide a solid ground for positing a type of conceptual structure that is purely temporal in nature and plays a prominent role in the temporal usages of prepositions.

After identifying the topological structure encoded by prepositions and its role in non-spatial and temporal conceptions, the research will provide some pedagogical ideas (in chapter 7, section 7.3) for teaching prepositions to Spanish and English students. The conceptual bases shown throughout this investigation are expected to help students (and teachers) to apprehend considerably better the semantics of spatial language and appreciate more clearly how the spatio-conceptual structure offered by prepositions is key to understanding part of the conceptual structuring underlying non-spatial and temporal prepositional usages. It follows that the next step, even though not covered in the present investigation, is to test the efficiency of the conceptual bases proposed by applying them into the classroom for English, Spanish and/or linguistics lessons. This in turn, would contribute to approach the much-desirable cognitive linguistic syllabus, an idea envisioned by some applied linguists such as Randal Holme (2009: Ch.9).

3.4 Further methodologies

A further methodology, not applied but just suggested in this research, has to do with *experimental methods* to validate the psychological reality of the conceptual parameters for the prepositions analyzed (see chapter 7, section 7.4). The application of experimental methods to linguistic cognition has the advantage of addressing individual cognitive factors by presenting participants with stimuli or instructions and monitoring their responses. Additional advantages of experimental methods such as Placement tasks and Acceptability Ratings,⁴³ are the accessibility to their millisecond scale of cognitive processes (which is not available to any other methodology) (Talmy 2007: xx), as well as the complementation that experimental methods provide to other methodologies such as introspective first

⁴³ See Carlson and Hill (2007) for an overview of these types of methods.

condition of attending and corpus work. Regarding introspection, even though it might not be fully reliable due to its subjective character, it nevertheless allows an examination of the linguistic processing that may occur inside an individual's cognition. This permits us to describe human cognition as an integrated system. Such hypotheses can be further supported by corpus work and experimental methods. Corpus work, in turn, shares with experimental methods the fact that both base their conclusions on the linguistic behavior identified across a set of individuals, allowing us to discern important minute characteristics of linguistic cognition, such as the core semantic values of *between*, *among*, and *amid* with respect to the parameters of Separation, Inclusion, and Central position, as we shall see in more detail in chapter 7.

By and large, each of the methodologies mentioned above contributes from its own partial perspective to our overall understanding of conceptual structuring in language. However, each presents limitations. This generates the necessity of the application of other methodologies as a matter of complementation (for instance audiovisual recordings). It should be further noticed, following Gibbs (2007), that each methodology needs to pay attention to the findings of neighboring areas so as to get new ideas about where to continue within its own practice. This is particularly the feedback that is needed in the cognitive sciences to approach an integral view of human cognition. This idea is akin to the *cognitive commitment*, (Lakoff 1990) which states that an account of human language must accord to what is generally known about the mind from disciplines other than linguistics, such as psychology and neuroscience.

The complementary methods used in this research such as corpus work (dictionaries and corpora) and the proposals for experimental methods and teaching practices given after the analysis, intend to provide an answer to the complaints of some scholars in such areas as cognitive psychology (e.g., Gibbs 2007), as well as in other disciplines (e.g., Sandra 1998), on the introspective character of linguistic analysis and the lack of a clear explanation of the methods used. Nowadays, many cognitive scientists are skeptical of theoretical claims that are based exclusively on introspection since this does not constitute the kind of objective, replicable data that many scholars in the cognitive (and natural) sciences prefer. This in part is why this research makes use of non-made-up linguistic expressions for the

analysis. It also offers further proposals to corroborate the psychological reality and pedagogical applications of the hypotheses that will be presented here. This, in turn, will provide *falsifiable* proposals so that alternatives might be suggested if the conceptual bases proposed for the prepositions under analysis turned out to be incorrect.

The next section pertains to the lack of a well-established methodology to identify figuration in language, a conceptual phenomenon that has been elusive for linguists, but which nevertheless, the present research intends to shed some light on.

3.5 Identifying figurative language

Even though there are many theoretical attempts to identify and describe figuration in language (e.g., Bowdle and Gentner 2005; Evans 2010d; Giora 2003), there is still no consensus among cognitive linguists as to how a given word or expression in context expresses metaphorical meaning. This section, far from establishing such consensus, intends to put forward some elementary tenets about the continuum existing between literality and figuration in language, with special emphasis on prepositional usages.

First and foremost, we have to consider literality and figuration in processing terms. Under this condition, the traditional view (e.g., Searle 1979) of a strict differentiation between literal and figurative language is untenable. It turns out that metaphorical understanding begins as early in processing as literal understanding (Goldvarg and Glucksberg 1998), and in the case of idiomatic expressions (e.g. *spill the beans*) their metaphorical meanings are processed more quickly than their literal ones (Gibbs 1994).

Literality and figuration seem to be driven by the very same mechanisms, namely lexical concept selection, integration, and interpretation (see Evans 2009: 215-278). The *saliency factor*, as pointed out by some authors such as Giora (2003, 2008) might be key to determining whether an expression is literal or figurative. Saliency determines which meaning is processed more quickly. Under this perspective, figuration is seen as a *graded* phenomenon.

Also involved in figurative language understanding are *knowledge types* and *complexity*.⁴⁴ Following Evans (2009) Complexity has to do with the length of the access route that a given lexical concept exhibits. Knowledge types are concerned with figurative tropes such as primary (Grady 1997) and complex (Lakoff and Johnson 1999) metaphors, metonymy, and semantic affordances – these latter can be described as the semantic tendencies that hold at the level of the lexical concept (i.e. linguistic content).

To appreciate these ideas more clearly, consider the following spatial and non-spatial usages of the English preposition *in*:

- (1) a. The kitten is *in* the box [ENCLOSURE]
b. Susan is *in* love with Tom [PSYCHOSOMATIC STATE]

We can say that (1a) and (1b) are classified as good examples of literal and figurative realizations of *in*.⁴⁵ In (1a) the kitten is located with respect to the box – it is inside the box so if someone grabs the box and moves it to another place, the kitten moves along with it – that means that the LM offers a functional element that has to do with transportation. This functionality becomes entrenched and is captured by the Location with Surety parameter. Consider again the conceptual basis of *in*:

⁴⁴ For details on knowledge types, saliency, and complexity in figurative language understanding, see Evans (2010d).

⁴⁵ Now we are briefly dealing with the two extremes of the literality-figuration continuum. An example that may lie in the middle is *I've got a hole **in** my sock*, in which the metonymy WHOLE FOR PART is involved. *In* contributes to the profiling with the part in which the hole is located. TR (hole) and LM (sock) refer to the same entity.

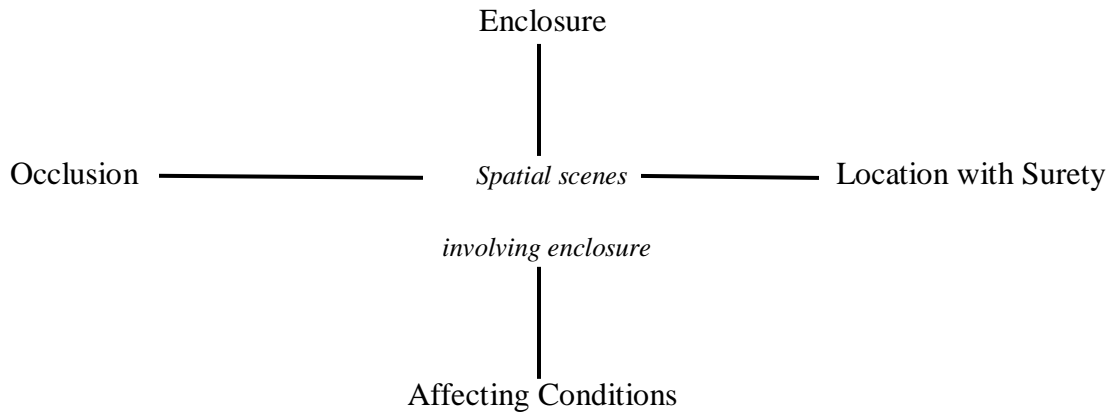


Figure 3.1. Conceptual basis for *in*

The conceptual basis of *in* proposed in Evans (2009: 160) can help us understand how the literal conception in (1a) arises. I suggest that in (1a) there is primary activation of the Enclosure parameter considering that nobody is grabbing the box. Note that even though the LM (here *box*) can also highlight parameters like Occlusion, and Location with Surety, the sentence in (1a) makes primarily use of Enclosure to construe the spatial scene. We may gloss the resulting spatial lexical concept as [ENCLOSURE]. Note also that the length of the access route is short – that makes (1a) less complex than (1b), where the preposition *in* holds a relation between a person and a psychosomatic state such as love. The resulting non-spatial lexical concept in (1b) can be glossed as [PSYCHOSOMATIC STATE] and is the result of semantic extension.

Some researchers (e.g., Lakoff 1993; Barcelona p.c.) suggest that expressions such as *She's in love* or *I'm in shock* are primarily motivated by the conceptual metaphor STATES ARE LOCATIONS, and that the parameter of Enclosure is key for metaphorical extension. However, I suggest (following Evans 2009, 2010a, 2010d, 2013) that we also need to consider the parameter of Affecting Conditions. This is due to the affective conditions that containers usually provide. As pointed out earlier, a container such as a refrigerator provides better affecting conditions for storing fresh food than a backpack or a wooden box, for instance. This, in turn, is what occurs at the subjective level when we fall in love. Feeling in love makes us think and act in certain ways (sometimes clumsily). Furthermore, I suggest that while there is metaphor in (1b), this underdetermines the figurative conception. As previously mentioned, metaphor is *one* type of knowledge that holds at the

conceptual level. There might also be factors that hold exclusively at the linguistic level – semantic affordances could be one of those, so they represent another type of knowledge that a speaker must handle. For instance, note that *in* (apparently) manifests semantic tendencies toward elements that evoke subjective/internal states (compare *in love* vs. **on love*). Figure 3.2 below depicts how the parameter of Affecting Conditions establishes a relation with the [PSYCHOSOMATIC STATE] lexical concept:

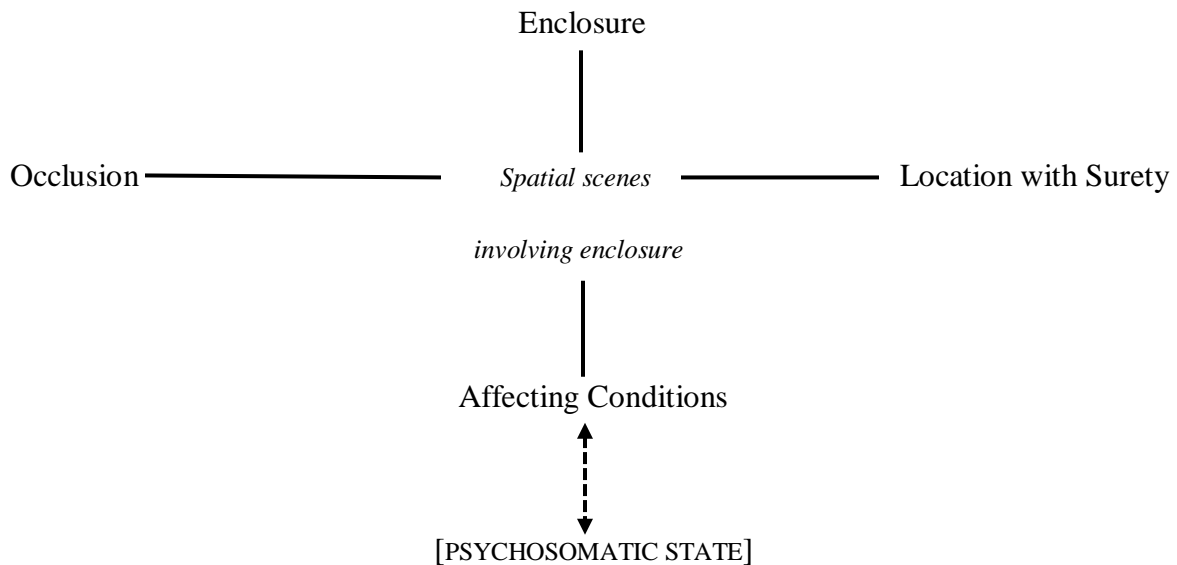


Figure 3.2. Affecting Conditions and its relationship with one of the “state” or figurative lexical concepts for *in*

The correspondences between Affecting Conditions and the [PSYCHOSOMATIC STATE] lexical concept is established via metaphorical mapping (indicated by the dashed double arrow). Note that the non-spatial conception evoked in (1b) is more complex than (1a). It also exhibits a longer access route to achieve the activation of [PSYCHOSOMATIC STATE]. However, there are some cases in which a long activation route need not necessarily evoke a prototypical figurative conception, such as in the utterance below:

- (2) The flag is *in* the wind [PREVAILING CONDITIONS]

We now know from psycholinguistic research that despite this supposed longer activation route, metaphorical expressions responding to well-established conceptual metaphors are understood as easily and as fast as literal expressions involving prepositions. This metaphor in turn, comes from Enclosure being a conceptual parameter that partly constitutes the

conceptual basis of *in*. Note that in 1(b), even though Enclosure does not establish correspondences with the [PSYCHOSOMATIC STATE] lexical concept, it participates in the form of the metaphor STATES ARE CONTAINERS. This metaphor might allow the activation and extension of Affecting Conditions in the first place, as well as the establishment of correspondence links between this parameter and the state lexical concept. Now in (2), the preposition *in* contributes to the sanctioning of the [PREVAILING CONDITION] sense. Prevailing conditions are situations that continue in time, such as a flag on a windy day or in a storm. It follows that these types of situations affect the attentional figure in fairly different ways. Examples of these are *in the sand*, *in the water*, *in the snow*, *in the dust*, among others. In figure 3.3 below, we can observe that the parameter of Affecting Conditions establishes correspondences with the [PREVAILING CONDITIONS] lexical concept. However, it is unclear whether we are dealing with figuration or with a literal spatial conception. I suggest that we still make use of the metaphor STATES ARE CONTAINERS to understand the relation evoked in (2).

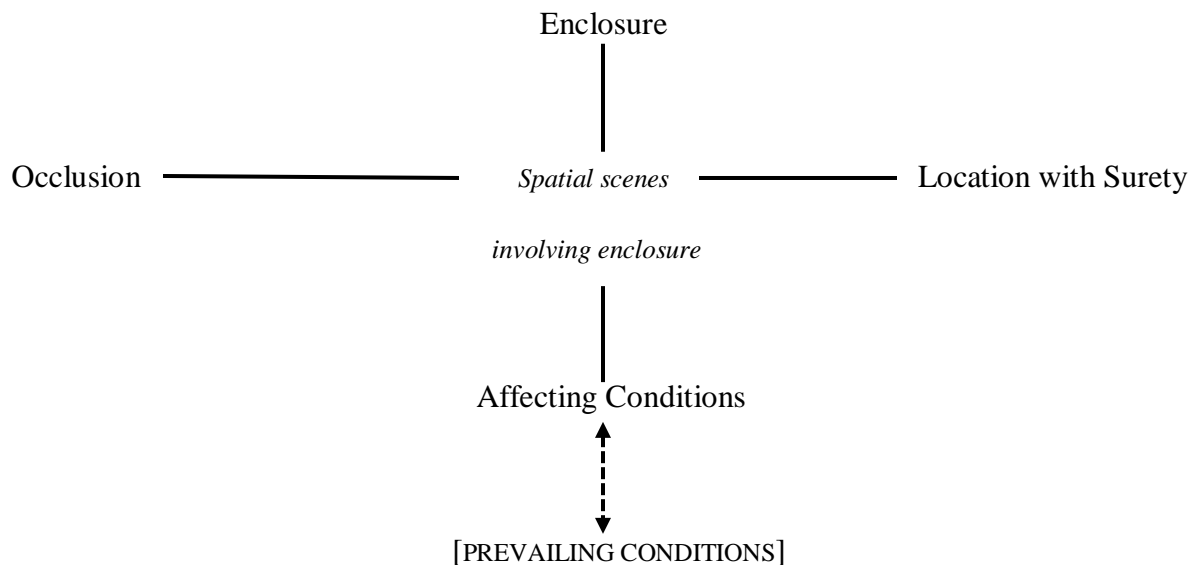


Figure 3.3. Affecting Conditions and its relationship with [PREVAILING CONDITIONS]

In sum, we can observe that the activation route may not be necessarily compulsory at the moment of determining the level of figuration of a given construction. We can also appreciate how metaphor not only is constituted by one sub-mapping, but by a multiplicity of sub-mappings from source to target. When it comes to non-spatial conceptions in the case of *in*, the parameter of Affecting Conditions is the one that establishes

correspondences with non-spatial and state lexical concepts. However, for such a correspondence to occur, metaphor must work at a more schematic level. The metaphor STATES ARE CONTAINERS may underlie most of the non-spatial usages of *in*. Crucially, the conceptual content of this metaphorical thinking might come from the parameter of Enclosure.

Lastly, temporal scenes evoked by *in* seem to behave slightly differently, specifically due to the role of Enclosure, which seems to be much more involved rather than being activated more schematically as in (1b) and (2) above, and because of the role that temporal structure plays in temporal conceptions. Consider the examples below:

- | | |
|---------------------------------------|----------------------|
| (3) a. The meeting was <i>in</i> June | [TEMPORAL ENCLOSURE] |
| b. I see you <i>in</i> ten minutes | [IMMINENT MOMENT] |

The Enclosure parameter establishes correspondence links with semantic sub-structures of the [TEMPORAL ENCLOSURE] and [IMMINENT MOMENT] lexical concepts. Crucially, these correspondences might occur in the first place due to metaphor, to temporal structure in the form of temporal reference, and to the semantic affordances of the symbolic units involved in (3). Note how temporal structure is slightly different in each example. In (3a) it has to do with an *event*-reckoning system. We make use of cyclical thinking, specifically of the temporal concept {YEAR} to locate the month of June and hence the meeting with respect to it.

In (3b), on the other hand, we make use of a *time*-reckoning system, particularly of a closed system that deals with countdowns (here *10 minutes*). Figure 3.4 below shows the activation and extension of the Enclosure parameter and its correspondences with the temporal lexical concepts for *in* evoked in example (3):

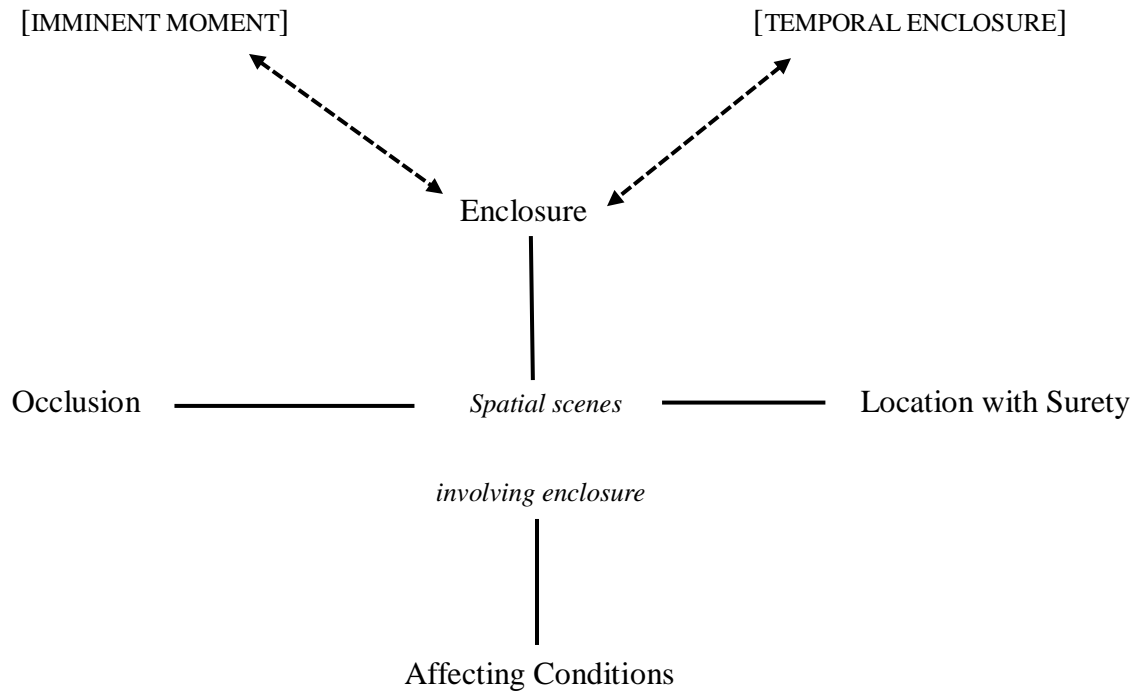


Figure 3.4. Enclosure and its relationship with temporal usages associated with *in*

The ideas above, which have been fostered within the Cognitive Linguistics enterprise, leads this research to the following assumptions:

- i) there is a continuum between literal and figurative language.
- ii) essentially the same structures and processes are involved in literal and figurative conceptions.⁴⁶
- iii) conceptual metaphors underlie non-spatial and temporal expressions rather than fully motivate them. There are more types of knowledge involved in these types of constructions.

⁴⁶ In this research, structures and processes are mainly concerned with lexical concept selection, integration, and interpretation (see Evans 2009: Ch. 11, 12, and 13 for full details on these notions). Nevertheless, a caveat is in order. Even though many processes and structures are involved in linguistically mediated communication (literal and non-literal), there is evidence (Bottini et.al 1994) that the right hemisphere has a specific role in the interpretation of figuration in language, such as metaphor. This might amount to evidence of slight differences that hold at the neurological level.

3.6 Summary

This chapter has introduced some relevant methodological tools and perspectives used in this research. We discussed the role of introspection within the first condition of attending: it allows us to scrutinize symbolic units at the level of the lexical representation as well as at the level of meaning determination (which further involves active zones). In addition to introspection, there is a naturalistically driven corpus work in the form of dictionaries and corpora to provide real instances of language use and pin down the parameters that might constitute each conceptual basis. Further methodologies that have not been applied at in the research reported in this dissertation but that will be applied to the results of my research at a later stage, concern the pedagogical applications and the psychological validation of the conceptual bases proposed. This chapter has also introduced the structure of the analysis to be presented in the following chapters and provided some suggestions for the identification of figurative language.

Chapter 4: *Between, among, amid*, and their Spanish equivalent *entre*.

I now turn to present a cognitive linguistic analysis of the prepositions proposed for this research, focusing on the spatio-conceptual organization they exhibit and its role on non-spatial and temporal usages.

4.1 Spatial lexical concepts for *between*

According to the *CED* (monolingual version), a spatial configuration that is generally encoded by the English preposition *between*, consists of a thing or things that are located in or moving into the space that separates two places, people, or objects. That is, a TR is situated in the middle of or in a central-like position with respect to (at least) two or more reference objects that serve as LM and surround the entity.

Figure 4.1 represents the spatial configuration just mentioned:

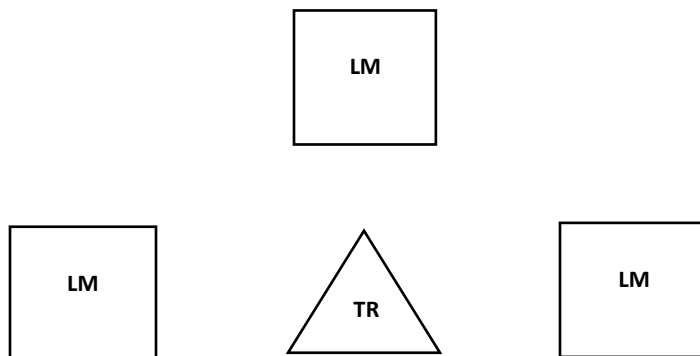


Figure 4.1. Prototypical spatial arrangement for *between*

Figure 4.1 shows a possible proto-scene of the English preposition *between*, which manifests a *central position* on the part of the TR with respect to its reference objects or LM. Moreover, within this (approximately) central position, there must be a certain degree of *proximity* between the TR and its LM in order to visually and mentally establish the region occupied by them, which crucially determines where the TR is to be located. Another phenomenological parameter that builds up the conceptual basis of *between* is the parameter of *Surround*. This is a feature that helps us to apprehend that a thing is between two or more individual elements. Furthermore, there is also a degree of *separation* of the elements making up the LM from each other, to locate the TR in the middle.

It follows from the idea above, that the spatial lexical concepts or senses that a given spatial particle might have, come from the proto-scenes they are derived from. As mentioned in chapters 1 and 2, proto-scenes (following Tyler and Evans 2003a, 2003b) consist of humanly relevant scenes wherein abstractions out of specific spatial arrangements (i.e., recurrent patterns and structures) give rise to idealized spatio-functional configurations. These abstractions take the form of *conceptual parameters* such as Separation and Central position. Also recall that conceptual parameters are akin to image schemas in that they try to capture the schematic type of conceptual structure that inheres in the human conceptual system. Image schemas, as previously mentioned, are pre-conceptual units that structure the way we interact with and perceive the world, and which eventually build up the conceptual basis of word meaning (Evans 2010c; Johnson 1987; see also Mandler 2004). In order to observe the role that these phenomenological parameters play in meaning construction, consider the following expression:

(1) The triangle is *between* the three squares.

In (1) we can see how the TR (the *triangle*) is located within the region that is built by its LM. The TR is somehow surrounded by the LM; moreover, they are in proximity to each other. We can already observe that the phenomenological parameters of Proximity, Surround, and Separation are vital for the semantics of the English preposition *between*. Furthermore, this particular spatial configuration carries a functional consequence: the entity which receives the focus of attention (i.e., the F/TR) is located in a sort of central-like position since it is within the locative region that is created by its LM.⁴⁷ In (1), the nominal *the triangle* elaborates the TR of the atemporal (i.e., non-processual in Langacker's [1987, 2008] terms) relation profiled by *between* whereas the nominal *the three squares* elaborates its LM. There is also a correspondence link between the atemporal relational landmark and the nominal *the three squares* in that their profiles refer to the same entity. The correspondence link pertains to *reference* whereas elaboration is a matter of *characterization* (Langacker 2008: 198). Note also that relational predications like the ones evoked by *between* are highly dependent on the more autonomous structures evoked by

⁴⁷ Recall from chapter 2 (section 2.2.1) that the notions of figure (F) and ground (G) are treated interchangeably in this work with the notions of trajector (TR) and landmark (LM).

nominals. This is understood in the Cognitive Grammar literature as autonomous/dependent-alignment, or *A/D-alignment* for short, as a key feature of language design (Langacker 1987, 2008).

Now consider an image that depicts a mundane spatial scene which can be described as “*a bench between two trees*” (taken from Morras (2018: 60); Morras and Barcelona (2019: 111):



Image 4.1. “*A bench between two trees*”

Image 4.1 above shows a mundane spatial scene that human beings encounter since their early stages in life. These frequent phenomenological encounters constitute primary scenes where abstractions of specific spatial arrangements become linguistically parameterized to eventually constitute the conceptual basis of a given preposition such as *between*. Note how the parameters mentioned for *between* such as Separation and Proximity are indeed abstractions of the scene (among many other proto-scenes in everyday experience) depicted in image 4.1. We can observe that there is proximity between the bench (F) and the trees (G), there is also a separation between the trees where the bench is located. This configuration in turn, carries the functional consequence of the parameter of Central position since the bench acquires a mid-position between the trees. Finally, the parameter of Surround may be present even though the bench is not fully surrounded by the trees. Figure 4.2 below shows the conceptual basis adapted from Morras (2018: 62) and Morras and Barcelona (2019: 110) for the preposition *between*:

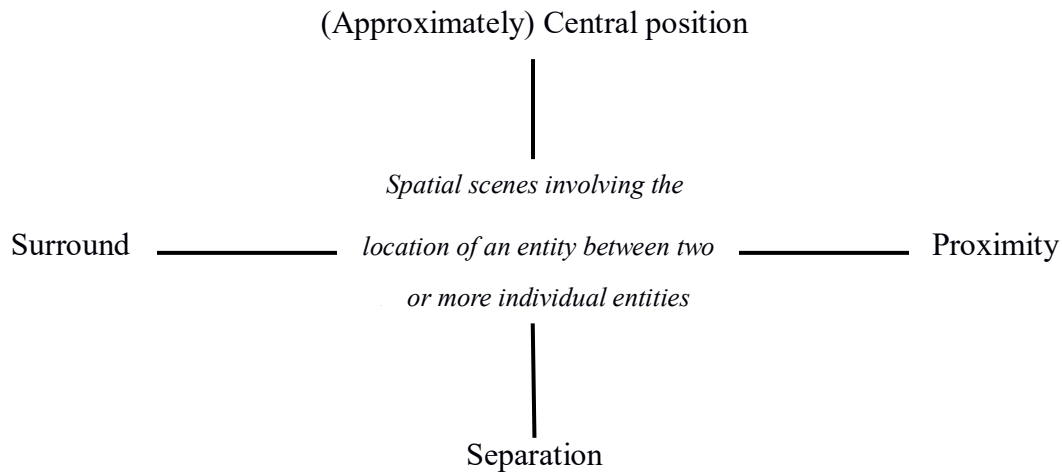


Figure 4.2. Conceptual basis proposed for *between*

As presented by figure 4.2, the conceptual basis of *between* consists, at the very least, of four semantic parameters. The one of Separation (and perhaps Surround) might constitute the core semantic value of *between* due to its emergence from a proto-scene that has to do with the location of an entity that is surrounded, and in some degree of proximity to two or more *separate* and *identifiable* things. Evidence from this locative behavior comes from the following passage taken from the *British National Corpus (BNC)*:

- (2) Further away, they could see a high bridge ***between*** the hills, but the station was too far away to see

[LOCATION]

In (2) we can see how *between* functions as a locative relational unit. Moreover, the parameters featured in figure 4.2 are indeed present. There is a TR (*the bridge*) which is co-located with, and proximal to, its LM (*the hills*). Notice how the hills are conceptualized as a group of individual entities that surround the bridge in question. This surrounding factor, along with proximity, generates a functional consequence which is the (approximately) central position exhibited by the TR. It is important to emphasize, though, that this central position is subject to variation due to the high level of *schematicity* evoked in the composite structure *they could see a high bridge ***between*** the hills*, but the TR is always located within the region established by its LM. Figure 4.3 depicts the degree of variation that the expression in (2) might convey:

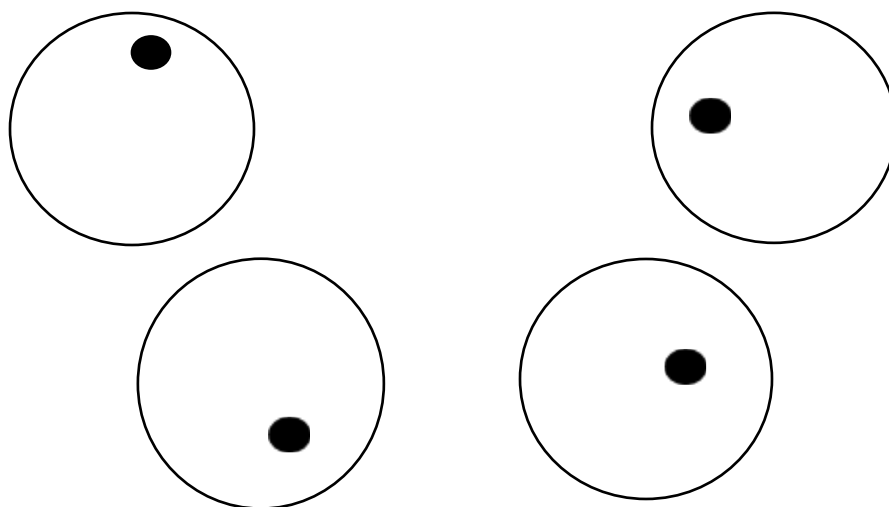


Figure 4.3. 'Further away, they could see a high bridge *between the hills*'

In figure 4.3, the white area represents the region where the TR (the bridge) is to be located (here *between the hills*). The black circle represents the bridge itself. Figure 4.3 shows how the parameter of Central position can significantly vary. This in turn, shows a low level of specificity exhibited by *between*: the bridge could be located at any point within the white area that stands for *the hills* in expression (2). However, the very fact of being located within the region, makes the TR acquire a sort of central position. The English preposition *between* in (2) is elaborated in order to establish a coherent semantic integration of the autonomous nominal structures encoded by *a high bridge* and *the hills*. Furthermore, these nominal structures manifest a *correspondence link* due to the coherent assembly of each component and composite structure. In sum, we can appreciate how the parameters of Surround, Proximity, and Central position get activated at the moment of conceiving this specific spatial scene (Separation might receive secondary activation). Further evidence of this spatial behavior comes from the following passage extracted from the *BNC*:

- (3) There's a thick mist *between* the hills and us. I can't see through it, but through it we shall have to go [LOCATION]

Unlike the expression in (2), sentence (3) places the TR (the mist) between two separate entities (therefore the parameter of Separation gets activated), which are the hills and the group of people that is evoked by the object pronoun *us*. These two entities constitute the boundary of the region in whose middle part the TR is located. Crucially, the coordination

structure of the *and*-type (*the hills and us*) evokes a mental space in which two coequal elements are mentally juxtaposed.⁴⁸ It follows that the conceptual structure yielded by *the hills and us* elaborates the prepositional landmark of *between*.

Figure 4.4 shows the conceptualization of expression in (3):

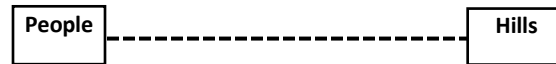


Figure 4.4

The dotted line indicates the mist that exists between the hills and the group of people, as shown in example (3). We can also observe how the prepositional landmark (*the hills and us*) is apprehended as a single entity in the composite expression: they mark the conceived spatial area in which the mist is located. There is a correspondence link between the profile of the nominal conjoined structure *the hills and us*, and the abstract prepositional landmark of *between*. This correspondence in turn, provides the conceptual ground for the elaboration of the prepositional landmark. Further activation of the parameters of Proximity and Central position are expected.

There are some cases in which the primary attentional focus falls on the trajectory or distance existing between two things, as evidenced in the following passage extracted from the *BNC*:

- (4) During a normal night's sleep, we cycle *between* these two main states
[DISTANCE]

In (4) we can observe how the activity of cycling takes place along the distance that exists between the two main states. Notice how the profiled relation between the TR (*we cycle*) and its prepositional landmark (*these two main states*) is similar to (3); however, the highlighting process is different: distinct attributes of the spatial relation get activated.

⁴⁸ Following Langacker (2008:407), the coequal status of the prepositional-landmark elements of *between* as shown in (3), means that these elements participate independently and to the same extent in the same set of grammatical relationships. For instance, each conjunct (*the hills and us*) in (3) specifies the LM of *a thick mist* and is thus its prepositional complement. The grammatical parallelism of the conjuncts implies that they are semantically parallel as well.

Rather than location, expression in (4) conveys the [DISTANCE] lexical concept. This highlighting in turn, might be driven by the primary activation of the Separation parameter.

When a different active zone gets sanctioned within the same profiled relation, it is understood in the Cognitive Grammar literature as *profile/active-zone discrepancy* (e.g., Langacker 1987, 2000, 2008, 2009). Even though expressions (3) and (4) convey the same non-processual relation that is profiled by the preposition *between*, expression (4) lays more emphasis on the distance between the two prepositional-landmark elements since it is within that distance that the sporty activity of cycling takes place – this in turn, gives more conceptual prominence to the path than to the locative function of the relational predication encoded by *between*.

Figure 4.5 below depicts this difference where the bold line indicates that the primary activation goes on the distance or trajectory, rather than on the location, which might receive secondary activation:

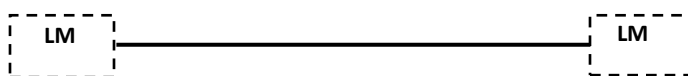


Figure 4.5. [DISTANCE] spatial lexical concept for *between*

The examples so far have been presented with the purpose of showing how phenomenological parameters are in charge of semantically building the conceptual basis of spatial language, particularly prepositions. However, the conceptual bases proposed in this research are by no means exhaustive, in that they do not intend to capture all the range of possible meanings that a preposition or any word in general might have in context since that would be an ill-conceived quest if we take seriously the protean nature of words (Taylor 2006). On the contrary, the conceptual bases proposed in this research represent an attempt to understand the core configuration of prepositional vehicles, as well as to show how the processes of elaboration and extension take place (Langacker 1987, 2008). In other words, the conceptual bases proposed here might shed light on how we “work out” the semantic potential of words.

The next section will be devoted to explaining how the English preposition *between* behaves in abstract domains by showing, in a non-exhaustive way, some of the probably most prototypical non-spatial senses of *between* that are sanctioned under certain contexts. It is important, however, to point out that by showing the non-spatial (and temporal) behavior of some English and Spanish prepositions, this investigation intends to show how it is the conceptual basis of a given closed-class prepositional vehicle, which is phenomenologically constituted, that partially structures these types of usages.

4.1.1 Non-spatial lexical concepts for *between*

To start with, it is important to recall that the conceptual basis shown in figure 4.2 above is based on, at the very least, the four phenomenological parameters described. These parameters in turn, are akin to pre-conceptual spatial relations or *image schemas* since they eventually become parameterized as part of the schematic conceptual content encoded by *between*. Recall that parameterization is a process in which abstractions of recurrent patterns and structures of a given proto-scene become (part of) the semantic spectrum (i.e., conceptual basis) of a given word.⁴⁹

Pre-conceptual units are fundamental for the way we understand and move in space: these structures are then reflected in language since the conceptual bases that words provide access to are precisely rooted in image-schematic structure. Crucially, the conceptual basis of a given prepositional vehicle provides a complex but schematic *spatio-conceptual structure*. This structure in turn, can be metaphorically and metonymically extended in order to conceive figurative conceptions underlying non-spatial usages.

Figure 4.2 above shows the parameters that, at the very least, constitute the conceptual basis of *between* (see also figure 4.1). It follows that the spatial arrangements (i.e., proto-scenes) that motivate the conceptual basis of *between*, are sources for conceptual metaphors and metonymies to take place. As an example, consider the following passage taken from the *BNC*:

(5) In fact, *between* you and me, I think she's relieved.

[SECRET]

⁴⁹ See Morras (in press) for suggestions on the differences that might exist between linguistic and conceptual parameterization.

In (5), the information shared by the speakers evokes a notion of [SECRET]; this is partly due to the integration of the closed-class item *between* with its direct object (*you and me*) in a conjoined prepositional phrase. It follows from this composite structure, that *you and me* elaborates the LM of *between*. The elaboration site, or e-site for short, and the landmark of *between* correspond to the profile of *you and me*. This in turn, gives rise to the mental juxtaposition of the two coequal elements within the prepositional phrase in (5). In addition, the composite structure realized by *between you and me*, which has unit status since it is an entrenched and conventionalized expression in English, evokes a mental space in which secret information is expected.

One of the prototypical spatial arrangements of the preposition *between* is depicted in figure 4.1 (and image 4.1) where the triangle is in a central position and is surrounded (even though not totally) by the three squares in relatively close proximity to each other. This mundane perceptual event is then subject to *reification* – that is, subject to the transition from an operational to a structural embodied schema (Sfard 1994). The notion of reification must be understood as the act of changing something abstract (= existing as a thought or idea) into something real. Operational schemas, on the other hand, are understood as schemas of action, whereas a structural schema, encodes a permanent object-like construct that might be acted upon in order to produce other constructs. In sum, humans need conceptual reification to trigger metaphorical mappings: a secret between two or more people manifests a highly similar conceptual base as a concrete thing that is located between two or more elements. The concrete thing located in the middle corresponds to the secret, whereas the reference objects that surround the entity on focus correspond to the people who know about the secret. This process is also based on notions such as *virtual boundary* (Langacker 1987: 195-197) and *standard/target asymmetry* (Langacker 1987: 349-350); the latter is a fundamental cognitive function that has to do with the exploitation of previous experiences for the structuring and interpretation of novel ones. Crucially, the exploitation of the Central position parameter, as shown in figure 4.2, becomes figuratively extended to understand an abstract concept, such as private information that is shared by two or more people: there is a virtual boundary that is constituted by the people who know

the secret, and the secret itself is the abstract thing located within the *virtual region*.⁵⁰ The parameter of Separation also plays an important role (hence, it gets activated and extended) and this is reflected by the people who know the secret. Just like two or more separate elements can locate a given F in the spatial realm, so can two or more people “locate” a secret between them. there is an abstract structural similarity between the spatial and the non-spatial configuration in this case. And the roles of the F and the two (reference) objects that serve as ground (G) in the spatial domain are relationally equivalent to the roles of information, communicator and addressee in the non-spatial domain.

Further evidence that supports the existence of the [SECRET] lexical concept for *between* in that it might be the result of *reanalysis* (following Hopper and Traugott 1993), comes from what I term the [SHARE] lexical concept. According to the *CED*, *between* denotes a sharing activity among two or more people or things. To exemplify this sense, consider the following passage extracted from the *BNC*:

(6) The financing of education is shared *between* central and local
government.

[SHARE]

The semantics evoked by *between* in (6) is achieved, at the very least, by virtue of the integration of the open-class elements *financing*, *education*, *shared*, *central* and *local government*, which respectively elaborate the TR (i.e., the *financing of education*) and LM (i.e., *central and local government*) of the preposition *between*. As in (5) above, expression (6) conveys the notion that something (the financing of education) is shared by the central and local government. However, there is an *added constraint* (in the sense of Herskovits 1985) in (5) that is absent in (6) and this is the notion of *privacy*. Whereas in (5) a secret is shared by two people, in (6) the financing of education is not a secret. In (6), it implies the *division* of costs, that is, the financing of education is equally distributed between central and local government, but in (5), a secret is something that cannot be equally distributed or divided, but simply shared. In a nutshell, I suggest that the [SHARE] lexical concept is partly

⁵⁰ Virtual boundary (Langacker 1987) must be apprehended as the mental delimitation in cases where no boundary feature at all is objectively present. For instance, the name of containers such as *glass*, *jar*, *tub*, and *box*, are frequently construed as designating the entire enclosed area, rather than simply the physical object per se.

sanctioned by the parameters of Separation and Central position (and probably Proximity) since those conceptual parameters are the ones that allow us to locate an object which is in the middle of two or more individual and identifiable things. This spatial configuration creates a region that is shared between the trajector and the landmark's periphery.

Figure 4.6 below depicts the conceptualization of the [SHARE] and/or [DIVISION] lexical concept(s) for *between*:

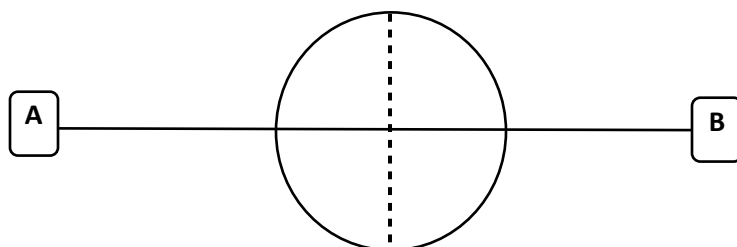


Figure 4.6. [SHARE] and/or [DIVISION] lexical concepts for *between*

In figure 4.6 above, the dashed line indicates that the white region is being shared between entities A and B, whereas the continuous line represents the relationship holding between entities A and B.

The examples shown so far point to a clear but more abstract notion of {LINK}, which is precisely another sense or lexical concept that can be sanctioned by *between*. I think that this sense has its roots in the parameter of Proximity (which might serve as a functional element). As shown above, Proximity is one of the parameters that constitutes the conceptual basis of the English prepositional vehicle *between*. It follows that proximity is a characteristic that happens to configure part of the spatial arrangements in which the preposition *between* is used. Such spatial configurations, in turn, convey a sort of relationship between a TR and two or more elements that serve as LM. This eventually results in a notion of link or “common ground”. According to the *CED*, the preposition *between* denotes a connection among two or more places, things, or people. As an example of the [LINK] sense, consider the following linguistic evidence taken from the *BNC*:

(7) A new centre for research into the links *between* society and global climate change has been opened by the Social and Economic Research Council (SERC).

[LINK]

In (7), one of the aims of the new center for research is to show the link or connections between society and global climate change. That is, the new center for research functions as the core of the shared region in which the links between society and global climate change take place. We can therefore observe how example (7) metaphorically and metonymically resembles figure 4.1 above in that the TR, here *the links* (i.e., the investigation carried out by the new center) is in a profiled relation with its LM (*society and global climate change*), but rather than having a spatial link of proximity, they have a figurative one.

Note that in (7), the conjunction *and* establishes a coordination structure wherein the nominal structures provided by *society* and *global climate change* elaborate the prepositional landmark of *between* and are conceived as being together in a single attentional frame due to mental juxtaposition. This in turn, implies the conceptual emergence of a higher-order entity comprising the elements profiled by the conjuncts.

Figure 4.7 diagrams the conceptualization of the [LINK] lexical concept for *between*:

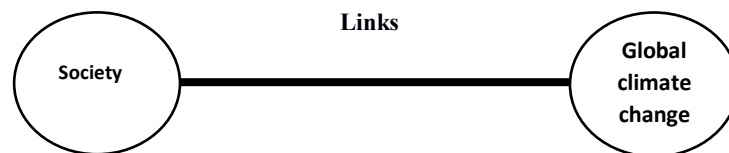


Figure 4.7. [LINK] lexical concept for *between*

In figure 4.7 above, the line in bold metaphorically represents the figurative link or connections existing between the society and the global climate change. Importantly, this metaphorical mapping can take place by means of the conceptual content evoked by the *new center for research*, which establishes the links between society and global climate change. However, the new center for research in (7) is not conceived as “mediating” between the two abstract landmarks, as in *John and Mary will share the cost between them* (where the cost is an abstract TR “located” in the middle of two things (LM). In (7), the center’s research is devoted to the *study / observation* of the links. Thus, it is the links that function as the TR of the non-processual relational predication conveyed by *between*. In

addition, the center for research is metonymically understood under the metonymic pattern WHOLE FOR PART, in that what gets activated (i.e., its active zone) is the research team that carries out the investigation rather than the building itself.

I now move on to the [DIFFERENCE] or [DISTINCTION] lexical concept, which shows practically the same profiled relation exhibited by the [LINK] lexical concept. However, its active zone is different. To illustrate this point, consider the following passage taken from the *BNC*:

- (8) In other words, there is a clear distinction *between* application logic and the computer representation of that logic. [DISTINCTION/DIFFERENCE]

In (8), the application logic and the computer representation of that logic are the things that are subject to differentiation. The distinction between these two things is the focus of attention – that is, there is a conceptual link between the act of perceiving differences and the entities that are subject to this differentiation. To exemplify, consider figure 4.8 below:

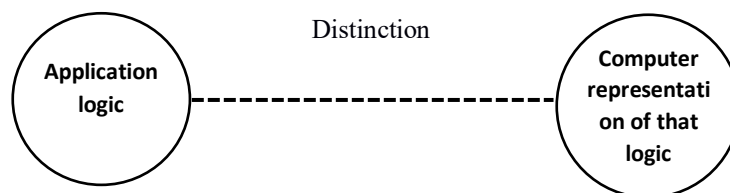


Figure 4.8. [DISTINCTION/DIFFERENCE] lexical concept for *between*

Figure 4.8 shows the same profiled relation between TR and LM as figure 4.7. However, there is a profile/active-zone discrepancy in that the same profile relation gets activated differently via linguistically mediated communication.⁵¹ The integration of the autonomous nominal structure evoked by *a clear distinction* plays an important role in the composite conception in that it functions as TR of the simplex atemporal relation profiled by *between*. There is also a correspondence between the profile of the entities circled in figure 4.8 and the prepositional landmark of *between*. This in turn, provides a coherent semantic assembly within the higher-order composite conception conveyed by the whole passage in (8). It follows that the very nature of the link between the entities in the circles is different: while

⁵¹ In this case we have to consider the prototypical relational profile of *between*, which requires two “similar” LMs, for postulating that discrepancy.

in 4.7 the link points to connections between the coequal prepositional-landmark elements (indicated by the line in bold), the link in figure 4.8 conveys a distinction (rather than connections), which is indicated by the dotted line.

A further type of knowledge that must be involved in (8) is conceptual metaphor. We can observe that the conceptual metaphors SIMILARITY IS CLOSENESS and DIFFERENCE IS SEPARATION might be involved in the non-spatial usage evoked in (8) (Barcelona, p.c.). Indeed, the parameters that establish correspondence links with these metaphors are Separation and Proximity. Central position might also participate in this metaphorical understanding.

The next lexical concept to be accounted for in this non-exhaustive list of the (probably prototypical) meanings of *between*, is the one of [COLLABORATION], which is a subtype of the {LINK} schema, in the sense that two or more entities work together in order to achieve a common goal. To appreciate this point, consider the following example taken from the *BNC*:

- (9) In 1985, following further collaboration *between* Philips and Sony, the first Compact Disc Read Only Memory (CD-ROM) emerged.

[COLLABORATION]

We can observe in (9) that the emergence of the first CD-ROM is in part the result of the collaboration of the companies Philips and Sony. Such collaboration is the TR of *between* in the composite structure evoked in *collaboration between Philips and Sony*, while the prepositional landmark is jointly elaborated by the profile of the coordination structure *Philips and Sony*. These latter companies in (9) are jointly collaborating between them to make the project run: there is a link between the collaborative bodies and the project itself (the release of the first CD-ROM), but this link is concerned neither with commonalities nor with differences as in (7) and (8), respectively. Rather, the use of *between* in (9) has to do with collaboration.

Figure 4.9 depicts the [COLLABORATION] lexical concept for *between*:

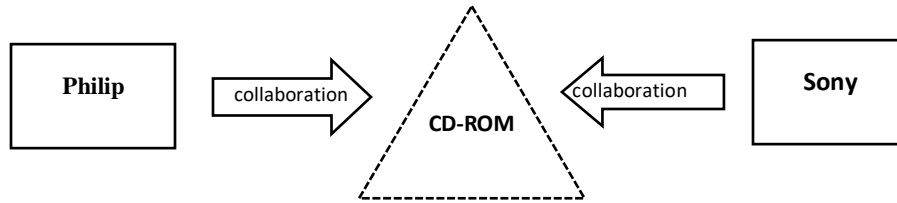


Figure 4.9. [COLLABORATION] lexical concept for *between*

The arrows represent the collaborative link (they also express intentionality) – the TR of *between* – offered by each company to jointly elaborate the product, here the first CD-ROM in (9). Note that figure 4.9 also captures the CD-ROM as TR of *emerged* in the clause *the first Compact Disc Read Only Memory (CD-ROM) emerged*. Indeed, the main attentional focus falls on *collaboration* in the clause *following further collaboration **between** Philips and Sony*, but then the attention shifts to *CD-ROM* once the integration of the clause *the first Compact Disc Read Only Memory (CD-ROM) emerged* takes place in a higher-order composite structure.

The parameters that might be most directly involved in terms of activation and extension in (9) are Separation, Proximity, and Central position. Extension in turn, is the result of correspondences between these conceptual parameters and conceptual metaphors.

Another possibly prototypical lexical concept for *between* that I want to consider is the one of [COMPETITION], which is typically used in sports events. According to the *CED*, *between* denotes a discussion, argument, or game between two or more people or groups of people, that involves both people and groups. As an example, consider the following piece of evidence extracted from the *BNC*:

- (10) Even today as I write this, a football match *between* the men and the women of Halling is taking place, the teams being known as the Go-Go Girls and Bionic Males [COMPETITION]

In (10), there is a football match between the men and the women of Halling (the Bionic Males and the Go-Go Girls respectively), which means that the sporting event is a sort of link between the two football teams. Importantly, the nominal structure encoded by *a football match* functions as the TR of the non-processual relational predication conveyed by *between*, and its prepositional landmark is elaborated by the nominal conjoining structure

the men and the women of Halling, whose essential import consists in the mental juxtaposition of two coequal elements that are conceived as being together in the same attentional frame. This partial composite structure is then integrated with the rest of the conceptual structure encoded by the maximal scope of sentence (10) in a higher-order composite structure to eventually arrive at the composite conception that sanctions the [COMPETITION] lexical concept for *between*.

We can conceptualize a football match by virtue of the entities that make possible the actual match, that is, the football teams and the pitch (among other elements such as the referee and the spectators), at the very least, are the things that are minimally required for conceptualizing the sporting event.⁵² It follows that a football match functions as a sort of link between the two football teams; but apart from that, it is an event in which the winner gets a prize (satisfaction of victory included), therefore, notions such as *confrontation* and *competitiveness* are to be expected. Figure 4.10 diagrams a possible conceptualization of the [COMPETITION] lexical concept:

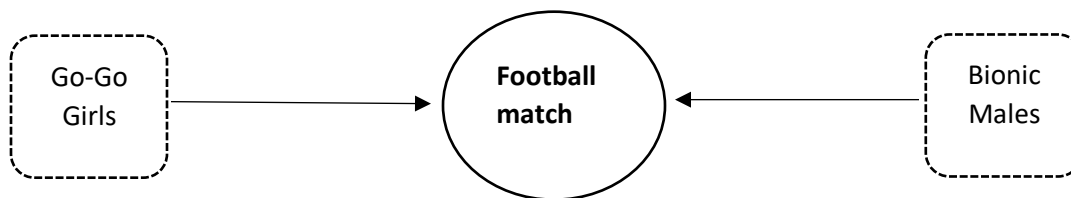


Figure 4.10. [COMPETITION] lexical concept for *between*

The football match represents the attentional figure and therefore it is the TR of the relational profile of *between*. The arrows indicate competition or confrontation as well as the intention between the two teams to get the victory. The two teams in turn, function as LM by virtue of the copulative coordination structure *the men and the women of Halling*.

As in most of the examples shown so far, there is a similar image-schematic structure that underlies the [COMPETITION] lexical concept and comes from the {LINK} image schema. This underlying structure allows humans to get access to metaphorical and metonymical conceptions. However, this underlying schematic structure is subject to the conceptual nature of the trajector/landmark alignment of a given construction. For instance, compare

⁵² For details on conceptual organization see Lakoff's 1987 idealized cognitive models.

the clause *There are differences between X and Y* with *There are similarities between X and Y*, or *There is collaboration between X and Y in this project*. In each utterance we can appreciate the schematic structure of {LINK}, but because of the conceptual nature of the trajector/landmark alignment, specifically on the TR (i.e., *differences*, *collaboration*, *similarities*) the resulting composite conception is considerably different.

Conceptual metaphor is key to apprehending the conceptual flexibility of this image schematic structure since it is the vehicle for non-spatial understanding. I suggest that a wide array of conceptual metaphors such as SIMILARITY IS CLOSENESS, DIFFERENCE IS SEPARATION, and COLLABORATION IS PROXIMITY, among others, establish correspondence links with the parameters of *between*. Such correspondences might allow metaphorical extensions in the first place.

The last two senses that this chapter includes for *between* are the [CHOICE] and [TEMPORAL DISTANCE] lexical concepts. I will start with the [CHOICE] lexical concept, which I suggest, is derived from the Surround and Central position parameters (see figure 4.2 above). To illustrate its linguistic realization, consider the following *BNC* passage:

- (11) We can make a choice *between* struggling on *or* surrendering forever to the forces of death. [CHOICE]

In (11), the conceptualizers are to decide between two options: (i) struggling on, or (ii) surrendering forever to the forces of death. These two alternatives are an example of a coordination structure of the *or*-type. That means there is a mental juxtaposition of two or more coequal elements. However, the *or*-type coordination structure is more elaborate than the *and*-type in that its meaning resides in the relationship between two mental spaces where each candidate or option such as in (11) has the potential to fill the role (see Langacker 2008: 411). Each alternative is considered on an equal basis, making mental juxtaposition the key feature in this type of coordinate relation even though *or* divorces it into two separate mental spaces (contrary to the *and*-type which does not invoke separate spaces). It follows from this that the prepositional landmark of *between* is elaborated by the *or*-type conjoining structure *struggling on or surrendering forever*, and its TR is filled by

the relational profile evoked in *We can make a choice* in order to yield the composite conception evoked in (11).

If we take a look at figure 4.1 above, we can see similarities in the conceptual structure that both figure 4.1 and the composite conception of *between* in (11) share: the conceptualizers' choosing process is metaphorically given a central position (as the triangle in figure 4.1). It is in this region that the conceptualizers can decide by taking one of the two options that are available (like the squares in figure 4.1).

Figure 4.11 depicts this metaphorical reasoning:



Figure 4.11. [CHOICE] lexical concept for *between*

Figure 4.11 above shows the act of choosing in (11) (represented by the circle in bold) and the two available options to do so (represented by the dashed diamonds). Note how the relational profile of *make a choice* adopts a central position which is akin to a figurative vantage point from which the group of people can observe (i.e., think about) the two options that are available (represented by the dashed diamonds; they also indicate the potentiality of the options to be taken). The two options virtually delimit the periphery of the area (prepositional landmark) in which the act of choosing takes places.

Activation in (11) might fall on the parameters of Separation and Central position. These are further extended to conceive the non-spatial scenario evoked in (11) in which a choice is involved. As mentioned earlier and depicted in figure 4.11, the possible choice acquires a central position with respect to the two options available. These two options are individual and separate elements even though they have coequal status as prepositional landmark.

Now note how the English preposition *between* can be sanctioned even when the conceptualizer(s) have many more options at their disposal to pick up, as evidenced in the following *BNC* sample:

- (12) The qualification with respect to comp sixteen is that congress needs to be aware that a future Labour government will have to decide *between* any competing priorities **[CHOICE]**

As shown in (12), *between* can also be sanctioned in situations where more than two options (in this case many) are available for the subjects to make up their mind and choose. In (12) the TR of *between* is elaborated by the clause *a future Labour government will have to decide*, while the prepositional landmark is elaborated by *many competing priorities*.

An important point to highlight in (12) is the use of the determiner *many*, which function as a coarse-grained grounding quantifier for the nominal *competing priorities* to yield the composite structure evoked by *many competing priorities*. Another important fact that enables the preposition *between* to sanction situations in which people must decide between many or several options, is that *between* co-occurs with plural mass nouns, as well as with count nouns.⁵³

There will be more to say about the [CHOICE] lexical concept below when the preposition *among* is presented as another option for the linguistic realization of this sense. For now, figure 4.12 attempts to capture the [CHOICE] lexical concept that is partially sanctioned by *between*:

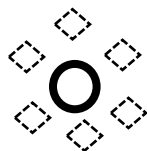


Figure 4.12. [CHOICE] lexical concept for *between*

4.1.2 [TEMPORAL DISTANCE] lexical concept for *between*⁵⁴

As briefly seen in chapter 2, the domain of time has been widely understood throughout the literature in terms of the more concrete domain of space (Johnson 1987; Lakoff and Johnson 1980, 1999; see also Moore 2006, 2014). For present purposes, the metaphor TIME IS SPACE will be the starting point to account for the temporal behavior of the English

⁵³ For the noun classification that this research follows see Langacker (2008: 128-146).

⁵⁴ The temporal behavior of *among* and *amid* have not been considered in this research due to their low frequency in linguistically mediated communication.

preposition *between*.⁵⁵ To see how this metaphorical mapping takes place, consider the following passage extracted from the *BNC*:

- (13) A study published in the British Medical Journal traces the excess cesium to locally produced lamb and milk from cows which have eaten coastal grasses contaminated with nuclear waste. The measurements were taken *between* 1979 and 1986. [TEMPORAL DISTANCE]

As in (3) and (4) above, there are two clearly separated points that establish a boundary in terms of the distance that a given attentional figure can occupy. In this case, the spatial reification is reflected in that two temporal points can delimit an event: these temporal points represent the beginning and end of the target event (TE). At the linguistic level, we can say that in (13) the clause *the measurements were taken* elaborates the TR of the *temporal* relationship profiled by *between*, and its prepositional landmark is filled by the *and*-type coordination relation evoked in *1979 and 1986*.⁵⁶ The single attentional frame of the coordination structure in turn, establishes a correspondence with the Separation parameter, hence, this parameter gets activated and extended for temporal reference in linguistically mediated communication, which in this case is periodicity-based.⁵⁷ We can observe how the landmark in (13), which plays the role of temporal reference point or RP, locates the target event (TE), *the measurements* (i.e., trajector), and fixes it (with the help of an origo) to a type of event-reckoning system. The origo (O), which is set at year 1, grounds the relation between TE and RP to the transience type of duration. Recall from chapter 2 that duration is a type of transience that defines the extrinsic temporal frame of

⁵⁵ However, and as argued in chapter 2, time might be more basic than space, so temporal structures is expected to constitute a type of knowledge that partly builds up the human conceptual system. Temporal cognition is fundamental for linguistic realizations of time (see Morras [to appear] for such a view).

⁵⁶ Even though in the cognitive grammar literature prepositions profile atemporal relations, since (unlike verbs) they do not designate events or states that evolve over time, they can be apprehended as temporal in temporal linguistic constructions by virtue of the metaphorical mapping TIME IS SPACE. Several spatial prepositions are used to designate temporal periods (understood as spatial paths) as well as temporal locations (understood as spatial locations).

⁵⁷ This type of coordinate strategy is a characteristic of the extrinsic temporal frame of reference (for details on this type of temporal reference, see Evans 2013: Ch.6).

reference (or t-FoR for short). Duration can be understood as the subjectively felt experience of the passing of time forming an elapse. The O in (13) is set at year 1 since it represents the temporal point in which repeatable event-reckoning systems such as the Gregorian calendar begin.⁵⁸

Another parameter that gets activated and extended for temporal conceptualization is Central position. The semantics of this parameter matches the metaphorical conceptualization of a temporal event that is in a delimited temporal area, just like a concrete thing in space can be located in the area delimited by other objects. However, semantic extension in the form of metaphorical mappings for temporal conceptualizations is not the whole story since we do need a type of conceptual structure that is purely temporal for a full-fledged account of temporal semantics.

The idea (and evidence) of time as qualitatively different from space has made some scholars, including myself, assume *temporal thinking/cognition* as the key feature of time since this represents its unique structure (Evans 2004, 2013). Moreover, time seems to be more essential or basic than space for conceptualization itself due to the temporal integration system that functions at the neurological level, as suggested by Pöppel (e.g., 2004, 2009). Note that to understand that the measurements in (13) were taken between the years 1979 and 1986, we first need to apprehend the {24-HOUR} and {365-DAY} cycles, which are features of the extrinsic t-FoR. Furthermore, we make use of *linear time* to temporally locate the event in (13).⁵⁹ These features, in turn, are manifestations of temporal concepts that structure cyclical and mensural-like periodicities. This structure seems to be purely temporal in that we locate a TE with respect to an RP within the Gregorian calendar. A highly schematic temporal structure that might emerge from this type of temporal reference could be glossed as [TE FIXED WITH RESPECT TO AN RP IN THE GREGORIAN CALENDAR].

⁵⁸ Recall from chapter 2 that event-reckoning systems are related to the use of calendars, while time-reckoning systems are associated with the use of clocks. Both systems underlie the temporal structuring of the extrinsic t-FoR. Moreover, both types of systems can be further divided into *repeatable*, *open-ended* (i.e. linear time), and *closed* (i.e. countdowns).

⁵⁹ Our temporal concept of {LINEAR TIME}, in turn, might be grounded by the primary metaphor DURATION IS LENGTH (Grady 1997).

Besides the essential need of positing a type of structure which is purely temporal in the conceptualizations of time as shown for the preposition *between*, much of the spatio-conceptual structure of *between* is mapped onto the domain of time, to the extent that the metaphor TIME IS SPACE seems to appeal for an account of the temporal behavior of some English and Spanish prepositions since space and time do share a common schematic structure (Johnson 1987). In the case of the preposition *between* (following Talmy 2000), the metaphorical link comes from the very substrate of each domain: while time is about *action*, space is about *matter*. The tendency of conceptualizing time in terms of space comes from the irrefutable fact that temporal experience is fundamental to the occurrence of events. According to Grady (1997), the asymmetrical relation of time in terms of space underpins the *primary metaphor* of DURATION IS LENGTH, where the primary source is LENGTH and the primary target is DURATION.

In the final analysis, I suggest that while space is absolutely essential for temporal understanding, spatio-conceptual structure *partially structures* and *supports* linguistic temporal realizations, rather than fully motivate them since time exhibits its own structure. Another point is that conceptual metaphors underdetermine rather than completely motivate temporal understanding, as briefly argued in chapter 2.⁶⁰ This in turn, broadens our view of the *types* of knowledge and degree of complexity lying behind temporal (and non-spatial) conceptions.

Figure 4.13 shows the [TEMPORAL DISTANCE] lexical concept for *between*:



Figure 4.13. [TEMPORAL DISTANCE] lexical concept for *between*

Figure 4.13 shows how the primary metaphor DURATION IS LENGTH underlies the temporal understanding of *between*. A spatial source schema ({LENGTH}, or rather {PATH}), in this

⁶⁰ By underdetermination the present author means that conceptual metaphor in its own does not provide enough constraints to specify a unique solution as to what exactly are the mechanisms and types of knowledge involved in non-spatial and temporal usages. As we have seen so far, we also need temporal thinking as well as non-metaphorical representations, apart from conceptual metaphor, to approach a richer understanding of the very nature of these types of scenes.

case) is mapped onto a target schema, here {DURATION}. The representation of the metaphor requires a representation of both source and target plus that of the mapping of one onto the other. The set of specific sub-mappings or correspondences can be understood as: beginning of {PATH} mapped onto beginning of {DURATION} or rather {PERIOD}, intermediate parts of {PATH} mapped onto intermediate phases of {PERIOD}, end of {PATH} onto end of {PERIOD}. Thus, the resulting *blend* (in the sense of Fauconnier and Turner 2002) of the metaphorical mappings is what figure 4.13 captures best.

Note that figure 4.13 strikingly shares the same image-schematic structure as figures 4.4 and 4.5 above; however, rather than pointing to a perceivable spatial configuration, figure 4.13 depicts a temporal scene.

4.2 Spatial lexical concepts for *among*

I now turn to the English preposition *among*. Unlike *between*, *among* is generally used when there are at least 3 entities that are part of a group, and which are not specifically named. According to the *CED*, *among* denotes a thing or things that are in the middle of or surrounded by other things. As an example, compare the following examples:

- (14) a. The negotiations *between* Chile, Uruguay, and Brazil are going well.
 b. The negotiations *among* the South American countries are going well.

As depicted in (14), the use of *among* sanctions situations in which there is homogeneity in that the entities of a given group are not specified, rather, they are conceptualized as a mass. In addition, the mass noun category – broadly speaking – includes both non-plural mass nouns (such as *gold*) and plural mass (such as *diamonds*) (see Langacker 2008:130). However, there are few properties that this preposition has in common with *between*, among them, the fact that both prepositions manifest a low level of *specificity* (Langacker 1987, 2008: 55-57). To see this point, consider the first example taken from the *BNC*:

- (15) If you come, I will meet you *among* the crowd. Otherwise - tonight, and I
 will give the call. Jeannie
 [WITHIN]

In (15) there is a dialogue between two people in which they are planning to meet in the middle of a crowd. It follows from this situation that there is an apparent spatial configuration in which the speaker will be included in a sort of mass (i.e., many people) that might surround her. Moreover, the spatial arrangement depicted in (15) is akin to (2) above in that it manifests a low level of specificity (see figure 4.3 above): the speakers could meet anywhere within the mass of people. The surrounding mass in turn, makes the speaker acquire an approximately central position, just like in cases where the preposition *between* is sanctioned; however, I suggest that there is an added constraint in the spatial scenes that are generally evoked by *among*, and it has to do with the attentional figure becoming *part of* the mass that surrounds it; therefore, the parameters of *Inclusion* and *Surround* might be expected as key configurational features or core values that the conceptual basis of *among* might be constituted of. A person who is in the middle of, or anywhere in a large crowd as evoked in (15), could easily get occluded by the mass of people; hence, the parameter of Occlusion is a phenomenological consequence which is generally and apparently present in the sanctioning of spatial scenes involving *among*.

Figure 4.14 depicts the conceptual basis proposed for *among*:

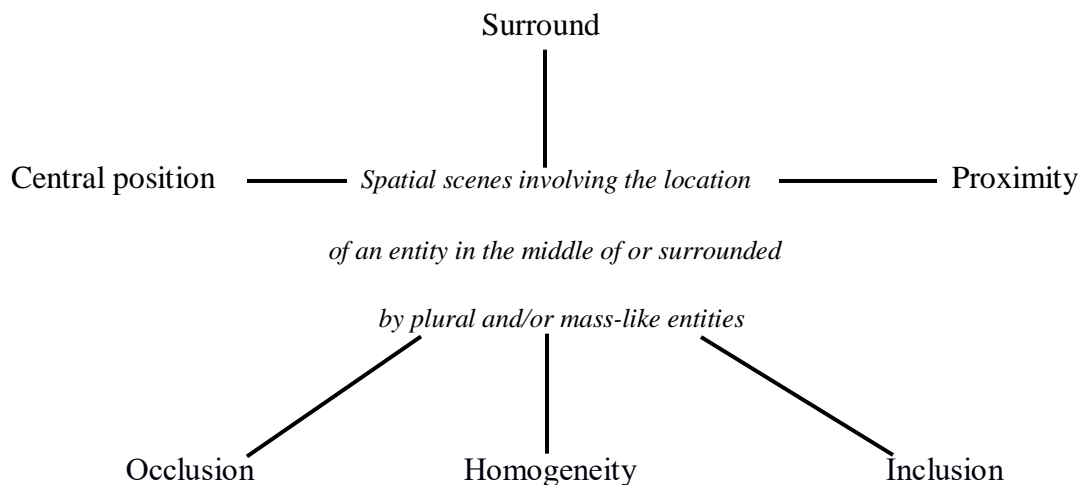


Figure 4.14. Conceptual basis for *among*

As figure 4.14 shows, there are, at the very least, 6 parameters that semantically constitute the conceptual basis of the English preposition *among*. Just like in the case of the preposition *between*, *among* manifests the parameters of Surround, Proximity, and Central position, but apart from those parameters, and as evidenced in (14), *among* generally

exhibits an integrational feature, in that a given attentional figure that is supposed to be among other entities is also considered to be part of the larger group. There is also homogeneity in that the entities that form the group (i.e., the ground) are not specifically named, as in (14b).

Occlusion is another parameter that arises as a functional consequence of being part of a larger group: the possibilities of occlusion for an entity that is being surrounded by a big number of other elements is higher than when a given entity is located between two or more things. This conceptual import is particularly true for spatial or “literal” utterances involving the preposition *among*. We can say, then, that one of the conceptual differences between *among* and *between* lies in the fact that the former functions as *e-site* for non-plural and plural mass nouns, whereas the latter does so for count and mass nouns.

At the core of the conceptual basis of *among*, we can appreciate a proto-scene that relates to the location of an F or TR that is surrounded by entities (G/LM). These entities exhibit a *plural* or *mass-like* character. This, in turn, might shed light on the reasons why the prepositional-landmark elements of *among* are seen unitarily. Image 4.2 shows a mundane spatial scene that may be considered as a “proto-scene” for *among*:



Image 4.2. Possible proto-scene for *among*: “the green apple is *among* several red ones” (Taken from Morras 2018: 67;

Morras and Barcelona 2019: 115)

I now turn to consider some of the possibly prototypical lexical concepts or senses that the word *among* can sanction. The first one, which I think arises as a functional consequence of

the parameter of Inclusion, is the [OCCLUSION] lexical concept. This sense is exemplified in the following corpus passage extracted from the *BNC*:

(16) and when he came out *among* the crowd he received an ovation

[OCCLUSION]

In (16), we can see how the crowd occludes the protagonist since he was apparently out of sight. Then when he came out of the crowd, he received an ovation. Note also that the preposition *among* in (16) evokes a complex atemporal relation since it partly encodes a trajectory within the whole composite structure. The notion of movement or trajectory comes from the clause *he came out among the crowd*, which clearly points to an occlusive feature that is partially encoded by *among*. Furthermore, we can conceptualize the protagonist as being in the middle of a mass of people because when he came out from it, he received an ovation; this means that the people noticed when the protagonist became visible and hence reacted upon with great enjoyment.

We can observe, then, the multiple activation of the parameters that make up the conceptual basis of *among* in the fact that the protagonist was in the middle of a crowd and then came out of it. This means he was surrounded by it; hence, there was proximity and inclusion since he was part of the crowd. The crowd in turn, is apprehended as a homogeneous thing since it is conceptualized as a mass in which none of its participants is mentioned. All these factors, particularly the fact of being in the middle of a large crowd, generate the functional consequence of occlusion.

Now the grammatical import of *among* is that it functions as e-site for the nominal *the crowd*: there is a correspondence link between the prepositional landmark of *among* and the profile of the nominal. Its (relational) TR, on the other hand, is filled with the relational profile of the clause *he came out* due to the complex atemporal character of *among* in (16).

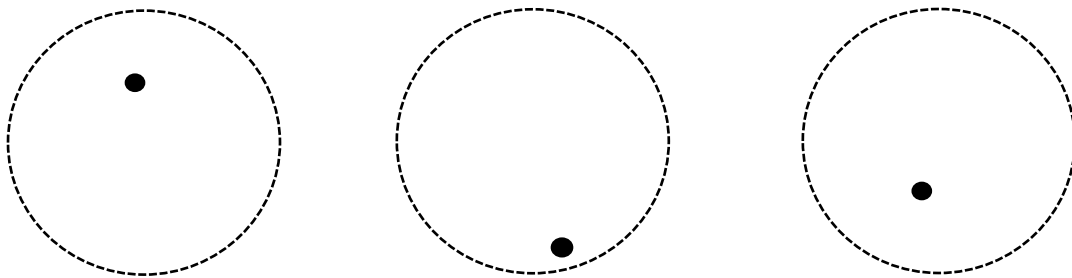
Further evidence of the [OCCLUSION] lexical concept comes from the following passage extracted from the *BNC*:

- (17) The path and the valley are actually a trap created by a flock of Harpies who nest in a small cave hidden *among* the rocks

[OCCLUSION]

In (17) we can observe again how the [OCCLUSION] lexical concept is partially sanctioned by the preposition *among*. This time, however, *among* evokes a simplex atemporal relation in that trajectory is not encoded; rather, the spatial scene is conceptualized in a summary-like fashion rather than sequentially. The clause *a small cave hidden*, profile a thing which is the cave. Furthermore, the verb *hidden* denotes an action that does not require movement, that is why the composite conception is based on summary scanning (Langacker 1987). It follows that the relational profile of the clause *a small cave hidden* elaborates the TR of *among*, whereas the profile of the nominal *the rocks* establishes a correspondence link with its LM and therefore elaborates it.

Figure 4.15 depicts some of the possible spatial scenes that could be evoked in (16) in which a small cave is hidden among the rocks. Hence, it is occluded.



4.15. “a small cave hidden *among* the rocks”

Figure 4.15 resembles figure 4.3 above in that there is a low level of specificity about the exact location of the attentional figure (i.e. the small cave). Moreover, the level of *schematicity* (contrary to specificity) (Langacker 2008: 55-57) of *among* is higher than the one of *between*: *between* generally establishes a minimum of two countable or mass-like reference objects which constitute the periphery of the area in which an attentional figure is to be located. On the contrary, *among* usually establishes the periphery and region with just one reference object which is conceptualized as a mass due to the homogeneous character of its prepositional landmark in that the thing or things that elaborate it are not explicitly

mentioned. This mass-like character of the prepositional landmark of *among* is elaborated by *the rocks* in (16) and captured by the dashed circles in figure 4.15.

I now turn to what I term the [INCLUSION] lexical concept and it refers to the fact that a given entity is part of a whole conceptual configuration in that it belongs to the whole group and has a certain role or function within the group. According to the *CED*, *among* denotes a relation in which a person or thing is included as part of a group of people or things. As an example, consider the following utterance taken from the *BNC*:

(18) She was wailing *among* her friends [INCLUSION]

The girl in (18) is not solely located in a group of people, but she is having an active participation within the group as a member. Now what causes the Inclusion parameter to get primary activation, as opposed to secondary activation,⁶¹ is the very nature of the prepositional landmark *her friends*, which is lexically integrated with the possessive determiner *her*. This possessive determiner denotes the nouns that follows it, in this case *friends*, as belonging to the possessor.

In the composite structure yielded by *She was wailing among her friends*, the relational profile of *She was wailing* elaborates the TR of *among* while its prepositional landmark serves as e-site for the profile of the nominal *her friends*. Note again how the parameters proposed as constituting the conceptual basis of *among* get activated: the girl is included in the group (Inclusion), she is near her friends (Proximity), she might be surrounded by her friends (Surround), and her friends in turn are apprehended as a homogeneous group (Homogeneity) since none of her friends is mentioned separately.

4.2.1 Non-spatial lexical concepts for *among*

I now want to focus on the non-spatial behavior that is usually exhibited by *among*. I will focus particularly on two lexical concepts; these are the ones of [GROUPING] and [CHOICE].

⁶¹ Secondary activation has to do with the conceptual knowledge that is backgrounded. This type of activation supports the conceptual import of the parameters that are most directly involved in a given construction.

I start with the [GROUPING] lexical concept, which seems to be a figurative extension that is partly motivated by the parameters of *Surround* and *Inclusion*. Consider the following *BNC* passage:

- (19) Scott Currie will be visiting us on 27th November at 2 p.m. I'd like him to look specifically at Personnel's computing problems **among** other things.

[GROUPING]⁶²

In (19), the boss of a company is talking with the staff about a supposedly computing expert, here Scott Currie, that is visiting the company on the 27th of November at 2 p.m. Now the point that the current analysis is concerned with has to do with the composite structure evoked in *Personnel's computing problems among other things*. It follows that the personnel's computing problems are the principal reason why Scott is visiting the company; however, the boss of the company wants him to look at other things too. The backgrounded "other things" Scott can deal with, but which nevertheless are not mentioned, constitute the prepositional landmark of the relational unit *among*, whereas its TR is elaborated by the nominal *Personnel's computing problems*.

Figure 4.16 depicts the contextual realization of *among* in (19):

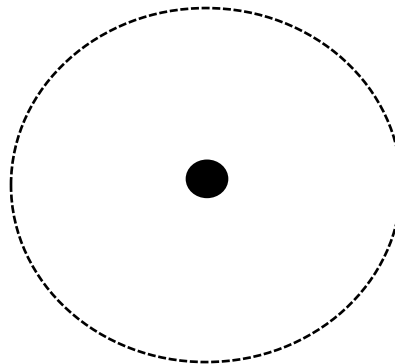


Figure 4.16. 'I'd like him to look specifically at *Personnel's computing problems among other things*'

Figure 4.16 shows how the Personnel's computing problems, which are represented by the black circle, adopt a central position within the *figurative/virtual region* that is populated by

⁶² This lexical concept should be understood as "grouping in an ad hoc category". More precisely for the present case in (19), the category might be called the {TASKS / THINGS} that Scott has to carry out.

the unknown number of other things Scott might do for the company (represented by the outer dashed circle). This conceptual import encoded by *among*, resembles the proto-scene from which the conceptual basis of *among* emerges (see image 4.2 above). It follows that the parameter of Surround plays a substantial role in the figurative extension of *among*, in that the surrounding entities that are near to the attentional figure in the spatial domain get extended onto non-spatial domains for linguistically mediated communication. In (19), the possible things Scott can do for the company, build up the figurative region. From this region just one thing gets highlighted while all the others remain backgrounded as an open-ended array of more things Scott might do but which, nevertheless, are not mentioned. This feature in turn, is akin to the homogeneity manifested in spatial scenes in which prepositional-landmark elements are not explicitly mentioned or identified but conceptualized as a whole, as shown in (17) and (18).

In (19), one of the jobs, and maybe the most relevant one that Scott was called for, was solving the Personnel's computing problems, but there are other things as well that Scott will do in (19). Those omitted things evoked by the composite structure *among other things*, are included in the things that the company's boss wants Scott to do. It follows from this that the phenomenological parameter of *Inclusion* is involved in the figurative extension to eventually arrive at the composite structure evoked by the [GROUPING] lexical concept. We can observe invariance in (19) (following Lakoff 1990) in terms of how the schematic structure from the spatial parameters of Surround and Inclusion (at the very least) is preserved and mapped onto the non-spatial domain.

Consider another *BNC* example of the [GROUPING] lexical concept and its relationship with the English *among*:

- (20) ***Among*** other things, smoking makes the blood clot more easily and puts him at risk of another heart attack, which may be less mild than the first.

[GROUPING]

Note that in (20), the passage starts with the relational composite structure evoked by *among other things*. At this low level of conceptual organization, the LM corresponds to *other things*. The TR, on the other hand, might be an argument or a proposition in favor of

the speaker's claim. This argument is made explicit by the clause "*smoking...first*". Thus, it is a relational TR. It follows from this idea that the semantics of *among other things* in (20) is not just [GROUPING] but also [ARGUMENT HIGHLIGHTING].

Unlike (19), the composite structure yielded by *among other things* comes at the beginning of the passage in (20). It follows that there is a distinct *constituency* (particularly in terms of word order) in each corpus passage that might play a role in triggering the conceptual linear order of embodied simulations. In (20), the introductory expression *among other things* evokes a mental space that has a superordinate character in that the category {THINGS} is evoked. Furthermore, the information about the things that get highlighted within the superordinate category comes after – from this point, it follows that the lexical integration of *smoking makes the blood clot more easily and puts him at risk of another heart attack* carries this specific information to form the higher-order composite structure evoked by *among other things, smoking makes the blood clot more easily and puts him at risk of another heart attack*.

Figure 4.17 below depicts the contribution of *among other things* in (20). The outer circle in bold stands for the superordinate category of {THINGS} whereas the dashed circle in the middle represents the upcoming information about the member(s) of the category that get highlighted. In addition, there seems to be a figure/ground reversal (Langacker 1987: 125) between (19) and (20) which might be due to the mental word order in the lexical integration of the whole composite structure evoked in each passage.

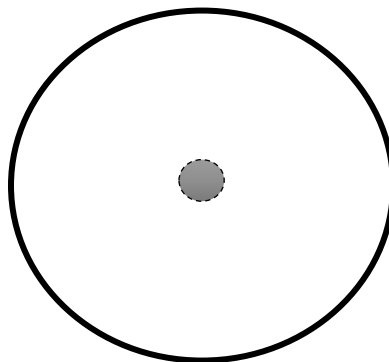


Figure 4.17. Conceptualization of the composite structure evoked in '*among other things*' in (20)

Figure/ground reversal is one of the manifestations that is generally encountered in the wider notion of profile/active-zone discrepancy. Note how the profile relation is identical to the one shown in Figure 4.16 above. However, figure 4.17 shows that different aspects that constitute the profiled relationship are activated. This difference in the activation routes might be due to the constituency that each passage presents in their composite-integration order.

Now let us consider what might happen in language processing when the rest of the utterance is integrated:



Figure 4.18. 'Among other things, smoking makes the blood clot more easily and puts him at risk of another heart attack'

As mentioned above, figure 4.17 evokes a mental space in which a not-yet mentioned attentional figure is surrounded by more things that constitute its G. Crucially though, they both are part of the same group. On the other hand, figure 4.18 narrows down the schematic import of *among other things* and establishes some health problems caused by smoking as main figure (TR). It follows that the act of smoking carries several health issues from which just two of them get highlighted in (20). The backgrounded health problems are represented by the dashed circle that surrounds the highlighted ones.

We can then appreciate the metaphorical extension of the parameters of *Inclusion* and *Surround* which receive primary activation when conceiving this particular sense of *among*. We can also observe that the parameter of *Homogeneity* is present because when people say *among other things*, they unitize the backgrounded things in a single group while the

attentional figure is the thing or things that come to the front and are therefore, named. Central position might receive secondary activation.

It is important to mention at this point that the current analysis is based on specific composite structures. It is not intended by any means to go through all the *discourse maximal scope* even though sometimes is necessary. In the case of (19) and (20), the change in the position in which *among other things* is placed in each corpus example, might play a role both in embodied simulations and language processing (for details on the role of embodied simulations in language comprehension see Bergen 2012).

The last prototypical lexical concept of *among* to be analyzed as a figurative extension of its conceptual basis as depicted in figure 4.14 above, is the one of [CHOICE], which happens to be sanctioned by *between* as well (as shown in (11) and (12)). It follows from the linguistic evidence exposed so far, that lexical concepts are form-specific, but forms (i.e. lexical vehicles) are not lexical concept specific since a single word form can be associated with a potentially large number of lexical concepts that may or may not be semantically related (Evans 2009: Ch. 7). As shown in passage (12), the English preposition *between* can also express a situation in which a person has to decide *between/among* several options. However, I think that there might be a subtle conceptual difference in the use of each preposition to evoke the [CHOICE] sense, and it comes from the very nature of their conceptual basis, particularly from the different ways the {LINK} image schema structures each preposition.⁶³

Before proceeding to the analysis of the [CHOICE] lexical concept, it is important to briefly recall some important conceptual features of the two prepositions shown so far.

The image schema of {LINK} that underlies the conceptual basis of the preposition *between*, seems to be of a special kind since the conceptual nature of the linkage between the prepositional-landmark elements that *between* co-occurs with, appears to be more perceptually identifiable – that is, spatial scenes which are generally encoded by *between* exhibit a clear separation and therefore identification, of the elements that elaborate its prepositional landmark. There might be of course, spatial scenes in which the entities are

⁶³ For details on the conceptual nature of the {LINK} image schema, see Johnson (1987: 117-121).

stick to each other. Nevertheless, the elements that elaborate the prepositional landmark of *between* are generally apprehended as countable nouns (e.g. parrot) as in (5) and (6), for instance, and plural mass nouns (e.g. parrots) as in (1) and (2).

The image-schematic structure that underlies the conceptual basis of *between* can be observed in example (7) as well as in figures 4.6, 4.7, 4.8, 4.9, and 4.13. On the contrary, the English preposition *among* appears to exhibit a high degree of proximity and homogeneity of its prepositional-landmark element(s) as shown by its proto-scene in image 4.2 above. This mundane phenomenological experience might eventually have communicative consequences with respect to the linguistic realization of the {LINK} image schema. As mentioned earlier, there is a conceptual distinction between the prepositions *among* and *between* in that the prepositional landmark of *among* establishes correspondence links with the profiles of non-plural mass (as in (16)), and plural mass nouns (as in (17)), whereas *between* does so but mostly with count and plural mass nouns, as in examples (5) and (1).

We now must consider the parameter of Inclusion within the image-schematic structure of linkage that is encoded by *among* as part of the linguistic motivation that lies behind a given spatial scene where an entity is located among other entities. Furthermore, the parameter of Surround is apparently more prominent in *among* than in *between*; this in turn, provides further reasons for the qualitative distinction between the image-schematic structure of linkage in these two similar prepositions (see figures 4.15, 4.16, and 4.17). In addition, a grammatical trait that is highly frequent in *between*, as opposed to *among* where it is practically absent, is the use of the coordination structures of the *and*- and *or*-type (as shown in most of the linguistic examples of *between*). Also note that Inclusion is motivated by the conceptual fact that this preposition establishes correspondence links with non-plural and plural mass nouns. It follows that the profile of a mass noun is not construed as being bounded within the immediate scope in the domain of instantiation: a mass noun does not encode a boundary as an onstage element to be focused on, therefore, there is no bounding within its immediate scope (Langacker 1987, 2008). This very conceptual import makes the parameters of Inclusion and Surround (as well as Homogeneity) become more prominent in the conceptual basis of *among*.

As an instance of the [CHOICE] lexical concept that is partially sanctioned by *among*, consider the following passage taken from the *BNC*:

- (21) The models also describe the exact form of the deterioration in decision making which occurs when people have to choose ***among*** several alternatives instead of just two [CHOICE]

The preposition *among* in (21) partially evokes the same lexical concept as *between* in (12). Even though the semantic tendency of both prepositions to co-occur with concrete and abstract things is expected, this does not represent substantial evidence for establishing an adequate criterion of the semantic co-occurrences or tendencies of the prepositions *among* and *between*.

In (21) the nominal *several alternatives* equates its profile with the prepositional landmark of *among*, just like the nominal *many competing alternatives* establishes correspondence links with the LM of *between* in (12) above. However, I think that an explanation about the differences in terms of usage of these similar prepositions, especially on the [CHOICE] lexical concept, does lie at both the linguistic and conceptual level. Both prepositions partially evoke the situation of choosing between many options available. Nevertheless, and based on subtle differences of the {LINK} image schema that structures each preposition, as well as on the differences in the conceptual parameters that constitute the conceptual bases of *among* and *between*, is that these prepositions, under specific contexts of use, might trigger different but semantically related embodied simulations.

Figure 4.19 intends to show this point:

C = conceptualizer

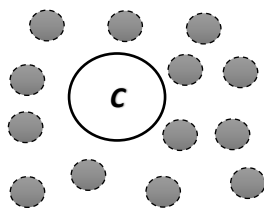


Figure 4.19. [CHOICE] lexical concept for *among*

In addition, we could also say that the reason why the lexical concept of [CHOICE] is sanctioned by both *among* and *between*, is because they share some conceptual ground in

that they both can semantically co-occur with plural mass nouns, such as *priorities and alternatives*, as evidenced in (12) and (21), respectively. Moreover, example (12) exhibits as part of its composite conception, the composite structure evoked by *decide **between many competing priorities*** in which the adjectival gerund *competing* modifies the plural mass noun *priorities*. This in turn, narrows down the type of priority evoked in (12) and it also might shed light on the identifiable character of the prepositional-landmark elements that co-occur with *between*.

4.3 Spatial lexical concepts for *amid*

I now turn to the (possibly) prototypical spatial lexical concepts that are generally sanctioned by the English preposition *amid*. To do so, it is first necessary to consider the core semantic value of this preposition. The relational unit *amid* is generally understood as a preposition that denotes a spatial configuration wherein a given TR is surrounded by one or more things (LM). Importantly, these surrounding things – the prepositional-landmark elements that co-occur with *amid* – are conceptualized as mass-like objects. According to the *CED*, *amid* is a synonym of *among* in that it denotes one or more things which are in the middle of or surrounded by one or more elements.

The conceptual nature of the surrounding entities that constitute the prepositional landmark of *amid* is that they are usually inseparable; this means that the semantic co-occurrences of *amid* have to do mainly with non-plural mass nouns even though it can also be integrated with plural mass nouns as in the case of *among*, and, less frequently, with count nouns. As an example, consider the following passage extracted from the *BNC*:

- (22) Shelley was conscious of the sound of her own breathing, even ***amid*** the clatter of plates and the loud hubbub of Spanish conversation.
[IN THE MIDDLE OF]

In (22) the composite structure yielded by *Shelley was conscious of the sound of her own breathing* profiles Shelley's breathing as a primary conceptual focus which then becomes integrated with *even **amid** the clatter of plates and the loud hubbub of Spanish conversation* to build the higher-order composite structure and then conception evoked in the passage above. It follows that *Shelley's breathing* establishes correspondence links with the TR of

amid and therefore elaborates it, while the coordination structure *the clatter of plates and the loud hubbub of Spanish conversation* jointly elaborates its prepositional landmark. Note the conceptual import of the prepositional-landmark elements in that they are conceptualized as mass-like things: there is a certain degree of homogeneity in the elements that elaborate the prepositional landmark of *amid*, just like in the case of *among*. Another important point to highlight here is that the preposition *amid* can co-occur with the coordination structure of the *and*-type, just like *between* can (*among* can also do so, but less frequently). The coordination structure *the clatter of plates and the loud hubbub of Spanish conversation*, in turn, is what enables the [IN THE MIDDLE OF] lexical concept to receive primary activation since it helps locate Shelley's breathing in the middle of the two prepositional-landmark elements, here the clatter of plates and the loud hubbub.⁶⁴

Figure 4.20 depicts the conceptual basis proposed for the English preposition *amid*:

⁶⁴ It must be added that the [IN THE MIDDLE OF] lexical concept might be treated as an abstract variant of our spatially rooted concept of {IN THE MIDDLE OF}. This special treatment is due to the temporal concept of {SIMULTANEITY}. Simultaneity or synchronicity is a temporal quality (following Evans 2013:67-68) that consists of an awareness that two or more events are occurring at the same moment. The lexical concept evoked in (22) seems to be a temporal extension of this more spatially rooted concept, since the breathing event is presented as co-occurring temporally with the two landmark events (the clatter of plates and the conversation hubbub). This in turn, might count as an instance of the metaphor TIME IS SPACE. Lastly, temporal qualities are experiences types that involve comparison across a specific type of transience. In the present case, it has to do with *anisotropy* since it involves the temporal element of {NOW}.

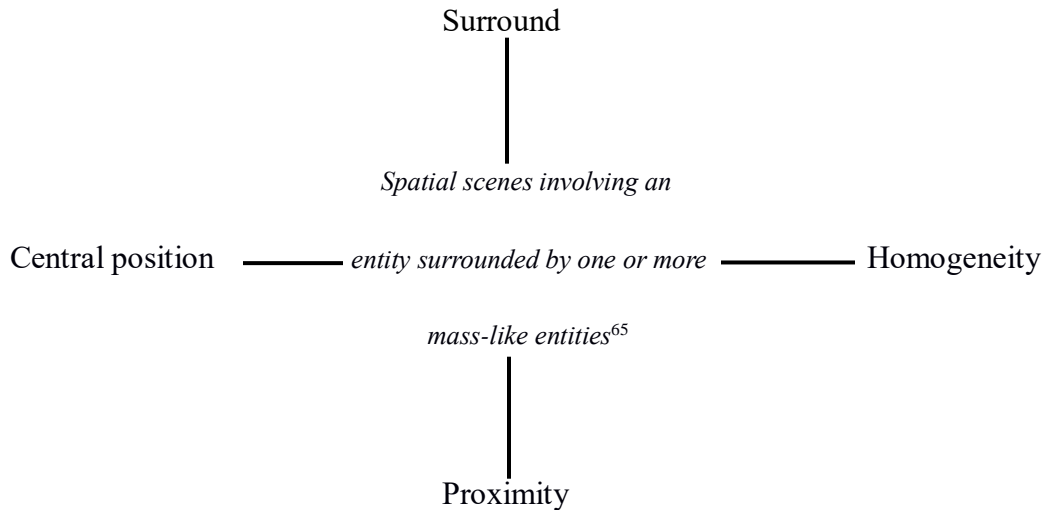


Figure 4.20. Conceptual basis for *amid*

The semantic parameters proposed above as constituents of the conceptual basis of *amid* are indeed present in the composite conception evoked in (22) even though their activation varies depending on the linguistic context that *amid* is integrated with. The manifestation of the Surround parameter has to do with the spatial limits established by the LM (the clatter of plates and the loud hubbub in (22)). This spatial boundary establishes the area in which the TR (Shelley’s breathing) is located. Furthermore, the spatial delimitation provided by the prepositional landmark carries functional consequences in that the TR acquires a central position due to its location within the delimited region. Proximity is another parameter which varies significantly. In (22) we know, even though in a coarse-grained way, that there is a certain degree of proximity between the TR and its prepositional landmark. We do not know the exact distance that Shelley is with respect to the clatter of plates and the people who were talking loudly (thus there is a fairly high level of schematicity evoked in (22)). What we do know, however, is that Shelley is located with respect to two elements (LM) that help to conceptualize a semantically coherent spatial scenario in which *amid* plays a relational role. Finally, the last parameter that is activated in (22) is the one of Homogeneity. Plural mass and non-plural mass nouns are conceptualized as something inseparable or unitized. This feature in turn, is what characterizes the prepositional landmark of *amid*. In (22), we can observe how the prepositional landmark consists of two

⁶⁵ These entities tend to be non-plural and plural mass.

inseparable things: the clatter of plates and the loud hubbub are apprehended as unitary entities in that their immediate scope is just a portion of their maximal one.

More evidence of the relational spatial role of *amid* comes from the following passage extracted from the *BNC*:

- (23) A koliba turned out to be a large wooden chalet-type restaurant which in this case was set *amid* tall pine trees [SURROUND]

In (23) the composite structure *A koliba turned out to be a large wooden chalet-type restaurant* profiles a thing which is a type of restaurant denominated Koliba. This profiled thing then, functions as main attentional figure in a higher level of organization when the composite structure evoked in *which in this case was set amid tall pine trees* is integrated and this yields the resulting composite conception. Now at a lower level of semantic organization, we can observe that the relational profile of *was set* elaborates the TR of *amid* while its prepositional landmark is elaborated by *tall pine trees* in the clause *was set amid tall pine trees*.

Note the unitization feature exhibited by the prepositional landmark *tall pine trees* in that the primary conceptual import goes on conceptualizing the group of tall pine trees as a whole, rather than focusing individually on each tree that composes the group.

Figure 4.21 is devoted to make this point clear:

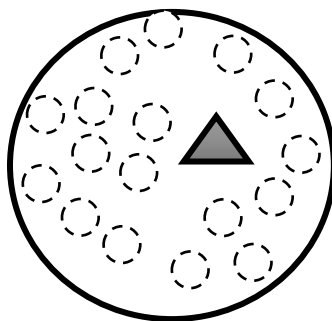


Figure 4.21. ‘was set *amid* tall pine trees’

In figure 4.21, the outer circle in bold represents the conceptual unitization of the nominal *tall pine trees* whereas the small dashed circles stand for the individual trees that constitute the whole area where the Koliba (represented by the triangle in bold) was set.

It is important to capture the conceptual import of the parameter of Homogeneity in that it is a characteristic of the prepositional-landmark elements of the spatial scenes in which *amid* is involved. Quantitatively, *amid* sanctions situation in which a figure is surrounded by one or more things; qualitatively, the surrounding entities are conceptualized unitarily.

In the final analysis, the English preposition *amid* appears to behave in a hybrid-like grammatical manner in that it can co-occur with coordinate structures of the *and*-type, just like *between* can (as opposed to *among* which exhibits this behavior but considerably less) as shown in (22), and it can also co-occur with just one concept rather than two coequally juxtaposed ones, as shown in (23). This one-element prepositional-landmark character is highly frequent in *among* but less in *between*, as shown in most of the examples so far involving *between* (however see example (2) above for the one-element prepositional-landmark feature).

4.3.1 Figurative lexical concepts for *amid*

We saw in section 4.3 a couple of important facts: (i) that the grammatical behavior of *amid* is akin to the one of *between* and *among* in that *amid* can co-occur with conjoins as well as with simple nouns, and (ii) that there is a conceptual import which is generally manifested by the prepositional landmark of *amid* and is the phenomenon of **unitization** (following Langacker 2008:342-343). Unitization is the reflection of our human propensity to conceptualize the world in terms of discrete objects to individually interact with them. It allows the semantic and grammatical treatment as masses of count things (normally expressed as count nouns). For instance, in (23) the prepositional landmark *tall pine trees* profiles the whole group of pine trees (rather than each tree being individually profiled) that populates the area in which the restaurant is located: the tall pine trees get unitized.

Now when it comes to non-spatial domains, the predominance of the prepositional landmark of *amid* to become conceptualized as a unitized thing is reflected by its substance-like status. Consider the following passage taken from the *BNC*:

- (24) *Amid* mounting criticism of the French government's failure to speak out against the killings, French Foreign Ministry spokesman Daniel Bernard on Jan. 13 condemned the attacks on the opposition and said that France would only continue to support the government [IN THE MIDDLE OF]/[SURROUND]

In (24) we can observe how the preposition *amid* partially sanctions the lexical concepts of [IN THE MIDDLE OF] and [SURROUND], just like *among* and *between* do. However, the conceptual import of the surrounding entity (mounting criticism) is homogeneous in that it is conceptualized as an inseparable entity. In (24) the nominal *mounting criticism* is apprehended as a substance-like abstract thing which establishes a correspondence link with the prepositional landmark of *amid*, making a successful and coherent semantic assembly. On the other hand, the TR of *amid* is elaborated by the relational profile of the composite structure evoked by *French Foreign Ministry spokesman Daniel Bernard on Jan 13 condemned attacks on the opposition*, who reacts, amid mounting criticism, upon a delicate situation the French government was going through.

The spatio-conceptual structure that might be recruited for metaphorical understanding comes from proto-scenes such as the one evoked in example (23): there is an F that is located in the middle of a mass. Another similar example can be an utterance such as *She is amid the desert*, in which we locate a woman with respect to a mass-like landmark, here *the desert*. Note how in these cases, there is primary activation of the Central position parameter since it is a conceptual feature, exhibited by the TR, that is highly prominent in the semantics of *amid*. Central position is assumed in this research as the core semantic value of *amid*. This core semantic value, in turn, shares semantic sub-structures with the [IN THE MIDDLE OF] lexical concept in that they highlight the mid-position adopted by the TR. This central position is what gets mapped onto the non-spatial domain to apprehend the location of concrete or abstract concepts with respect to their abstract LMs. Landmarks in the spatial realm are characterized by being mass-like and by surrounding the attentional figure, such as a desert and a large group of tall pine trees. This mass-like character and surrounding feature are mapped onto the non-spatial realm to apprehend abstract landmarks/concepts such as {CRITICISM}. These two conceptual characteristics are indeed captured by the parameters of Homogeneity and Surround in figure 4.20 above. Primary

activation in (24), then, falls on the parameters of Central position, Surround, and Homogeneity.

The parameter of Surround is clearly present in the figurative realization of *amid* in (24). Moreover, and as previously mentioned, a given F that is surrounded by any type of element (i.e., count or mass nouns) would acquire a central position because of this specific figure/ground alignment. There must also be a certain proximity between F and G within a given spatial scenario. We can say then, for the sake of comparison, that the English prepositions *amid*, *between*, and *among* do share some conceptual ground that is reflected in the parameters of Surround, Proximity and Central position. These partly constitute the conceptual basis of each relational unit. However, each preposition exhibits subtle differences in terms of their conceptual structuring and linguistic realizations, particularly in the nature of their prepositional-landmark elements.

As mentioned above, *amid* can also be integrated with coordination structures of the *and*-type, just like *between* and *among* can (even though considerably less frequent in the latter). To show this point, let us consider the following *BNC* passage:

- (25) *Amid* the gloom *and* doom, the American film industry rather charitably nominated Hello, Dolly! for seven Oscars, including one for Best Film
[IN-BETWEEN]

In (25), the composite structure *amid the gloom and doom*, conveys a figurative middle area which shares characteristics of both abstract nouns. The noun *gloom* (metaphorically) evokes feelings of great unhappiness and loss of hope whereas *doom* denotes death, destruction, or any very bad situation that cannot be avoided. It follows that the [IN-BETWEEN] lexical concept is used here as a *conceptual blend* (Fauconnier and Turner 2002) since it exhibits characteristics that neither of the two mental spaces (*space* and *emotion*) has separately.

It is important to mention that at this low-level composite structure, the prepositional phrase *amid the doom and gloom* refers to an abstract situation in which a not-yet mentioned TR acquires a central position in the middle of two abstract concepts. The semantic scope of this PP involves the rest of the sentence – that is, the American film

industry' decision. *The American film industry*, in turn, functions as TR of *amid* while its prepositional landmark is elaborated by *the gloom and doom*. We can then appreciate the blended space – a mixture between the gloom and doom – in which the American film industry is located to further make the rather charitable decision of nominating *Hello, Dolly!* for seven Oscars. We can observe a similar metaphorical understanding as in (24) above in that there is a projection of spatio-conceptual structure onto the non-spatial domain: an F is located in the middle of a mass-like LM that surrounds it. Just like a person who is amid the desert or a restaurant that is located amid tall pine trees, we can metaphorically locate the American film industry in the middle of two abstract concepts, such as {GLOOM} and {DOOM}, that are conceptualized as forming a blend – a situation or event that exhibits characteristics of both concepts. Primary activation is then expected to fall on the parameters of Central position, Surround, and Homogeneity. The latter is reflected in the conceptual nature of the prepositional-landmark elements even though they eventually create a blended space.

Now the conceptual import of *amid* that lies behind the lexical integration shown in (25), is that the profiled things that elaborate the prepositional landmark (gloom and doom) are conceptualized as mass-like entities or substances: their immediate scope is a part of its maximal scope. The homogeneity manifested by *the gloom and doom* is dependent on the lack of intrinsic boundary of these abstract nouns.

Another characteristic of the prepositional landmarks of *amid*, is *contractibility*, which has to do with the idea that any portion of a mass of a given type is a valid instance of that type (Langacker 2008:141). In sum, the homogeneity denoted by the prepositional landmark of *amid* is a key factor in its linguistic realizations, as in (25).

The four conceptual parameters proposed above as constituting the conceptual basis of the English preposition *amid*, are metaphorically extended and activated, to a greater or lesser extent, depending on the contribution that the rest of the lexical elements provide to each composite structure. In addition, *amid* seems to behave more figuratively than literally since most of its usages obtained in a simple manual search in the *British National Corpus (BNC)* evoke non-spatial domains.

The last piece of evidence to be exposed for understanding the semantic extension of *amid* comes from the following example taken from the *BNC*:

- (26) ‘Oh, Ellie!’ Terry exclaimed with a tearful smile. ‘A voice of sanity *amid* all the chaos’.
[SURROUND]/ [IN THE MIDDLE OF]

In (26) the composite structure evoked by *a voice of sanity amid all the chaos* conveys a figurative scenario of hope in which the nominal *a voice of sanity* elaborates the TR of *amid*, whereas *all the chaos* elaborates its LM. Note the similarities between this expression and the one in (23) (see also figure 4.21 above) in that (26) is a semantic extension of the spatial scenario depicted in figure 4.21. The primary conceptual prominence is attached to the parameter of Surround since this is the semantic function that the composite conception evokes in (26). Another parameter that is key for the present metaphorical understanding is Central position because it helps to emphasize the in-the-middle-of position of the speakers who are immersed in a chaotic situation. Finally, Homogeneity also receives activation due to the conceptual nature of the non-plural mass noun *chaos*.

To sum up, we could say that *amid* behaves similarly to *among* and *between* in some facets; nevertheless, *amid* has its own conceptual import, which makes it unique. As mentioned above, *amid* can be integrated with simple nouns, full nominals, and coordination structures of the *and*-type (it cannot be integrated with a coordination structure of the *or*-type, however). The elements that elaborate its LM can be one or more and are generally conceptualized as being unitized due to their mass-like character within a given construction. Lastly, *amid* generally appears to be integrated in figurative expressions even though it also sanctions spatial senses, but they are less frequent than the figurative ones.

Table 4.1 summarizes the conceptual import of *between*, *among* and *amid* in terms of the nature of their prepositional-landmark elements and the coordination structures they are usually integrated with.

<i>Preposition</i>	<i>prepositional-landmark elements</i>	<i>coordination structures</i>
Between	<ul style="list-style-type: none"> - 2 or more elements - Count and plural mass nouns 	<ul style="list-style-type: none"> <i>or</i>-type (as in (11)) <i>and</i>-type (as in (3); (5) (6); (7); (8); (9); (10); (13)) <i>none</i> (as in (1); (2); (4); (12); (14a))
Among	<ul style="list-style-type: none"> - At least 3 elements - Plural and non-plural mass nouns 	<ul style="list-style-type: none"> <i>and</i>-type <i>none</i> (as in (14b); (15); (16); (17); (18); (19); (20); (21))
Amid	<ul style="list-style-type: none"> - 1 or more elements (generally figurative ones) - Plural and non-plural mass nouns 	<ul style="list-style-type: none"> <i>and</i>-type (as in (22); (25)) <i>none</i> (as in (23); (24); (26))

Table 4.1. Grammatical differences of the prepositional-landmark elements of *between*, *among*, and *amid*

In table 4.1 above we can appreciate two important features of the prepositional-landmark elements that elaborate the LMs of *between*, *among*, and *amid*. The first one has to do with the number and conceptual nature (i.e. count/mass distinction) of the elements that constitute the prepositional landmark; whereas the second one is about whether these elements are integrated in a coordination structure or not. Note that *among* sometimes can be integrated with a coordination structure of the *and*-type as in an utterance such as *There*

are breathing problems among children **and** old people in which *children and old people* elaborates the landmark of *among*. This type of construction is less frequent, however.

After having presented the first three English prepositions, which clearly share some conceptual ground among them, we are now in a position to introduce their Spanish equivalent *entre*, which has the capacity to cover all the conceptual ground that *amid*, *among* and *between* cover separately. The following section is devoted to this issue.

4.4 Spatial lexical concepts for *entre*

The Spanish prepositional vehicle *entre* is characterized by exhibiting no orientation, limited extension, boundaries, and inclusion within the limits (Trujillo 1971: 277). No orientation is a feature of both TR and LM. Limited extension and boundaries are features of the prepositional-landmark elements that co-occur with *entre*, and inclusion refers to the position adopted by the TR, which is in the middle of an area delimited by its reference object(s) or LM. *Entre* is also understood as a preposition that denotes place rather than path (in the sense of Jackendoff 1983) and therefore constitutes a simplex atemporal relation.

According to the *DLE*, *entre* denotes a thing or things that are in the space that separates two or more elements. Figure 4.22 depicts this (prototypical) spatial configuration:

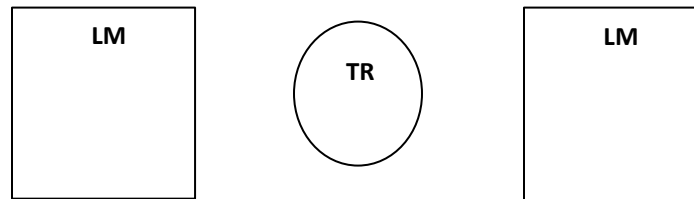


Figure 4.22. Proto-scene for *entre*

Figure 4.22 depicts a possible proto-scene for *entre*. As seen above, a key component of proto-scenes is the conceptual configurational-functional relation that holds between a given TR and its LM, as depicted in figure 4.22 above. At the linguistic level, the nominals that elaborate the TR of *entre* are conceptualized as being proximate to their LM(s). In some cases, proximity is so explicit that the TR of *entre* is in direct contact with its LM. From these types of scenes, functional aspects emerge as the result of the conceptualization of a TR and its LM as being within the sphere of influence or *region* of each other.

Figure 4.22 implicitly depicts one of the core parameters of the preposition *entre*, which is the one of *Surround* (along with *Separation*). Surround refers to an attentional figure that is in between of two or more objects that serves as G. Because of the nature of the spatial array, a given F acquires an (approximately) central position as functional consequence. To show this point, consider the following example:

(27) El círculo está *entre* los dos cuadrados [CENTRAL POSITION]

(The circle is *between* the two squares)

The expression in (27) clearly represents how the parameter of Surround is encoded by the Spanish *entre* since its manifestation results in a sort of boundary or extension limit in which the TR (the circle) can be located. It follows that the parameter that arises as a consequence of an attentional figure that is being surrounded is the one of Central position: two or more clearly *separate* objects that establish an extension limit to an entity that is located in between, make the given entity become part of the center of the spatial arrangement (as depicted in figure 4.22 above), rather than part of the periphery (thus, there is activation of Separation). The other parameter that sanctions the spatial sense of *entre* is the one of Proximity, and it has to do with the spatial extension (provided by the prepositional-landmark element(s)) that the TR of *entre* encounters. This behavior in turn, is akin to the one exhibited by *between* in that it sometimes makes use of two reference objects in order to locate the attentional figure. *Amid* also behaves in this way (as in (22) and (25) above), since it can be integrated with a coordination structure of the *and*-type, and it can also be integrated with just one reference object as shown in (23), (24), and (26). *Among* exhibits these grammatical behaviors as well, but it is less frequent with respect to the coordination structure of the *and*-type.

If we look at figure 4.22, we can observe the level of proximity that is shown by the TR with respect to its LM. However, and as mentioned above, there are some cases in which TR and LM might be in contact. As an example of this scenario, consider the following example taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

- (28) Anthony Reynolds, vocalista de Jack, se hizo esperar hasta subir al escenario, apareciendo de *entre* el público botella de vino en mano y ataviado con sus gafas de sol. [SURROUND]/ [OUT-OF TRAJECTORY]

The composite structure evoked in (28) is partially built by the lexical integration of the clause *apareciendo de entre el público* (*coming out of the crowd*), in which *entre* establishes correspondence links with the profile of the person who does the action (Anthony) as well as with the nominal *el público* (the crowd/public), which elaborates the prepositional landmark. In addition, this composite structure conveys a sequential scanning since it has to do with a change in location of the protagonist. Recall from chapter 2 that in these cases of complex atemporal relations of prepositions, the schematic profile that elaborates the TR of the preposition is relational. In (28), the profile of *apareciendo* (literally translated into English as *appearing*) elaborates de TR of (*de*) *entre* (equivalent in this case to the English *out of*). It is important to mention, however, that the [OUT-OF TRAJECTORY] and [SURROUND] lexical concepts not only are sanctioned by the clause *apareciendo de entre el público*, but they are a product of the whole composite conception evoked in (28) above.

It is convenient to remark at this point that the notion of lexical integration assumed in this research (Langacker 1987, 2008; see also Evans 2009, 2010b) is akin to the notion of distributional spatial semantics (Sinha and Kuteva 1995), which posits that the spatial relational semantic information is not exclusively encoded by locative particles. On the one hand, lexical representation has to do with the mental units that populate the speaker's mind, that is, how words mean independently of their context. Meaning determination (i.e. lexical integration), on the other hand, has to do with the context-dependent realization of a given mental unit (i.e. a lexical concept). For instance, the Spanish preposition *entre*, according to the *DLE*, prototypically denotes a simplex atemporal relation between TR and LM in which the TR is in the middle of two or more things that constitute its LM. Another more figurative sense according to the *DLE*, is the one of *inclusion*, like for example in an utterance such as *Ella está entre sus amigos* (English *She's among her friends*). However, the *DLE* does not mention anything about trajectory in the semantics of *entre*: this is because the encyclopedic knowledge that words provide access to can hardly be covered in

a dictionary. In (28) there is a shift in atemporal behavior that goes from a simplex to a complex relation that *entre* partially encodes. On the other hand, the vision provided by the *DLE* is akin to the lexical-representation level of *entre* in that it is mostly understood as a locative (simplex) relational unit. In expression (28) there are two functional consequences that emerge due to the situation of being in the middle of a crowd: the man (Anthony) who is apparently moving through the crowd, is *included* in it, and he can even get *occluded* as he moves through it. There might also be contact between Anthony and some people as he moves (i.e., proximity). It follows from this situation that the parameters of Occlusion and Inclusion, under certain conditions, emerge as functional consequences of the parameter of Surround (and Proximity).

Consider more examples of *entre* taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

(29) Despertarme sin horarios, pero con tiempo a disfrutar de la mañana, disfrutar el aire que pasa a través de la ventana antes de levantarme, *revolviéndome entre las sabanas* ...preparar el desayuno a mis acompañantes; zumo de naranja natural, un poco de fruta y unos huevos con beicon muy hecho...mmm...
[OCCLUSION]

(30) Esta especie de estrecho ha recibido el nombre de Paso del Drake y, además de ser prueba fehaciente de la separación lenta pero continua *entre las placas de la Antártida y de Sudamérica*, es responsable de que una gran cantidad de agua muy fría circule alrededor del continente antártico, provocando su aislamiento térmico y repercutiendo en el clima global [SEPARATION] / [LOCATION]

In (29) we can observe how the composite structure evoked by *revolviéndome entre las sabanas* plays a prominent role at the moment of highlighting the [OCCLUSION] lexical concept. Once again, we can appreciate an instance of sequential scanning which is mostly attributed to the processual unit *revolviéndome* – therefore, the preposition *entre*, after becoming integrated with the verb, acquires a complex atemporal character. The relational profile of *revolviéndome*, in turn, elaborates the TR of *entre*, whereas the nominal *las sábanas* elaborates its LM. Importantly to mention though, is that the situated realization of the profiled relation evoked in *revolviéndome entre las sabanas*, is deeply

related to the semantic frame (in the sense of Fillmore 1975, 1982; see also Barsalou 1992) of (IDEAL) MORNING ROUTINE.

From the phenomenological standpoint, we know that sheets are something that can easily cover a human body; thus, the parameter of Occlusion might be expected in example (29). We can say, then, supported by the linguistic evidence shown above, that Occlusion, under certain conditions, is indeed a phenomenological consequence of an entity that is surrounded to the extent it is not visually perceivable anymore.

In the case of (30), we can observe that the parameter of Occlusion might be or might be not present. What we do know, however, is that the ice layers between Antarctica and South America are located, and therefore included, in the area that is established by these two territories. Note that not only is the [SEPARATION] lexical concept what gets activated, but so is the [LOCATION] lexical concept since example (30) also conveys the location of the ice layers which is in the space existing between Antarctica and South America. It follows from this that the [LOCATION] lexical concept might receive secondary activation. The composite structure *la separación lenta pero continua* designates a thing, which is [SEPARATION]. This profiled thing in turn, elaborates the TR of *entre* in (30). On the other hand, the composite structure yielded by *las placas de la Antártida y de Sudamérica*, designates two things (Antarctica and South America's ice layers) which are coequal elements that are mentally juxtaposed in a single attentional frame and jointly elaborate the prepositional landmark of *entre*.

In sum, I suggest two parameters as the core semantic value of the Spanish preposition *entre*. These are the ones of Surround, and Separation. These parameter in turn, bring functional consequences to the front in that functional categories such as Occlusion, Proximity, Inclusion, and Central position arise by virtue of phenomenological experience (i.e., spatial navigation and interaction).

Figure 4.23 depicts the conceptual basis proposed for the Spanish preposition *entre*:

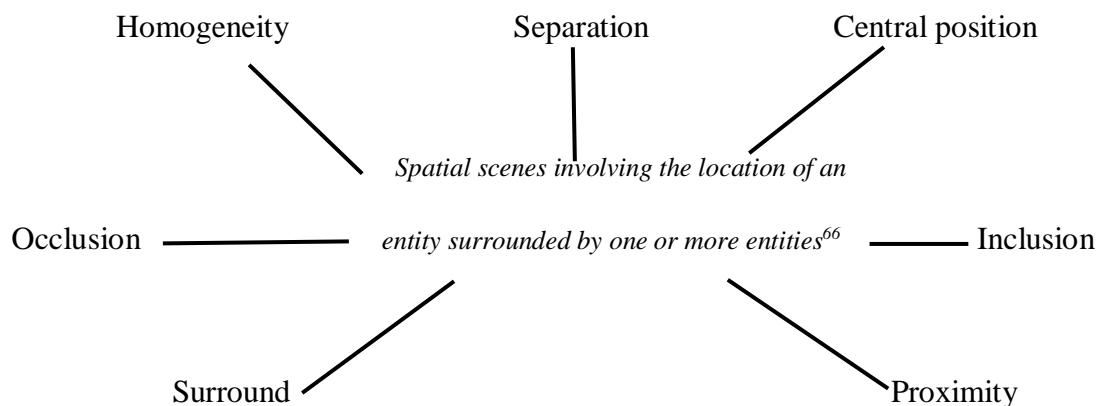


Figure 4.23. Parameters deriving from spatial scenes involving the location of an entity surrounded by one or more entities

Figure 4.23 depicts the conceptual basis for the Spanish preposition *entre*, which consists, at the very least, of seven conceptual parameters. Note that the parameters above are the ones that separately compose the conceptual bases of the English equivalents *between*, *among*, and *amid*. Therefore, *entre* can cover practically all the semantic spectrum that is covered separately by its English equivalents.

Most of the examples shown so far point to the non-processual nature of the Spanish preposition *entre*: this preposition is generally seen holistically, that is, as a simple gestalt wherein temporal evolution is not the focus. However, there are some cases in which this preposition becomes a *complex* (rather than *simplex*) atemporal relation in that it contributes to express a path of motion, as in (28) and (29). Importantly however, is to recall that complex atemporal relationships are still non-processual ones under the scope of Cognitive Grammar (e.g., Langacker 1987, 1991, 2008) so the evolution through time is always backgrounded. It can be said then, that even though in most of the cases the Spanish *entre* and its English equivalents *between*, *among*, and *amid*, are apprehended as purely locative or simplex atemporal relations, at times they can convey (in a distributed way) a path of motion.

Now consider another example of the complex atemporal behavior exhibited by *entre* (taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*):

⁶⁶ Contrary to *between*, *among*, and *amid*, the prepositional-landmark elements of *entre* can be nouns of any type: count, plural mass and non-plural mass. The abstract LM of *entre* does not discriminate in this respect for its elaboration.

- (31) "Viesca" iba pidiéndole a dios que no me muriera, estaba agotado, fatigado, por mi peso y por el largo camino, pero nunca se detuvo, *corrió entre* los mezquites, hasta el pueblo, busco el consultorio del médico, mientras pepillo y sarita corrían a sus casas, a decirles a sus mamas, la fatal noticia.

[TRAJECTORY]

In (31), the primary conceptual prominence evoked by the composite structure *pero nunca se detuvo, corrió entre los mezquites, hasta el pueblo* (but he never stopped, he ran through the mesquites until the town), goes on the trajectory that exists between the two reference objects (the mesquites, which is a Mexican botanical species, and the town respectively). This sequential scanning in turn, is motivated by the open-class element *corrió (ran)*, which profiles a processual relation between the protagonist and the action he is performing (going from point A to point B). This profiled relation, which anaphorically stands for the protagonist, elaborates the TR of *entre*. On the other hand, its LM is elaborated by the composite structure yielded by *los mezquites, hasta el pueblo* which evokes the sequence in which he runs *through* the mesquites (he passes point A) until he reaches the town (point B).

The [TRAJECTORY] lexical concept evoked in (31) is based on sequential scanning in that there is a change in the location of the protagonist, which is evident. However, the [TRAJECTORY] lexical concept not always is conceptualized in a sequential-like fashion, but also summarily. To make this point clear, consider the following *Spanish Web 2011 (esTenTen11, Eu + Am)* example:

- (32) Robbie McEwen (Predictor Lotto) ganó al 'sprint' la segunda etapa del Tour, primera en línea y disputada sobre 203 kilómetros *entre* Londres y Canterbury.

[TRAJECTORY]

In (32) the athlete Robbie McEwen was the winner of the second phase of the Tour which covered the 203-kilometer distance between London and Canterbury. Now the point I want to highlight is the composite structure yielded by *203 kilómetros entre Londres y Canterbury* (203 kilometers *between* London and Canterbury) which is structured in a summary-like fashion in that the elements that are apprehended at each stage are summed or superimposed. The summary scanning of the [TRAJECTORY] lexical concept is obtained

from the lexical integration of the composite structure *203 kilómetros entre Londres y Canterbury* in which the nominal *203 kilómetros* elaborates the TR of *entre* while the conjoining nominal structure *Londres y Canterbury* establishes correspondence links with its prepositional landmark and therefore elaborates it. In sum, we can observe that the main difference in examples (31) and (32) is on the (probably metonymic) activation of the different facets of the [TRAJECTORY] lexical concept. In the former, the primary conceptual prominence is on the distance *travelled* whereas in the latter it is on the distance that *exists* between the two English cities.

Now I want to finish this section by showing a corpus passage that sanctions the [LOCATION] lexical concept, which according to the *DLE*, is the most prototypical sense that is encoded by *entre*. Consider the following example taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

- (33) Chester (ubicado en el norte en la frontera *entre* Inglaterra y Gales) es la entrada a la región norte de Gales y se conecta con Londres, Manchester y Birmingham [LOCATION]

The maximal discourse scope in (33) profiles a thing as the main attentional focus, which is the English city of Chester, located in the northern border between England and Wales and it connects to cities such as Manchester and Birmingham, among others. Now the spatial location of the TR in the example above – that is, Chester, is linguistically mediated by the composite structure *ubicado en el norte en la frontera entre Inglaterra y Gales* (located in the north border *between* England and Wales). The Spanish participle *ubicado* (located) has an anaphorical function in that it refers back to Chester, which was already mentioned at the beginning of the passage. It follows that the Spanish past participle *ubicado* elaborates de TR of *en* (English *in*) in the composite structure *ubicado en el norte (located in the north)*, whereas the nominal *el norte (the north)* elaborates the prepositional landmark. The composite structure obtained so far profiles a thing, which is Chester, so it moves forward to build the higher-order composite structure *ubicado en el norte en la frontera entre Inglaterra y Gales* (located in the north border *between* England and Wales). Note how the construction in (33) “zooms in” in that we now know that the TR (*Chester*) (at the maximal discourse scope) not only is in the north, but also is in the border between England and

Wales. It follows that the nominal profile of *Inglaterra y Gales* elaborates the LM of *entre* while *la frontera* elaborates its TR and represents the location of Chester. The parameters of *entre* that are most directly involved in its meaning determination in (33) are Separation, Proximity, and Central position.

4.4.1 Figurative lexical concepts for *entre*

I now turn to the non-spatial domains that the preposition *entre* usually conveys. To do so, consider the first example that deals with the [SECRET] lexical concept. The following passage has been taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

- (34) aquí ***entre nos***, el tío que inventó el TKD se fue a vivir a Norcorea porque era íntimo amigo de Kim Il-Sung y simpatizaba con sus ideales socialistas contrarios a los del neoliberalismo de Sur Corea
[SECRET]

In the expression (34), the introductory expression *Aquí entre nos* (English *here between us*), evokes a mental space in which a secret is expected. The word *nos* is an abbreviation of the pronoun *nosotros*. Moreover, the whole Spanish expression has unit status in that it is an entrenched idiomatic expression that is conventionally shared by many Spanish speakers from different countries including Chile, Mexico, Uruguay and Ecuador, among others.

To properly apprehend the figurative conception behind the Spanish expression *Aquí entre nos*, it is important to mention that this idiomatic expression can also be reproduced as *entre nos*. The adverb *aquí* may sometimes be used to emphasize the place where the secret is to take place. In example (34), however, this is not the case since the place where the speakers are is not mentioned. Instead, the deictic unit *aquí* (English *here*) may denote a metonymic pattern in that it stands for the specific location of the speakers: it points to the very fact they are face to face to tell each other the secret. The metonymic pattern might be present in that it signals the restricted social circle and small spatial region delimited by the speaker and her/his interlocutor(s). Speculatively, we may say that the metonymy CATEGORY (IMMEDIATE PROXIMAL DEICTIC) FOR MEMBER (the highly specific subcategory of immediate proximal deictic involving face-to-face interaction) is what underlies the use of *aquí* in (34).

Having now this in mind, the precise nature of the introductory composite structure that evokes a mental space wherein a secret is expected, comes from the categorizing relationship that each word establishes within the composite structure. *Aquí entre nos* yields a composite structure which has *Aquí* as a deictic unit that marks a restricted interactive and spatial area. At this low-level structural organization, TR and LM may coincide. Once this composite structure is integrated with the clause *el tío que inventó el TKD se fue a vivir a Norcorea porque era íntimo amigo de Kim Il-Sung y simpatizaba con sus ideales socialistas*, the secret information – that is, the reasons why the inventor of TKD (Taekwondo) went to North Korea, is what elaborates the TR of *entre*. Its prepositional landmark, on the other hand, is elaborated by the pronoun *nos*. *Nos* profiles an unspecified group of people that represents the LM where the metaphorical TR is located in the middle.

Now the exact motivation behind the figurative use of *entre* in expression (34) comes from the parameters of Occlusion, Central position, and Separation since the secret is “placed” in the middle of the people who know about it. It follows that the parameter of Occlusion, which is a functional consequence of some TRs that are fully surrounded by their LMs to the extent they cannot be seen anymore, gets metaphorically extended to partially sanction the [SECRET] lexical concept. There is a metaphorical mapping in that there is a shift from the spatial to the non-spatial domain (Lakoff and Johnson 1980, 1999). In the spatial domain, a person (such as in (29) above) can be visually occluded by the sheets of her bed. However, in the abstract domain evoked in (34), the very nature of the occlusion has to do with confidential information – that is, an abstract thing. These metonymical and metaphorical patterns, along with the lexical integration of all the words that participate in the construction above, sanction the [SECRET] lexical concept (see example in (5) above for comparisons with its English equivalent *between*). Separation and Central position are also key for the image-schematic structure that is mapped from the spatial domain onto the non-spatial spatial domain in that they help to conceptualize the role of the people and the secret, respectively.

In the following lines I will present a non-exhaustive list of figurative lexical concepts for *entre* to show how this Spanish preposition can semantically cover practically all the senses that are sanctioned by its three English equivalents.

The grouping sense

Having presented what I term the [SECRET] lexical concept, which is a figurative sense that is partially encoded by *entre*, I now proceed to explain the [GROUPING] figurative lexical concept which gets sanctioned under specific circumstances. The very essence of the grouping sense consists of saying that a certain group of things or activities, is larger than the things or activities mentioned or highlighted of that group. It also has to do with an inclusive function. According to the *DLE*, *entre* denotes a thing or things that are considered to be part of a group.

Consider the following example taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)* that evokes this sense:

- (35) *Entre* los documentos expuestos destaca especialmente el manuscrito de 1784 de la Memoria sobre el estado actual del Rio Guadalquivir
[GROUPING]

Passage (35) starts with the expression *entre los documentos expuestos* (among the documents exposed) which profiles a thing – that is, one or more of the documents that were exposed. Note that this introductory expression evokes a mental space which is structured based on a superordinate categorization level (following Rosch 1978) in that it evokes the superordinate category of {DOCUMENTS}. It also tells us that more than one document were exposed. This composite structure is then integrated in the higher-order composite structure *entre los documentos expuestos destaca especialmente el manuscrito de 1784* (among the documents exposed the manuscript of 1784 is highlighted) to narrow down and establish the main document that example (35) highlights. Finally, the last part of the passage, *de la Memoria sobre el estado actual del Rio Guadalquivir*, (of the memory about the current conditions of the Guadalquivir river), provides further details of the 1784-manuscript, particularly on what was it about.

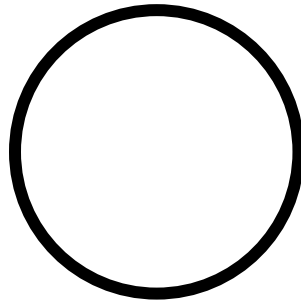


Figure 4.24. '*entre los documentos expuestos*'

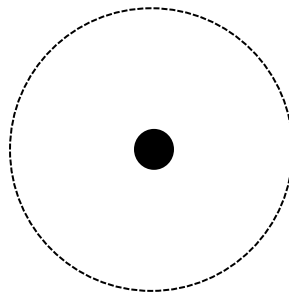


Figure 4.25. '*destaca especialmente el manuscrito de 1784*'

The figures above are intended to diagram the meaning construction process which is linguistically mediated by example (35). I want to emphasize that the introductory expression *entre los documentos expuestos* evokes a superordinate mental space of the category {DOCUMENTS} that is the primary attentional focus at that level of organization, as shown in figure 4.24. As we all know, there are many types of documents in the world such as files, articles, papers, among others. Crucially however, a type of document such as a manuscript is considered, in line with the Cognitive Psychology literature, a member of the *basic level category*. Note how this narrowing-down feature is provided by the composite structure yielded by *destaca especialmente el manuscrito de 1784*, which refers to the main document in question (the 1784-manuscript). That composite structure establishes the 1784-manuscript (a basic level element) as profile determinant of the composite conception evoked in (35) and it also backgrounds the superordinate category {DOCUMENTS},⁶⁷ as shown in figure 4.25 (compare example (35) with (19) and (20) above for conceptual similarities with *among*).

⁶⁷ For details on categorization see Rosch (1978).

Finally, the parameters of the conceptual basis of *entre* depicted in figure 4.23 that might be most directly involved in (35) are Surround, Inclusion, Homogeneity, and Central position. Hence, they get activated and semantically extended to conceptualize the non-spatial scenario evoked in (35). Surround is manifested in that the TR is conceptualized as being surrounded by other elements of its own category. Inclusion helps us apprehend that the TR is included within a larger group. Homogeneity is reflected in the fact that the elements that constitute the LM are replicable instances of the same category. Lastly, Central position also gets activated and extended even though it does so after *entre los documentos expuestos* is integrated in a higher-order composite structure with *destaca especialmente el manuscrito de 1784*. After such integration, the 1784-manuscript acquires a sort of central position since it is being highlighted from a group of (surrounding) documents.

The choice sense

At times, *entre* can establish a relation between the very act of deciding, and the array of possibilities for making it. This in turn, is akin to the behavior of two of its English equivalents, here *among* and *between* (as in (11), (12), (21), and (22) above). Consider the following example taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

- (36) Los alumnos podrán optar ***entre*** elegir una especialidad determinada o no
 elegir ninguna [CHOICE]

In (36), there is a group of students who has to decide between two options: (i) to take a specialization module, or (ii) not to take it. It follows that the students' decision elaborates the TR of *entre*, and the coordination structure of the *or*-type elaborates its prepositional landmark. There is a mental juxtaposition of two coequal elements (the two options available) within the *or*-type conjoining structure even though they evoke two mental spaces which can fill the semantic role separately: the prepositional clause *entre elegir una especialidad determinada o no elegir ninguna*, clearly shows this point.

A coordination structure of the *or*-type can also be lexically integrated with *entre* when there is more than one option available, as in example (37) below:

- (37) Puedes elegir ***entre*** muchas alternativas en comida a domicilio: cajas
 Chicken Box Snack Delivery para compartir de a dos; caja Chicken Box

Familiar para más de tres, *o* también un Banquetazo Mega para toda la familia.
[CHOICE]

As shown in (37), there are some cases in which many alternatives are available, just like in examples (12) and (21) above. Crucially however, the coordination structures of the *or*- and *and*-type mostly co-occur with *entre*, as well as with the English preposition *between*, but not with *among*, at least regarding the *or*-type coordinate relation. For instance, people do not say **you have to choose among black or/and white*, but *between black or/and white*. This difference in turn, might be due to the conceptual basis that each English preposition offers: *between* tends to put more emphasis on the *separation* of the elements that elaborate its prepositional landmark; this in turn, might be the reason why it is generally integrated with count nouns and plural mass nouns, whereas *among* tends to semantically co-occur with plural mass and non-plural mass nouns. In the case of the Spanish *entre*, this is not a conceptual issue since it is composed by all the parameters that separately build up the conceptual bases of its English equivalents *between*, *among*, and *amid*.

Now the parameters that are mostly involved in each example vary due to the *nature* of the coordination structure in charge of the elaboration of the prepositional landmark. In (36) the parameters that are activated and extended are Separation and Central position. Separation is reflected in the coordinate structure of the *-or* type in that there are just two alternatives, whereas in (37) the parameters that might be mostly involved are Surround and Central position because there is a higher number of alternatives.

The link sense

The preposition *entre* can also denote connections between two or more entities just like its English equivalent *between* in (7) above. To illustrate this lexical concept, consider the following example taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

(38) Joaquín Maudos analiza la relación *entre* el gasto en I+D, el capital humano
y las patentes [LINK]

In (38), we can observe that Joaquín Maudos analyzes the link or relationship between the I+D expenditure, the human resources, and the licenses. Now if we split the passage (38) into two (or three) composite structures, we can note that in the first part, *Joaquín Maudos*

analiza la relación, the relational profile of *analiza* serves as e-site for the elaboration of its TR, here *Joaquín Maudos*, and its LM, is elaborated by the nominal profile of *la relación*. Then in the NP *la relación entre el gasto en I+D, el capital humano y las patentes, relación* functions as profile determinant since its profile corresponds to the composite structure profile. Within the NP, we can observe the prepositional phrase *entre el gasto en I+D, el capital humano y las patentes*, in which *entre* is now the profile determinant since its profile corresponds with the relationship profiled by the PP.

The profiled thing (*relación*) of the composite structure *la relación entre el gasto en I+D, el capital humano y las patentes*, elaborates the TR of *entre*, whereas its prepositional landmark consists of the coordinate structure of the *and*-type provided by *el gasto en I+D, el capital humano y las patentes*. It follows that the parameter that is most directly involved in (38) is the one of Separation since it allows us to segregate the I+D expenditure, the human capital, and the licenses as the three elements that are being analyzed by the TR of the whole finite clause, here *Joaquín Maudos*. In addition, the relationship between the TR (*relación*) and LM (*el gasto en I+D, el capital humano y las patentes*) in the PP at this level of organization may be driven by Proximity, so activation of this parameter might also be expected.

The competition and/or confrontation sense

The Spanish preposition *entre* is used to establish a relation between the participants of a type of confrontation (i.e. argument) or sporting event (i.e. football match). The sense of *entre* that is exemplified in the following example is the one of sport competition. To do so, let us take a look at the *Spanish Web 2011 (esTenTen11, Eu + Am)* corpus passage below:

- (39) Según informó la LFP, el partido ***entre*** el Almería y el Barça,
 correspondiente a la 12ª jornada del campeonato de Liga, se disputará el sábado
 20 de noviembre a las 20 horas [COMPETITION]

The maximal discourse scope of passage (39) above, has to do with a decision taken by the LFP (*Liga de Football Profesional*) regarding the date and time in which a football match between Barcelona and Almería is to take place. Now at a low-level composite structure, the conceptualization of the football match is yielded by the composite structure *el partido*

entre el Almería y el Barça (the football match between Almería and Barça) in which the nominal *el partido* establishes correspondence links with the TR of *entre* while its prepositional landmark establishes correspondence links with the nominal conjoining *el Almería y el Barça*. We can observe that the two football teams are mentioned separately even though they are mentally juxtaposed in a single attentional frame in order to elaborate the prepositional landmark, so the activation and extension of the parameters of Separation and Central position is expected. The metaphorical extension goes on how the football match is conceptualized: it is the attentional focus that lies “in the middle” of the individual participants that make the sporting event possible, here the football teams of Almería and Barça (see figure 4.10 and example in (10) for similarities with the English preposition *between*).

The in-between sense

According to the *DLE*, *entre* denotes an intermediate state between two or more things. This in-between status has to do with an attentional figure which exhibits a little set of properties of the elements that constitute its G. To illustrate, consider the following example taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

- (40) Al final, cocinar en El Bulli se convierte en algo que se mueve «*entre* la ciencia y el arte». «Tenemos un equipo de investigadores que trabajan buscando cosas nuevas» [IN-BETWEEN]

El Bulli was a Spanish restaurant which was opened between the years 1962 and 2011 and was recognized as one the greatest restaurants in the world. It follows that the maximal discourse scope evoked in the example above, profiles El Bulli, while its active zone has to do with the very experience of what cooking in El Bulli is like. This feeling in turn, is encoded by the composite structure *entre la ciencia y el arte* (*amid* science and art). Note how the prepositional landmark of *entre* is elaborated by the nominal conjoining structure *la ciencia y el arte*. Also note that even though both elements are mentally juxtaposed in a single attentional frame, they independently project some of their attributes in a blended space (in the sense of Fauconnier and Turner 2002) which consists in the sensation or feeling of what cooking in El Bulli is like. The resulting blended space – that is, the act of cooking in El Bulli, is a mixture of science and art, and this concept elaborates the TR of

entre (compare this example with the use of *amid* in (25) above). We can observe, then, that the blended space represents a characteristic of the TR in (40) which is the feeling of cooking in El Bulli evoked in the clause *cocinar en El Bulli se convierte en algo que se mueve* (Cooking in *El Bulli* becomes something that moves). I suggest that this figurative conception is largely due to the activation and extension of the Central position parameter in that it allows us to conceptualize a TR that exhibits characteristics of both elements that conform its LM. The parameter of Separation also receives activation since it facilitates the conceptualization of the prepositional landmark as two separate and identifiable concepts, which nevertheless, project some of their attributes onto a single mental space that characterizes the TR.

The difference sense

The Spanish preposition *entre* can sanction constructions in which a comparative function takes place. Consider the following example extracted from the *Spanish Web 2011* (*esTenTen11, Eu + Am*):

(41) "La diferencia *entre* ricos y pobres es mayor" [DIFFERENCE]

Example (41) is a quote of a person who thinks that the difference between poor and rich people is bigger. The composite structure *la diferencia entre ricos y pobres* (the difference between poor and rich people) evokes a relational predication that has to do with comparison. *Ricos y pobres* elaborates the prepositional landmark of *entre*, whereas the nominal *la diferencia* establishes a correspondence link with its TR and helps to activate the specific facet that *entre* conveys in the composite structure. We can observe how the prepositional-landmark elements of *entre* (even though they share the same attentional frame) evoke two clearly separate groups of people who are subject to differentiation. Metaphorically speaking, the gap that might result from this comparative function of *entre* is indeed where comparisons can be appreciated (see figure 4.8 and example (8) for similarities with *between*). It follows that the activation and extension of Separation and Central position, at the very least, is crucial for this non-spatial conception to arise.

In addition, I would like to highlight a point about the [DIFFERENCE] lexical concept sanctioned by *entre*, in that even though it can also be sanctioned by two of its English

equivalents, here *between* and *among*, *between* is the one that is used more frequently in these types of constructions. This might be due to the Separation parameter that lies at the core of the conceptual basis of *between* (see figure 4.2 above), as well as to the tendency of *between* to co-occur with coordination structures of the *and*-type. Corpus evidence of this behavior comes from the *BNC* where a simple search in the concordance section for the expression *difference(s) between* yields 1727 Hits (15.40 per million). On the other hand, on a simple search for the expression *difference(s) among*, only 75 Hits (0.70 per million) is obtained.

The collaboration sense

Collaboration has to do with the activity of two or more things to achieve a common goal. According to the *DLE*, *entre* denotes cooperation between two or more people or things. Consider the following *Spanish Web 2011 (esTenTen11, Eu + Am)* corpus passage that evokes this sense:

- (42) La colaboración *entre* familias, profesionales y administración, clave en el
tratamiento del autismo [COLLABORATION]

The example above shows the cooperation of three groups of people which are families, professionals, and administration personnel, for autism treatment. The composite structure La *colaboración entre familias, profesionales y administración* (the collaboration *between* families, professionals, and administrative staff) profiles a thing, here *colaboración*, which is jointly elaborated by means of the prepositional-landmark elements *familia*, *profesionales*, and *administración*. Note that the open-class element *colaboración* (the TR of *entre*), partly helps to the activation and interpretation of specific facets of *entre*, particularly the image-schematic structure of {LINK}. This structure, in turn, may be driven by the parameter of Proximity. Compare this example with (41) above, where even though the same facets of *entre* get activated, the open-class item *diferencia* is what elaborates the TR of *entre* and hence, makes it provide a different reading to the composite conception. It

follows that the parameters that receive primary activation in (42) are Separation and Proximity. Central position might receive secondary activation.⁶⁸

The metaphorical understanding underlying the example (42) can be accounted in terms of the schematic conceptual content evoked in the conceptual basis of *entre*. Separation, Proximity, and Central position are indeed extended for metaphorical reasoning. Conceptual metaphors such as COLLABORATION IS PROXIMITY might constrain the apprehension of a non-spatial scenario dealing with the abstract concept of {COOPERATION} between three different entities to achieve a common goal.

An important converging point between *entre* and, in this case the English preposition *between* (see the example (9) and figure 4.9 above), is that there is a clear separation and identification of the collaborative bodies that are intended to achieve a common goal, here the treatment of autism. This concept of separation might not be present in the same way in an utterance such as *la colaboración entre muchas instituciones* (*the collaboration among many institutions*) in which the collaborative organisms are not explicitly named since they are conceptualized as a homogeneous group (there is also an absence of the coordination structure of the *and*-type). Under that scenario, the English language uses the preposition *among* whereas the Spanish language keeps the same preposition, *entre*.

The last thing to mention is concerned with the parameters of *entre* that might be most directly involved in (42). These are the ones of Separation and Central position. Separation is reflected in the distinction that exists on the cooperative bodies for autism treatment, here families, professionals, and the administration staff. On the other hand, Central position allows us to conceptualize the autism treatment as a central figure in that it is the main objective behind the cooperation of the organisms involved.

The inclusion sense

⁶⁸ Recall that secondary activation is the activation of semantic elements that are not as directly involved in a given construction as other semantic elements – conceptual parameters in current parlance – that so are and hence, receive *primary* activation. Secondary activation is a sort of conceptual “back up” for primary activation.

According to the *DLE*, *entre* denotes a thing or things that are considered as being a member of a larger group. To illustrate, consider the following example taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

- (43) *Entre* sus amigos se sentía admirado y querido, se sentía seguro y volcaba en ellos todo su amor reprimido [INCLUSION]

To properly understand the inclusion sense of *entre*, let us focus on the composite structure *entre sus amigos se sentía admirado y querido* (among his friends, he would feel admired and beloved). At a low composite structure level, *entre sus amigos* evokes a mental space that consists of a group of people who are friends of a not-yet mentioned (or previously mentioned) person. The TR of *entre* is elaborated by the 3rd person subject (the person that felt admired and beloved), so it is the TR of *sentía* and the Spanish reflexive *se*. The TR of *se sentía querido y admirado* is identical to the TR of *entre*. The resulting higher-level composite structure *entre sus amigos se sentía admirado y querido*, evokes a relational predication in which *entre* plays the main relational role.

Note how this figurative use type is equivalent to the one of the English *among* in that (i) the prepositional landmark is not necessarily structured as a conjoining construction of the *and*- type, and (ii) the prepositional landmark is conceptualized unitarily as a homogeneous thing (see example (18) above for similarities). It follows from this that there is activation of the Homogeneity parameter, as well as of the Inclusion for the reading provided in (43). The parameters of Central position and Surround might receive secondary activation.

4.4.2 Temporal behavior of *entre*

I want to finish the analysis of the Spanish *entre* by presenting one of the most prototypical temporal usages of this preposition, which is similar to the one of *between* (see example (13) and figure 4.13 above for similarities). To do so, consider the following example extracted from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

- (44) Es cierto que el arrendador también se beneficia de reducciones, especialmente si el arrendatario tiene *entre* 18 y 35 años [TEMPORAL RANGE]

In (44) the composite structure *especialmente si el arrendatario tiene entre 18 y 35 años* (especially if the tenant is *between* 18 and 35 years old), profiles *el arrendatario* (the tenant), who is between 18 and 35 years old (temporal LM or RP (reference point)). As mentioned in example (13) above as well as in chapter 2, temporal conceptions require temporal thinking even though most of the time the domain of time is structured based on spatio-conceptual structure (Time-to-Space mapping). For instance, to understand that a tenant is between 18 and 35 years old, we need to apprehend the open-ended system of {LIFE SPAN}. Furthermore, we also need to understand the 365-day cycle, which constitutes a whole year. With these two temporal-thinking requisites (at the very least), the primary metaphor DURATION IS LENGTH can be applied to the absolute or extrinsic temporal frame of reference (t-FoR).

In (44) a young tenant is the trajector of *entre* whereas its prepositional landmark is elaborated by the coordination structure *18 y 35 años*. Crucially, these two juxtaposed coequal elements are temporal anchors in that they establish the limits of the temporal region in which the TR is located. Furthermore, this coordination structure makes use of an origo (O) that helps to anchor the relationship between the target event (TE), here the possible benefits of the subject in (44), and the range of age (RP) she should be to become a beneficiary, to the transience type of duration. The O in this case is the *day of birth* of the possible tenant, which starts the open-ended counting system based on linear time. The resulting temporal conception makes use of an open-ended event-reckoning system to locate the TE with respect to its RP.

Note that there is a clear separation of the prepositional-landmark elements in (44). This allows us to temporally apprehend the range of age that a possible tenant might be; thus, there is activation and extension of the Separation parameter. Now the conceptual reification from space to time that underlies the [TEMPORAL RANGE] lexical concept might be reflected in the fact that the temporal range or distance existing between the ages of 18 and 35 shares striking similarities with a space-rooted scene in which the attention falls on the length that there might be between two concrete things (compare for instance example (44) with (3) and (13), as well as with figures 4.4 and 4.13 to appreciate these similarities more clearly).

Linguistic temporal conceptions also involve temporal cognition for their proper realizations. As showed in chapter 2, the temporal domain has its own structure, and this is indeed reflected in temporal reference (Evans 2013; Morras, to appear). Example (44) makes use of the extrinsic t-FoR to locate the TE with respect to its RP. It follows that the schematic temporal structure that underlies example (44) could be glossed as [TE FIXED TO AN RP IN AN EVENT-RECKONING SYSTEM]. Recall that event-reckoning systems, as well as time-reckoning systems, can be further divided into repeatable (e.g., months), closed (e.g., countdowns), and open-ended (e.g., linear time). The one used in (44) is an open-ended event-reckoning system since we are dealing with linear time where the O is the day of birth of the subject in (44): the temporal unit that starts the count in the system and allows us to calculate the age of the subject.

Consider now another example in which a similar metaphorical extension can be identified:

- (45) La subvención se transferirá a la cuenta bancaria que acredite la AMPA en un único plazo *entre* el primer y el segundo trimestre del curso escolar.

[TEMPORAL RANGE]

In (45) there is a subsidy which has to be transferred to a bank account accredited by the AMPA (*Asociaciones de Madres y Padres de Alumnos* [Association of students' parents]). Now the point that the analysis is concerned with, is the period of time that is given for the transfer of the subsidy. As in (44) above, the composite structure *en un único plazo entre el primer y el segundo trimestre del curso escolar* (in an only instance *between* the first and second trimester of the academic year), has the nominal *un único plazo* (*only instance*) as the TR of the relational unit *entre*. The TR is located within a temporal region that is established by the profile of the prepositional-landmark coordination structure *el primer y el segundo trimestre del curso escolar* (*the first and second trimester of the academic year*). This consists of two clearly separate periods that delimit the time in which the subsidy must be transferred. Hence, there is activation and extension of the Separation parameter to conceptualize the two trimesters. In addition, there is also activation of Central position in that it allows us to temporally locate the subsidy transfer with respect to the amount of time given. The subsidy transfer in turn, can be apprehended as the TE which is fixed to a repeatable event-reckoning system by virtue of its RP, here the first and second trimester.

The origo (O) helps to anchor the relation between TE and RP to the duration transience type. The O in the present case corresponds to the beginning of the academic year.

Once again, we can appreciate the semantic extension of *entre* in that the parameters that are usually present in the spatial domain such as Separation and Central position, are extended in order to conceptualize temporal linguistic constructions. However, temporal cognition is also needed for temporal understanding, so more than one type of knowledge is involved in these types of conceptualizations. Spatio-conceptual structure does not fully motivate temporal realizations. Rather, it partially structures and supports them. This is so because of the inherent temporal structure that underlies temporal linguistic constructions. In (45) this schematic temporal structure might be glossed as [TE IS FIXED TO AN RP IN AN EVENT-RECKONING SYSTEM]. Note that even though the schematic temporal structure is identical as in example (44) above, the type of event-reckoning system is different. While in (44) an open-ended event reckoning-system is used, in (45) we make use of a repeatable event-reckoning system due to the concepts of {1ST TRIMESTER}, {2ND TRIMESTER} and {ACADEMIC YEAR}. These temporal concepts involve cyclical time rather than linear time.

Lastly, recall that the temporal behavior of *entre* is akin to the one of *between* in that there is separation between the prepositional-landmark elements. This is so because there is generally a coordination structure of the *and*-type that allows us to place the target event in the middle.

4.5 Summary

This chapter has dealt with the spatio-conceptual organization and semantic extension of the English prepositions *between*, *among*, and *amid*, and their Spanish equivalent *entre*. The chapter has mainly focused on how these prepositions are phenomenologically structured and tried to pin down the parameters that compose each conceptual basis. This in turn, might provide a more insightful account of spatial semantics as well as meaning extension to the non-spatial and temporal domains. In the case of temporal conceptions, we saw that time has its own structure and this is indeed reflected in language use as shown for the cases of *between* and *entre*. However, the role of conceptual metaphor in temporal understanding remains of vital importance since it fully fleshes the account. The conceptual differences spotted in the English prepositions (some of them were captured in table 4.1 above) mainly come from a thorough analysis of the trajector/landmark alignment of each preposition under different contexts of use. This might shed light on the conceptual nature of the prepositional-landmark elements of *between*, *among*, and *amid*. It turns out that this conceptual nature is key to distinguishing each of them. On the contrary, the LM of *entre* does not discriminate the conceptual nature of the elements that elaborate it. That is one of the main reasons why the conceptual basis of *entre* is constituted by all the conceptual parameters that can be found (in some cases separately) in its English equivalents.

Chapter 5: English *to* and Spanish *a*.

5.1 Spatial lexical concepts for *to*

The English preposition *to* generally denotes a scene in which a TR is oriented with respect to a *highlighted* LM (Tyler and Evans 2003a). The fact that the prepositional landmark of *to* is profiled, makes this preposition *goal-oriented*: the LM is the primary goal for the TR of *to*. Consider the proto-scene for *to*:

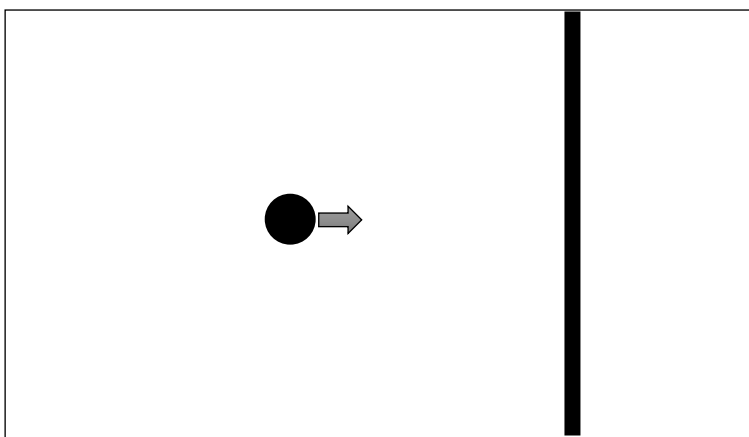


Figure 5.1. Proto-scene for *to* (Adapted from Tyler and Evans 2003a: 148)

In figure 5.1 above, the circle represents the TR whereas the thick line in bold stands for the profiled LM. Crucially, there is orientation or directionality (represented by the arrow) of the TR with respect to its profiled LM (primary goal). To illustrate this feature, consider the following example taken from the *BNC*:

- (1) He was pointing *to* a large man on the other side of the gangway who was slumped back in his seat clutching his chest **[ORIENTATION]**

According to the *CED*, *to* denotes direction. In (1), the composite structure *he was pointing to a large man*, uses the preposition *to* as a relational unit whose TR is elaborated by the clause *He was pointing pointing*, while the prepositional landmark (which is the primary goal) is elaborated by the profile of the nominal *a large man*. The preposition *to* in (1), conveys a summary scene in that there is no path or motion but directionality; in this case *to* functions as a simplex atemporal unit.

However, there are other cases in which there are path and motion – hence, the understanding of *to* involves sequential scanning, so it functions as a *complex* atemporal unit. Consider the following *BNC* example to see that conceptual behavior:

(2) I got out *to* the shops this afternoon and have you noticed they're into Christmas
already [FORWARD MOTION]

We will focus on the composite structure *I got out to the shops*, which conveys a sequential scene – this means that the speaker was somewhere and then left that place and went to somewhere else, here the shops. The sequential scanning in turn, is *distributed* by the semantics of *to* along with the satellite structure *got out* and the pronoun *I*.⁶⁹ The relational profile of *I got out* elaborates the TR of *to*, and its prepositional landmark, which in the case is considered as primary goal, is elaborated by the nominal profile of *the shops*. The partial composite structure *I got out to the shops* then, evokes a change in location in which *to* plays an orientational or directional function which is accompanied by motion toward a goal (the shops).

Both summary and sequential scanning evoked by *to* (as in (1) and (2) respectively), activate the parameter of Orientation as one of the main features at the core of the conceptual basis of *to*. The Orientation parameter is considered the core semantic value of *to*. Another important but schematic parameter of *to*, is what I term *Vector*, represented by the arrow in figure 5.1 above. This parameter must be understood as a schematic representation of orientation, motion, and length, and might constitute the core semantic value of *to* along with Orientation. For instance, when we pay attention to a cat climbing a tree, we have to visually track the movements of the cat – to do so, we must look at what the cat is doing and that implies visual directionality. The Vector parameter is also present

⁶⁹ Following Talmy (2000), languages can be broadly divided into satellite-framed (e.g., English) and verb-framed (e.g., Spanish). The former type relies on a particle to express information related to the path of motion, whereas the second type typically expresses this information in the verb root itself. In the *clause I got out to the shops*, we can appreciate how the spatial particle *out* evokes a relation in which a TR is outside the area delimited by its LM (i.e., home). There is a change in location that is mostly driven by the satellite *out*. *Got* is part of the satellite structure because it is a constituent of the phrasal verb *got out* whose holistic semantics expresses path. Compare this utterance to its Spanish counterpart *Salí a los mercados*, where the verb *salí* (got out) is the relational unit that evokes the path.

in constructions that involve motion as in (2); most importantly, however: this specific parameter plays a role in the conceptualization of the prepositional landmark as a *primary goal* since there is directionality and tendency to motion of the oriented TR toward its highlighted LM. Finally, the unusual degree of saliency of the prepositional landmark of *to*, leads the parameter of Primary goal to be apprehended as the functional element in the conceptual basis of *to*.

Figure 5.2 shows the conceptual basis that the present research proposes for *to*:

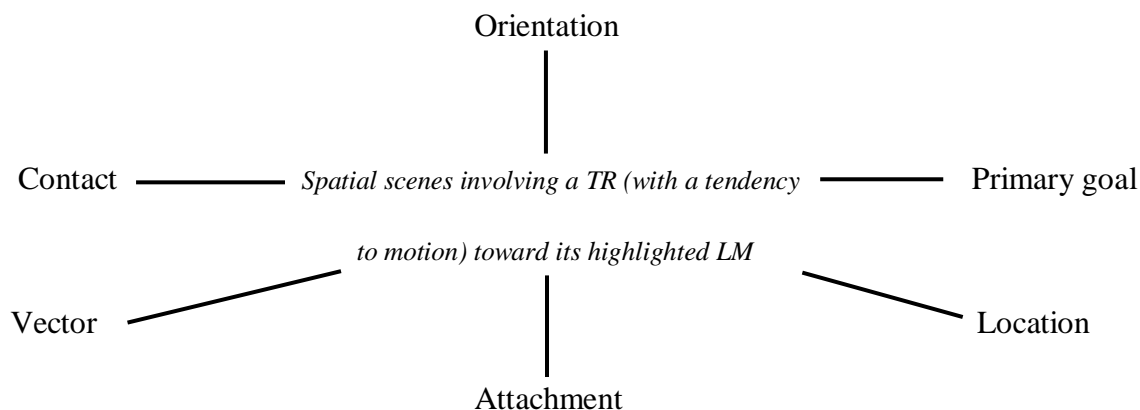


Figure 5.2. Conceptual basis proposed for *to*

Figure 5.2 above depicts the conceptual basis of *to*, which has as its core (proto-scene) all the spatial scenes that have to do with an oriented TR that is facing toward its highlighted LM and manifests a tendency to motion. The prepositional landmark in turn, is (generally) conceptualized as *primary goal*. The main parameters in the conceptual basis of *to* are *Primary goal*, *Vector*, and *Orientation*. *Primary goal* is concerned with the fact that the prepositional landmark of *to* is generally profiled and highly active – thus, it is considered the main goal and functional element. *Vector* has to do with the directional nature and tendency to motion of an oriented TR with respect to its LM: the vector parameter is the conceptual link that makes the TR “search” for its primary goal since it deals with a schematic representation of orientation, motion, and length. Another prominent parameter of *to* is *Orientation*: the highlighted status of the LM of *to* is readily interpretable as primary goal due to the orientation and tendency to motion of the TR. We can appreciate then, that the parameters of *Vector*, *Primary goal*, and *Orientation* are closely related and build up the

core semantic value of *to*.⁷⁰ There are also other parameters that arise as functional consequences of the spatial configuration conveyed by *to*. For instance, *Contact* has to do with the fact that in some situations, the TR meets its LM, as in an utterance such as *You have to apply the soap directly to the stain for better results*, in which there is a clear sequential scanning since the TR (the soap) has to be manipulated to be in contact with the LM (the stain). *Location* is concerned with spatial relations in which the TR is located with respect to its LM, but the TR might not be oriented toward it; for instance, in an utterance such as *John is standing to my right*, in which there is no sense that the TR, here *John*, is oriented toward or facing the speaker's right side from the perspective of the subject's vantage point. Finally, the *Attachment* parameter, which is closely related to *Contact*, has to do with a TR that is attached or joined to its LM in order to form a continuum with it; for example, in an utterance such as *They added a fence to the garden*, the TR (*the fence*) was first oriented to its LM (*the garden*) and then it underwent contact. This in turn, implies a permanent situation – hence, the notion of attachment arises. We can indeed observe reflexes of this pattern in such words as *together*.

Now consider a *BNC* example to see how the parameters proposed for *to* above get activated differently depending on the linguistic context this preposition is integrated with:

(3) Couples were dancing, slowly, cheek *to* cheek, by the pool [CONTACT]

In (3), the composite structure *Couples were dancing, slowly* profiles the couples, who were dancing probably in a party or summer ball. Moreover, they were dancing in a slow manner and cheek to cheek. The composite structure *cheek to cheek*, in turn, is linked by virtue of the relational unit *to* which functions as e-site for *cheek* and *cheek*. The profile of the former elaborates its TR while the latter corresponds to its LM.

Note the spatial function of *to* in that it profiles a spatial relation of contact between TR and LM. Furthermore, the trajector/landmark alignment of *to* in (3), is constituted by the same autonomous structure, here the people's cheeks: the TR then consists of a cheek of one

⁷⁰ Vector is distinguished from Orientation in that it is a schematic representation of direction, length, and motion. It also has a subjective character in that it evokes intentionality in scenes of transfers as in *I sent a postcard to my uncle yesterday*.

member of the couple, whereas the prepositional landmark consists of the other person's cheek.

Following Tyler and Evans (2003a), I agree that there is an experiential correlation between achieving a goal and contact. Every day we look for spatial goals, in the sense that we go to different places. For instance, having a weekend off with friends at the beach – once the people get to the destination, they achieve a goal by being located and hence in physical contact with the coastal area. From this it follows that in many situations in which there is a TR that is oriented toward a LM that is considered the primary goal, the TR exhibits high probabilities of undergoing motion, thereby reaching the LM such as in (3) above. However, example (3) represents cases where Primary goal is not the focus but rather contact. It follows that there is multiple activation of the parameters shown in figure 5.2 above, particularly the ones of Orientation, Vector, and Contact.

Consider another corpus example extracted from the *BNC* in which no contact but orientation is involved:

(4) Then he turned *to* me. 'Miss Sandra Forsyth,' he said.

[ORIENTATION TOWARD A LANDMARK]

Note how in (4) above, there is no contact whatsoever between the TR, here the *man*, and the LM – that is, *Miss Sandra Forsyth*. The spatial relation in the composite structure *Then he turned to me*, is partly encoded by the preposition *to* in that it provides access for the activation of basic phenomenological units of experience (i.e., conceptual parameters) such as Orientation and Vector or *agonist force* in that the very action of turning our bodies to someone else's implies force dynamics.⁷¹

It is important to recall at this point that spatio-conceptual structure, that is, the type of conceptual structure that spatial language is principally paired to, is not solely structured by spatio-geometric information but also by non-spatial parameters. In the case of *to*, there is the Primary goal parameter, which in (4) offers a higher-than-usual activation of the prepositional landmark that is crucially conceptualized as being the main objective: the man who wanted to greet Miss Forsyth accomplished his goal – thus, there was an *intention*

⁷¹ See Talmy (2000) for a thorough account on force dynamics.

behind the man's act. Such a non-spatial parameter amounts to evidence that prepositions are not only grounded in perceptual and motor states, but in introspective ones as well (see Barsalou 2008 for a brief review of grounded cognition). This again, is clearly demonstrated by the activation and prominent role of the Primary goal parameter, which is the main characteristic of the elements that elaborate the prepositional landmark of *to*. Moreover, this feature goes further to the extent that it becomes parameterized in the conceptual basis of *to* – this in turn, explains why the prepositional landmark of *to* is generally profiled and highly active. In (4), *to* functions as e-site for the profile of *he turned*, which represents the male subject, whereas its prepositional landmark is elaborated by the pronoun *me* and is conceptualized as primary goal.

Consider another example of *to*. In this case, this preposition denotes spatial distance:

- (5) India presently has two reprocessing plants: in Bombay, and at Tarapur, some 60 miles *to* the north [DIRECTION]/ [LOCATION]

According to the *CED*, *to* denotes the position of something or someone in comparison with something or someone else. In (5), Tarapur is located with respect to Bombay based on an absolute spatial frame of reference since Tarapur is located around *60 miles to the north* of Bombay.⁷² The composite structure *some 60 miles to the north* evokes a sort of simulation of real motion (in the sense of Bergen 2012: 30-32) in that *to* expresses the distance and direction (i.e. path) from which Tarapur is located with respect to Bombay. The LM of *to* is elaborated by the nominal *the north*, whereas its TR is elaborated by the nominal profile of *some 60 miles*, which expresses the distance existing between Bombay and Tarapur.

Note again that the higher-than-usual status (i.e., Primary goal) of the LM of *to* is not always highlighted (as in (3)). Rather, what is highlighted by the prepositional LM in (5) is direction. Thus, there is activation of Orientation and Location. The parameter of Orientation is jointly activated by the composite expression *to the north*, which allows us to

⁷² For details on spatial frames of reference see Levinson (2003).

locate things in space in an absolute manner. Location, on the other hand, is achieved by the composite expression *some 60 miles to the north*.

Consider now an example in which no Orientation is encoded but only location:

- (6) She also suffered injuries *to* the left side of her chest and a laceration over the eye
[LOCATION]

In (6), *to* profiles a relation in which the TR, here the woman's injuries, is located with respect to the LM, here the woman's chest. However, the TR is not oriented in the direction of its LM. An injury on someone's chest is something that is unlikely to exhibit orientation. Rather, the conventional interpretation goes on the location of the injuries that are on the left side of the woman's chest.

Evidence of the existence of the Location parameter comes from the linguistic fact that the spatial location evoked in (6) can be paraphrased as *She also suffered injuries on the left side of her chest and a laceration over the eye*. Note that in the canonical representation of the relation between TR and LM, the TR is the element in focus, whereas the role of the LM is locating this element (hence, the LM is the second most prominent element in a given construction). However, in the proto-scene shown in figure 5.1, the LM is given an unusual degree of saliency due to the TR being oriented in direction to it. It follows from this, that under specific contexts, the role of the prepositional landmark of *to*, which is mostly to *locate* the TR, might come to predominate in the profiled relationship sanctioned by *to*. Under such contexts, the prepositional landmark acts as a salient reference point regarding the location of the TR. This in turn, facilitates the development of the Location parameter. We can appreciate then, that the parameters of *to* that are most directly engaged in the composite conception in (6), are the ones of Location and Contact.

The English preposition *to* can also convey the notion of attachment, as shown in the following *BNC* passage:

- (7) The nave arcade is high and its columns are topped by foliated capitals and, below,
are life-size sculptured figures attached *to* the column [ATTACHMENT]

In (7), the composite structure *life-size sculptured figures attached to the column*, has the nominal *life-size sculptured figures* as main attentional figure. The relational profile of *life-*

size sculptured figures attached elaborates the TR of *to*. On the other hand, the nominal *the column* functions as LM – hence, it elaborates the prepositional landmark. Under this context, *to* profiles a relation in which the TR is attached or joined to the LM so the TR forms part of or is contiguous with it. This sense may have aroused due to an oriented TR, here the *life-sized sculptured figures*, reaching its goal – that is, *the column*. This very notion, in turn, implies that one entity is physically fixed or joined with another in a permanent way. In most of the cases, the attachment sense correlates with the TR having first been oriented, moved to, and subsequently undergoing contact with its LM, thus, the [ATTACHMENT] lexical concept or sense is closely related to the [CONTACT] one.

The parameters that are most directly involved in the composite structure *life-size sculptured figures attached to the column* in (7), are the ones of Attachment and Primary goal. Attachment, as mentioned above, has to do with a TR that is fixed or joined to its LM. In (7) we can clearly conceptualize the sculptured figures as being permanently fixed to the column, hence, they are in contact. The Contact parameter in turn, might receive secondary activation and represents the functional consequence of an entity being attached to another. By the same token, we might consider Attachment as a functional consequence of a TR that gets in (permanent) contact with its LM. The parameter of Primary goal is the other element that is most directly involved in the realization of *to* in (7) since it represents the main characteristic or feature of the elements that elaborate the prepositional landmark of *to*. It specifies the place where the figures must go. As mentioned earlier, the prepositional landmark of *to* generally exhibits a high level of activation – this higher-than-usual degree of saliency in turn, may be due to the TR being oriented to its primary goal, that is, its LM. Other parameters within the conceptual basis of *to* that might receive secondary activation are Location and Orientation.

So far, we have seen the dynamic, rather than static, behavior of the English preposition *to*. Its dynamicity is reflected, among other things, in the fact that it can behave as a simplex, as well as a complex atemporal unit. This difference in turn, depends on the linguistic contexts that *to* is placed in. Simplex and complex atemporal relations are distinguished by the notion of trajectory – the former do not entail it whereas the latter do. A simplex atemporal relation thus, involves orientation or directionality, such as in example (1) in

which the man is pointing to someone else. On the other hand, there are cases in which *to* further conveys motion or trajectory, such as in (2) in which there is a change in location; therefore, *to* behaves in a complex way. It is important to bear in mind, though, the fact that both complex and simplex atemporal relations background the domain of time in that they are apprehended as non-processual units (Langacker 1987, 1991, 2008).

The simplex/complex atemporal behavior of the preposition *to*, apart from being attributable to the very nature of language design, which is structured and dynamic, it is also attributable to the parameters that form its conceptual basis, particularly the one of Vector. The parameter of Vector, as mentioned above, is a schematic representation of length, motion, and orientation. It allows the preposition *to* to jointly or separately convey the notions of trajectory and directionality. Moreover, this parameter represents the orientation and tendency to motion that a given TR exhibits with respect to its (frequently) highlighted LM. This specific feature in turn, may be the key to understanding the higher-than-usual conceptual saliency that the elements that elaborate the prepositional landmark of *to* generally acquire: they are considered the primary goal (see figure 5.1 above). Not all the simplex atemporal relations profiled by *to* are due to the Vector parameter, however. There are some cases in which no orientation is conveyed, such as in (6) above where the orientation of the TR (*injuries*) is not profiled, but only its location with respect to its LM. On the other hand, complex atemporal relations profiled by *to* – that is, those that profile trajectory, generally if not always, activate the Vector parameter for linguistic realization.

The conceptual basis proposed above for *to* is of course not the only construct to account for lexical representation and polysemy (cf. Rice 1992). However, I have high hopes that it will contribute to a highly plausible conceptual account of how words are elaborated and extended (i.e., literal vs. figurative conceptions). In the next section, some of the (possibly) most frequent non-spatial usages of *to* are analyzed to show how the meaning extension of this preposition works. This extension in turn, is ultimately derived from perceptual, situated, and introspective experience.

5.1.1 Non-spatial lexical concepts for *to*

The conceptual basis of *to* proposed above is an essential construct for understanding non-spatial or abstract domains that are partially sanctioned by this preposition. Consider the first *BNC* example in which *to* is used to express political thinking:

(8) Although only a minority of parties were favourable *to* the Left, it was that minority which was most active at Party conferences and in political propaganda in the country [PREFERENCE]

In (8), the [(POLITICAL) PREFERENCE] lexical concept is partly encoded by the composite expression *were favourable to the Left*, in which the TR of *to* is elaborated by the clause *only a minority of parties were favourable*, and the prepositional landmark is elaborated by the nominal *the Left*. The resulting composite conception has to do with political preference. To say that someone is favorable to the left or the right, is to say that this person matches the political thinking and values of that party. This in turn, is mostly achieved through introspective experience – that is, response content (in the sense of Tyler and Evans 2001; see also Grady 1997). A person must know herself in order to decide which political party to vote for. It follows from this that introspection may play a crucial role in the development of abstract or *response concepts*.⁷³ As mentioned above, all the (conceptual) parameters that form the conceptual bases proposed are not only a product of sensory-motor experience (i.e., *image content*), but they are also grounded in all the brain's modal areas – that is, they are grounded in perception, situated action, and introspection (Barsalou 2008; Barsalou and Wiemer-Hastings 2005).

The role of introspection may be of great importance at the moment of understanding abstract domains in which the preposition *to* actively participates as in (8) above. I suggest that the parameters that most directly participate in the example above are the ones of Primary goal and Vector. The Primary goal parameter is reflected in the fact that the nominal *the Left* constitutes the political preference of the people who support the left wing: there is a tendency to orientation and motion toward the LM by part of the TR of *to* which is evident in (8). Moreover, *to* denotes affinity and proximity (i.e., subjective features); this is precisely due to the activation of those two parameters. A metaphor that could be involved in this non-spatial reasoning is PREFERENCE IS MOTION TOWARD A GOAL.

⁷³ See Grady (1997) for full details on response concepts.

The parameter of Vector must be understood subjectively when it comes to the abstract realm and it goes hand in hand with Primary goal. As mentioned earlier, Vector has to do with a schematic representation of (force) direction, motion, and length. The emergence of this conceptual parameter not only comes from proprioception (i.e. situated action), but also from perception and introspection. Introspective states are key to the understanding of the activation of the response content that non-spatial parameters such as Primary goal and Vector are mainly constituted of. Now under an intersubjective perspective, the parameter of Vector must be understood as the affinity or appeal that makes people support a given political party as in (8) above. Note that there is a sort of attraction based on epistemic thinking, which eventually makes people decide on something – hence, being more proximal to the decision taken and more distal from the options rejected. Lastly, the parameter of Location may also get extended: the fact of favoring to the left or right party is to locate one self’s opinion in one of the two political wings. From this it follows that the metonymy LOCATION FOR POLITICAL AFFINITY might play a role in the composite conception evoked in *favourable to the Left*.

Let us consider another figurative usage of *to*. In this case, *to* denotes a relation between a TR and an event which is brought about by the TR:

(9) I've been sentenced *to* death. Apart from that, everything is fine. Everything is a winner! [EVENT]

The composite structure *I've been sentenced to death* evokes an event in which a person’s fate is to receive the maximum punishment. That clause elaborates the TR of *to* whereas the profile of *death* elaborates its prepositional landmark. Note the correlation between the prepositional-landmark element, here *death*, and the event which occurs at a specific location. The death sentence is the “goal” that the subject in question must eventually meet. However, the conceptualization of such a goal triggers a spreading activation process that results in a new inference provided by the composite structure *I've been sentenced to death*.

The event in this case triggers the location, which is probably a prison's area where executions can be carried out.⁷⁴

I think that the [EVENT] lexical concept is partly motivated by the parameters of Primary goal and Location. The former is mainly built up by response (i.e. abstract) content whereas the latter is so, but by image (i.e. perceptual) content. Put it differently, the former is based more on introspection whereas the latter is based more on perception. Crucially, however, the Location parameter offers the topological structure which is necessary for the inference that can be glossed as EVENT>LOCATION – after all, events are based on conceived time, summation, and sequential scanning (Langacker 1987, 2012b): the parameter of Location provides the spatio-conceptual structure for setting that event (based on temporal units) in space.

Following Tyler and Evans (2003a) (see also Wierzbicka 1988), the [EVENT] lexical concept may serve as a conceptual source for the function that *to* has in complementation. As an example, consider the following *BNC* passage:

(10) The Smoke busters of South Tees showed that you don't need *to* smoke *to*
have fun [PRIMARY GOAL]/ [EVENT]

In the composite structure *you don't need to smoke to have fun* in (10) above, *to* behaves as a simplex atemporal unit that allows the structures evoked by *you don't need to smoke* and *have fun*, to lexically integrate in a coherent semantic assembly. The profile of the clause *you don't need to smoke* elaborates the TR of *to*. Moreover, if we consider the composite conception of the whole passage in (10), we can appreciate that the idea that people do not need to smoke to have fun was empirically proved, somehow, by the Smoke busters of South Tees.

On the other hand, the prepositional landmark of *to* is elaborated by the relational profile of *have fun*. Now the complementation function of *to* is deeply connected with the experiential correlation of being in a place and the practical association of what it implies to be in that

⁷⁴ Inference through spreading activation and the co-activation of implicit conceptual elements play a major role in language processing and understanding. Linguistic meaning is neither self-contained nor fully compositional (Langacker 2012b).

place. The act of having fun, for instance, implies this correlation: an enjoyable setting and the spatial affordances this implies for human interaction.

This type of function may be a further degree of grammaticalization, via (possibly metonymic) pragmatic strengthening (in the sense of Traugott and Dasher 2004), that comes from the “purposeful” conceptual character exhibited by the (schematic) trajector/landmark alignment of *to*. To this purposeful conceptual character, we might add temporal structure of the sequential type. The transience type of succession (i.e., temporal evolution) underlies the metaphor PURPOSEFUL ACTION IS MOTION TOWARD A GOAL. This metaphor may allow us to see a purpose as oriented motion to a destination.

Note how in the complementation function the LM is identified with the TR: there are correspondence links in that we can perfectly understand from (10) that in order to have fun people do not need to smoke. *To have fun* complements the message that people do not need to smoke – that is, *have fun* complements and is also apprehended as primary goal within the event of not smoking while having fun. The very fact that the preposition *to* contributes to the conceptualization of an event, makes the complementation function possible. This in turn, may ultimately be derived from the [EVENT] lexical concept. In Sum, we can observe that for the realization of *to* in (10) there is activation of the Primary goal and Vector parameters. Primary goal helps to conceptualize the act of having fun (the objective), while Vector schematically supports this willingness or desire to accomplish that goal. Location also gets activated.

From the evidence shown above, we could say that the [EVENT] lexical concept may ultimately become a sense-extension unit in the conceptual basis of *to*. This unit would be a metonymic extension that comes from the Location parameter. As mentioned earlier, events (which are based on temporal units) need their physical setting (i.e., space) to achieve conceptualization – in other words, they need a location. This metonymic extension in the form of Event that comes from Location (see figure 5.3 below), might allow the complementation function that *to* acquires regularly.

Another figurative use type of *to* that is highly frequent is the [COMPARISON] sense. To appreciate this function, consider the following *BNC* sample:

(11) Meyer's corporate publications had claimed that the timber industry helped to slow global climate change, provided economic benefits to developing countries and had a minor role in the destruction of tropical forests compared *to* those played by farmers and population growth. [COMPARISON]

The passage in (11) above has a comparative function within its maximal discourse scope: the passage compares the timber industry on the one hand, and the farmers and population growth on the other hand, with respect to the roles that each group has in the destruction of tropical forests. Now the particular composite structure that concerns us here is the one yielded by *compared to those played by farmers and population growth*. The mental space of {COMPARISON}, evoked here by *compared*, is the timber industry's minor role in the destruction of tropical forests. This elaborates the TR of *to*. The prepositional landmark of *to*, which in this case is the referential object of comparison, is elaborated by the profile of the coordinate structure *those played by farmers and population growth*.

In (11) *to* profiles a relation between TR and LM such that a comparison is facilitated. This sense may derive from the experiential correlation between an act of comparison and the act of bringing one object to another so that they can be more easily examined and hence, compared. Through the process of pragmatic strengthening, this sense has become conventionalized. However, I suggest that this sense is also an extension of the Location parameter (see figure 5.3 below). As just mentioned, the act of comparison implies bringing two or more things together so as to examine them more easily – they have to be *located* close to each other. Such mundane act of comparison based on perception, might be key to understanding the motivation behind the figurative usage of the [COMPARISON] lexical concept that is generally and partially sanctioned by *to*.

Lastly, I think that the parameters that most directly participate in the realization of this sense, are the ones of Primary goal and Location. Primary goal gets activated due to the role of the LM of *to*, which in (11) represents one of the objects of comparison, that is, the role of farmers and population growth in the destruction of the tropical forests. On the other hand, the parameter of Location also gets activated and figuratively extended (so metaphor is involved) in order to conceptualize the act of comparison between two things or group of

things due to the correlation existing between seeing two objects that are close to each other, and the cognitive operation of comparison.

Let us now take a look at the last figurative use type of *to* in this non-exhaustive list of lexical concepts. The last non-spatial lexical concept I want to analyze using the conceptual basis proposed for *to*, is the one of [EXTREME STATE]. According to the *CED*, *to* can denote an extreme state. Consider the *BNC* sample below:

(12) My Lady Dedlock says she has been ' *bored to death* ' [EXTREME STATE]

Note how in (12) the composite structure *to death* functions as intensifier of *bored* since it elaborates a salient subpart of it. In (12), the main figure, here *Lady Dedlock*, is conceptualized as being in an extreme state of boredom. This reading is partly due to the semantics of *to* since it helps to conceptualize a sort of “top” or “endpoint” that is included in the schematic scale or process profiled by *bored*, whose top or “endpoint” is profiled by *death*. It follows from this idea that *death* is understood as the end of a schematic path that metaphorically encodes an extreme state. On the other hand, the image-schematic structure {SOURCE-PATH-GOAL}, inherent in the Orientation parameter of *to*, also helps in the metaphorical mapping concerning the level or degree of boredom, which in (12) has to do with the highest. *Death* (the terminal point of a preceding process) is metaphorically mapped onto *extreme boredom* (also the terminal point of a process of growing boredom).

As we saw above, the parameters that constitute the conceptual basis of *to* might provide an approach to understand the motivation that lies behind (12). I think that the parameters that most directly participate in the figurative conception in (12) above are the ones of Contact, Orientation, and Vector. Contact must be understood metaphorically as the act of reaching a certain point, which in this case has to do with a psychological state of extreme boredom. Note also, as just pointed out, that the {SOURCE-PATH-GOAL} image schema is inherent since the component states of a process (i.e. boredom increase) are construable as a scale (i.e. a path), leading to its completion. Orientation has to do with the “upwards” direction in terms of the level of boredom that the conceptualizer is going through – this figurative orientation is conceived at the expense of the metaphor MORE IS UP (Lakoff and Johnson

1980, 1999).⁷⁵ Lastly, the parameter of Vector, which functions as the schematic representation of force, length, and orientation (and probably willingness in the psychological realm), allows us to profile all the component states of the process of ‘getting bored’ in (12). In other words, it helps to apprehend the process or sequence and then package it in a summary way since what really matters in (12) is the [EXTREME STATE], that is, the final stage of a process of getting increasingly bored.

When we consider the composite structure *bored to death* in isolation, we can distinguish how the profile of *death* elaborates the LM of *to*, while its TR is elaborated by the relational profile of *bored*. (which anaphorically stand for Lady Dedlock). This in turn, allows us to comprehend the idiomaticity that lies behind such construction since we can *infer*, based on the conceptual basis of the preposition *to* depicted in figure 5.2 above, what factors (i.e., parameters) are most directly involved in the trajector/landmark alignment.

Now the point I want to highlight here, is that when we put this idiomatic expression into context such as in (12) above, we have a larger construction which in this case is a subordinate clause. It follows that a larger construction implies a larger semantic integration – hence, a different trajector/landmark dynamism. Note how in the composite structure *she has been 'bored to death'*, which must be understood as a mental space that consists of the information reported by the speaker in (12), the preposition *to* acquires a quantifying function. Such a function in turn, implies that the TR, which is in this case is *Lady Dedlock* (at the maximal discourse scope represented by the pronoun *she*), establishes correspondence links with its LM (*bored*) and with a *secondary landmark* (Langacker 1991) that is specified by *to death*. The prepositional phrase structure, then, elaborates the secondary LM; and the result is the extreme character of the psycho-somatic state of boredom evoked in (12).

5.1.2 Complementation

As we saw above, there are cases in which *to* functions as complementizer. However, and following Tyler and Evans (2003a), the complementation of *to* as an infinitival subordinator might be ultimately derived from the [EVENT] lexical concept (as shown in (9)

⁷⁵ See also Barcelona (2000a) for details on the metonymic motivation of the MORE IS UP metaphor.

and (10) above). The experiential correlation in turn, may be attributable to the link that exists between the notion of futurity and the fulfillment of an expectation: source, path and goal can then be conceptualized through the temporal transience type of *succession* even though the infinitival *to* merely suspends sequential scanning since it profiles all the component states of the verb it combines with; therefore, it profiles the entire path (Langacker 1991: 446).

Consider the following example of a complement clause:

(13) The professor will be expected *to play a major part in the organisation of syllabuses, teaching and lecturing in Roman Art and Archaeology*
[EVENT]

Note how the subjective character of *to* in complementation allows the main figure, here the professor, to be left implicit in the complement clause in italics. In (13) *The professor* has subject status relative to its LM, here *will be expected* in *The professor will be expected*. Then, at a higher level of conceptual organization, *the professor* has topic status and the (secondary) LM becomes relational since it is elaborated by the clause *play a major part in the organisation of syllabuses, teaching and lecturing in Roman Art and Archaeology*. This relational LM, in turn, allows us to specifically know the areas in which the professor is expected to play a major role in. The TR of *to*, on the other hand, is elaborated by the clause *The professor will be expected*.

The parameters that most directly participate in the complement clause are Location and Primary goal. As mentioned earlier, the [EVENT] sense derives from the Location parameter due to the experiential correlation existing between events and the locations in which they take place. This locative function, which leads to the conceptualization of an event, is generally characterized by the *path* prepositional function as in *I got out to the shop* in (2) above. The second parameter that receive primary activation in the complement clause in (13) is the one of Primary goal. The secondary LM, as we saw above, serves as e-site for the TR and determines the active zone of the primary LM specified by *expected*. The resulting conception yields the thing or things that the professor in (13) is expected to play a major role in. These things are apprehended as the primary goal.

More evidence in support for the role of *to* as an infinitival subordinator in complementation, which is derived from the [EVENT] lexical concept, comes from the following *BNC* passage that deals with a *purpose* clause:

(14) 'Or have you simply come here *to annoy me*?' [PURPOSE]

According to the *CED*, *to* denotes the purpose of doing something. In (14) we can appreciate a locative relation between the agents (the speaker and her interlocutor) and their ground (represented by the spatial deixis *here*). In addition, we also have to consider the complement clause *to annoy me*, which serves as secondary LM and is elaborated by the infinitival complement. This secondary LM mediates the interaction between the TR and its primary LM (*have you simply* (TR) *come here* (LM)). It follows that the secondary LM narrows down and hence, specifies the type of event and it also stipulates the agent's primary goal. In sum, the secondary LM is the event's active zone with respect to the profiled relationship evoked in (14). This active zone might imply the activation of at least the following parameters: Orientation, Location, Vector, and Primary goal. The first three parameters go hand in hand with the {SOURCE-PATH-GOAL} image schema that underlies the conceptual basis of *to*. As we saw above, *to* suspends sequential scanning since it denotes a complex atemporal relation which profiles all the component states of a process. The result is the *summation* (Langacker 2012b) of a sequence which highlights the end stage, that is, the TR goes through a change in location by being orientated and moving toward its LM. More importantly, however, is the activation of the Primary goal parameter, which crucially, contributes to our understanding of the purpose that one of the agents in (14) might have had in mind.

According to Wierzbicka (1988) (see also Langacker 1991: 438-463), *to*-complements not only are characterized by evoking notions such as the personal mode and intentionality which is manifest by the very thought about desiring something, but they are also characterized by exhibiting a 'future component of some sort' (Wierzbicka 1988: 166). Moreover, *to*-complements present a non-committal character as in an utterance such as *He tried to fry the bacon*, in which the very act of trying is aimed at *effecting* – therefore, it precedes the subordinate event. It follows from such a non-committal character of *to*-complements, that there is uncertainty as to whether any action actually took place. On the

other hand, if one says *He tried **frying the bacon***, it implies that the action occurred: the act of trying is not aimed at effecting, but rather at ascertaining its consequence once initiated (Langacker 1991: 445). We can observe then, that *to*-complements imply a sequence of times even though they are atemporal relations due to the fact that they combine with ungrounded structures and are also ungrounded structures themselves. On the other hand, a gerundive complement, as in *He tried frying the bacon* above, implies an interpretation based on sameness in time: the *temporal coincidence* or sameness in time of *-ing* is attributable to its immediate scope which falls within the boundaries of the verb stem's processual profile (Langacker 1991: 443).

There are some verbs, however, that can be lexically integrated with either a *to*-infinitive or *-ing*. Examples of these are verbs like *hate*, *prefer*, *like*, and *love* (compare *I love **cooking*** to *I love **to** cook*). Even though there might be some degree of indeterminacy as well as arbitrariness, I favor the idea that a different syntactic structure implies a difference in meaning (Bolinger 1968). A possible explanation about the differences that may exist between *I love **cooking*** and *I love **to** cook*, might lie in the idea of *active involvement*, which goes hand in hand with Langacker's notion of viewing frame. Such a notion, which in turn is consonant with the conceptual process of *selection* (see Evans 2009: Ch. 11), has to do with how speakers construe reality through linguistically mediated communication. In the former example (*I love **cooking***), the speaker is not necessarily conceptualized as an active participant: it conveys the idea that the speaker likes cooking either in the sense of being actively involved in cooking or in the sense of just enjoying the food or watching food channels, and the like, whereas the latter example (*I love **to** cook*) is normally understood as meaning that the speaker is an active participant in the kitchen and that he or she could even be a chef: she is actively involved in cooking.

5.1.3 Futurity

I now briefly turn to the notion of futurity, which is generally associated with the prototypical value of *to* due to its goal-oriented character. According to the *CED*, *to* denotes a future event and is used before an infinitive. I suggest that this notion has its roots in the {SOURCE-PATH-GOAL} image schema that is generally conveyed by *to*. For instance, in the composite structure *I got out **to** the shops* in (2) above, we can observe how *to* conveys the

{SOURCE-PATH-GOAL} image schema in that we can conceptualize a sequence: the speaker is first located somewhere, and then she moves to another place which is specified by the prepositional landmark, here the profile of the nominal *the shops*. We can, then, see how the preposition *to* indicates succession and profiles the end point as primary goal. Moreover, the speaker in (2) might have planned in advance to go shopping before she left the place she was before. It follows from this idea that there is a *projection* (i.e., future plans) and then a *fulfillment* – this in turn, is the main experiential correlation for positing a motivation lying behind the notion of futurity that populates the conceptual basis of *to*. This correlation might have become parameterized as Primary goal.

Consider now a mundane utterance such as *This soccer ball is for you to have fun*, uttered by a father to his son. Note that even though the construction specifies present tense, the preposition *to* conveys the notion of futurity in that the complement clause *to have fun* points to a future event that the speaker's son/daughter is likely to encounter. Such a future event is conceptualized as a fulfillment of an expectation (i.e. goal). My point in here is to highlight the importance of the Primary goal parameter within the conceptual basis of *to*. I think this is the key feature that may allow us to comprehend more clearly the motivation existing behind the notion of futurity that is manifested in many usages in which the [EVENT] sense is sanctioned. Moreover, the fact that *to* encodes the {PATH} schema is further evidence for the emergence of the futurity notion. This particular schema is analogue to the transience type of *succession* whose embodied basis comes from the fact that the felt experience of time constitutes a sequence of events, one preceding another. This in turn, provides a basis for distinguishing between earlier and later events, and related events to their position in a sequence, giving rise to the temporal relation earlier/later. There is indeed a link between spatio-conceptual and temporal structure that allows summation in the first place and therefore, permits the understanding of conceived episodes in order to conceptualize the elapse of time until reaching the target event, which is the primary goal of the TR of *to*.

I want to finish this section with a remark on futurity as a temporal conceptual feature of *to*. To do so, let us compare two sentences such as *I will try to fry bacon*, as opposed to **I will try frying bacon*. The former sentence is acceptable whereas the latter sounds semantically

anomalous unless it is something that a person will do *for the first time*. The reason why the latter does not allow projection apart from the case just mentioned, is because of the conceptual nature of *-ing*, which can be apprehended as *temporal sameness*. On the contrary, the former sentence can be perfectly integrated with *to* due to its conceptual feature of futurity. The experiential correlation between future and the fulfillment of an expectation (Langacker 1991: 446), might be considered as the *temporal* proto-scene of *to*.

5.1.4 Temporal domain of *to*

In this section, I provide an analysis of the [UNTIL] temporal lexical concept of *to* in order to show how the domains of space and time interact with each other. As mentioned throughout the research, the conceptualization of time does have temporal structure, which is characterized by the three temporal frames of reference (t-FoR) – two of them (deictic and sequential) – have a neuro-biological basis, whereas the extrinsic or absolute temporal frame of reference is considered an intellectual achievement.⁷⁶ On the other hand, space also manifests three spatial frames of reference (Levinson 2003). It follows that these spatio-conceptual and temporal structures jointly collaborate in the conceptualization of time.⁷⁷

Consider now an example in which the [UNTIL] temporal lexical concept is partially sanctioned by *to* (the example below is taken from the *BNC*). This sense, according to the *CED*, has to do with a particular period of time that is reached:

(15) It's still two weeks *to* the Moulid [UNTIL]

Example (15) above profiles the temporal distance existing between now (i.e., an ego-based temporal concept) and the Moulid event (TE). A Moulid is an event of a holy person which is celebrated by Muslims and Christians in Egypt to honor their Saints. This ceremony, in turn, elaborates the prepositional landmark of *to* and is considered the target event (TE).

Our notion of *nowness* implies a constant time flow – that is, the very matrix of time that makes it always go forward and never backwards. This temporal feature known as

⁷⁶ For details on temporal frames of reference and the neuro-biological basis of time see Evans (2013) and references therein.

⁷⁷ For an account of the space-time (dis)analogy, see Langacker (2012a).

transience (Evans 2013; Galton 2011) goes hand in hand with the {SOURCE-PATH-GOAL} image schematic structure that underlies the (spatial) conceptual basis of *to*. Moreover, we need a repeatable cycle system in order to understand the temporal concept of {TWO WEEKS}. The profile of the nominal *two weeks* represents the temporal reference point (RP) since it helps to locate the TE, here *the Moulid*. The origo (O), the element that starts the count in this repeatable event-reckoning system, is set with respect to the solar cycle (the O is external to the counting system) and anchors the RP to the duration transience type. Thus, the type of temporal reference used in (15) is the extrinsic one.

Note that example in (15) could also be accounted using the temporal element of {NOWNESS} as origo. This element characterizes the deictic t-FoR. However, it is due to the temporal nature of the RP in (15), which is periodicity-based, that the temporal reference strategy is absolute. In a case where a person said *The Moulid is fast approaching*, we could say that it is a case of deictic temporal reference, particularly because of the perspective point (PP) evoked in the clause *is fast approaching*. In that case, the MOVING TIME metaphor might be applied. On the other hand, the MOVING EGO metaphor, may be active in temporal expressions such as *We are approaching the moulid*, in which the clause *We are approaching* conveys this metaphorical reasoning.

Even though the deictic t-FoR is not used in (15), there are conceptual convergences between the {SOURCE-PATH-GOAL} schematic structure of *to*, and the temporal distance between the RP and TE in (15). Such distance might be apprehended via the primary metaphor DURATION IS LENGTH because of the correlation existing between spatial trajectory and temporal duration. It is precisely the transience type of duration, the one that is apprehended more easily via metaphor.

At this point we can appreciate differences and similarities between spatio-conceptual and temporal structure. But most importantly, they have to be considered as dependent to each other, since a complete conceptualization of time requires spatio-conceptual structure (and probably vice versa).

Temporal conceptualizations have their neuro-biological basis on the concepts of past/future and early/ later. But as mentioned throughout the research, time needs space for its proper conceptualization, and this is so because these two domains are so deeply related

to the point that they are interdependent. As Grady (1997) points out, there is an experiential correlation between duration, a type of transience, and length, which is a property of space. The result of this elemental experiential correlation gives rise to the primary metaphor DURATION IS LENGTH in which there is a topological reification mapped from the domain of space onto the domain of time.

We can consider, then, the temporal use of *to* in (15) as a product of topological reification, but always taking into consideration the role that *temporal cognition* itself plays in temporal composite conceptions. The topological reification is motivated by the {SOURCE-PATH-GOAL} image schema. The path is metaphorically understood as the time flow, whereas the goal is specified by the target event. We can note that the spatial semantics of *to* matches how the domain of time works in general in that this preposition can profile all the stages of conceived time (time flow) until it gets to the final event, which is generally considered as the primary goal. The schematic *temporal* structure that might be used for metaphorical reasoning in the first place, can be glossed as [TE FIXED TO AN RP IN A (REPEATABLE) EVENT-RECKONING SYSTEM].

The parameters that are most directly involved in (15) are Primary goal, Orientation, and Vector. Primary goal represents the Mouldid, that is, the TE. Orientation and Vector jointly work in the understanding of temporal features such as the forward motion of time which is composed by several events that are conceptualized sequentially and summarily. There might also be secondary activation. For instance, the Location parameter might be metaphorically extended so as to apprehend temporal locations such as {NOWNESS} and {TWO WEEKS AHEAD}.

Now consider an example in which the {PATH} schema is the conceptual zone that gets activated the most, compared to the wider and more complex {SOURCE-PATH-GOAL} schema that is generally encoded by *to*:

(16) The car wasn't there at twenty *to* six, but ten minutes later there it was.
[UNTIL]

According to the *CED*, *to* is used when saying the time, to mean before the stated hour. In example (16) the TE, the arrival of the car, is being fixed with respect to the 12-hour clock

(a.m/p.m) in a (repeatable) time-reckoning system. Moreover, the RP (the time indicated as *twenty to six*), requires an O to anchor it to the transience type of duration. The expression in (16) shows a 12-hour system based on the day-night cycle, where midnight is taken to begin the measurements of durational elapse; therefore, the O is fixed as 00:00. The example above differs from example (15) in the fact that while in (16) the construction is time-based (i.e., since we use highly precise temporal measuring systems like clocks), example (15) is construed as event-based (i.e., calendar units). The highly schematic temporal structure that is inherent in (16) may be glossed as [TE FIXED TO AN RP IN A (REPEATABLE) TIME-RECKONING SYSTEM].

We can then observe that duration manifests a deep experiential correlation with the {PATH} image schema (i.e., length). Even though the composite expression might profile the whole {SOURCE-PATH-GOAL} schema, that is, from a certain point in time until 5:40, it is the time span between these two temporal points what contributes to the reading in (16), with a clear emphasis on the end part of the temporal elapse that is considered to be the “goal”, since it is the time that the car’s arrival is expected.

The parameter that is most directly involved in the temporal realization of *to* in (16), I suggest, is the one of Location. Because the composite structure *twenty to six* is based on an extrinsic temporal frame of reference, which is associated with clocks and calendars, and relates to the duration transience type, it is that the Location parameter plays a major role in the location of the TE (the arrival of the car) with respect to its RP, here 5:40. The extrinsic or absolute t-FoR can then be employed to apprehend *points in time*. An important aspect of this type of temporal reference, is that even though it derives from the phenomenologically real experience of duration, the temporal relation that emerges from it is an *intellectual achievement* since the absolute location of time, as in *twenty to six*, is an ability that is not encountered in every culture (see Sinha et al. 2016). Note also that in this type of temporal systems, time reckoning harnesses the physical manifestation of natural periodicities using material artefacts that either embody – like an hourglass – or symbolize the periodicities, such as the hands of a clock face. In (16), the speaker uses the linguistically captured metonymic representation of a clock face to conceptualize the relation holding between the car arrival and its time of occurrence within the temporal matrix.

Another two parameters that might be involved in (16) above are Vector and Orientation since they help to conceptualize the passage of time. Orientation is reflected in the forward direction of time itself and Vector complements such directionality with its schematic information about motion, force, and length in the low-level composite structure yielded by *twenty to six*. If we say *twenty to six*, we do know that *six o' clock* is an imminent point in time that will be met due to the very nature of time – it always goes forward rather than backwards, and it never stops.⁷⁸

Figure 5.3 below shows the conceptual basis of *to* plus its semantic extensions which might become pragmatically strengthened (following Traugott and Dasher 2004) to the point they get parameterized:

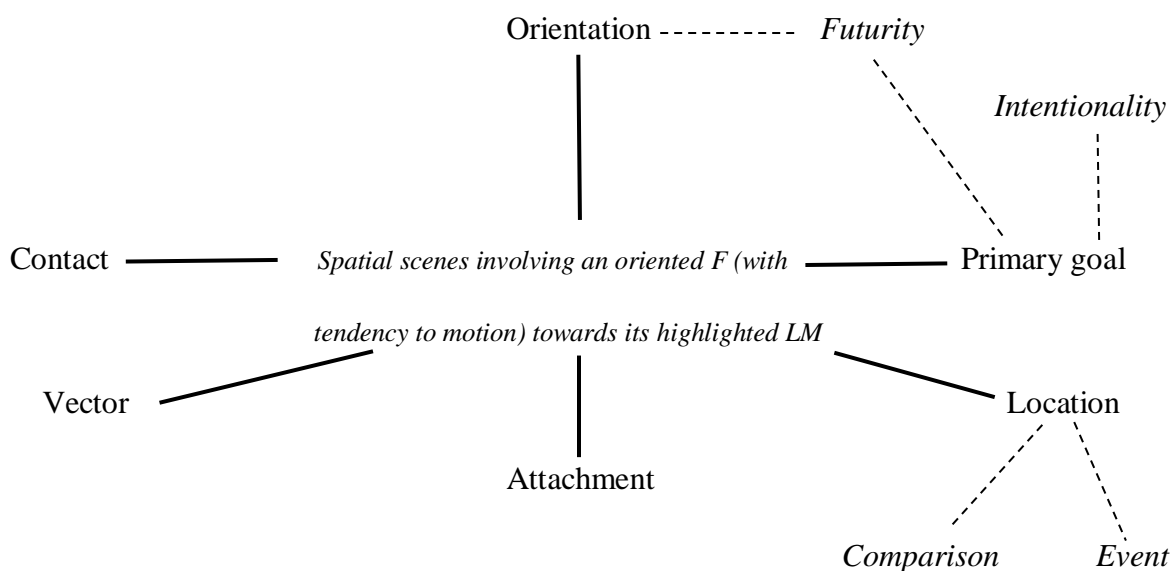


Figure 5.3. Conceptual basis for *to* and its relationship with sense-extension units

⁷⁸ This manner of understanding time as always moving forward might be considered a sub-metaphor within the TIME IS SPACE metaphor. However, such metaphorical thinking must be grounded in the phenomenologically real experience of the temporal relation known as *earlier/later* – that is, temporal evolution. As showed in chapter 2, time is phenomenologically real in that we perceive time due to our neuroanatomical organization. The transience types of *succession* and *anisotropic* are indeed a product of the phenomenologically real temporal relations of earlier/later and future/past, respectively. *Duration*, on the other hand, is more neuro-cognitively complex because it depends on physiological mechanisms (see Evans 2013:128).

Figure 5.3 above shows the conceptual basis of *to* plus some semantic extensions that might become parameterized due to pragmatic strengthening. Parameterization takes place when semantic features start becoming prominent (via bridging contexts [Evans and Wilkins 2000]) within the semantic pole of a word to the extent they exhibit a high frequency of use.⁷⁹ Such high frequency leads to the entrenchment and conventionalization of some well-established senses of *to*, whereas others never get parameterized but *accessed* through parameters like the [PREFERENCE] sense evoked in (8) above.

The semantic extensions that I think could get parameterized are Futurity, Intentionality, Event, and Comparison. *Futurity*, as shown in figure 5.3 above, comes from Orientation and Primary goal. This is due to the correlation between an expectation and the fulfillment of that expectation: the expectation is the primary goal whereas the process of achieving that goal is driven by Orientation (and Vector). *Intentionality*, on the other hand, comes from Primary goal (and probably Vector) because when people set themselves a list of goals, these goals are ultimately rooted in the volitional decision and willingness to fulfill and hence, reach those expectations.

The other two sense-extension units are Event and Comparison and they come from the same parameter, which is Location. In the case of Event, the semantic extension may be due to the experiential correlation between events and locations. Locations provide the spatio-conceptual structure that is characterized by matter – the substrate of space, whereas events are constituted by temporal structure, which is characterized by the substrate of time – that is, action. We can observe, then, a metonymic link between locations and events in which one provides mental access to the other (and activates it) due to their deep correlation. In addition, the Event parameter might serve as conceptual source for the role of *to* as an infinitival subordinator in complementation. Finally, the parameter of Comparison also comes from the Location parameter and is reflected in the phenomenological fact that we can visually compare two things that are proximal to each other: the fact that they are in the visual scope facilitates the mundane (and vital) cognitive operation of comparison.

⁷⁹ However, this needs to be further corroborated through a statistically corpus-driven work that measures frequency.

5.2 Spatial lexical concepts for *a*

I now turn to the spatial lexical concepts or senses of the Spanish preposition *a*. This preposition is characterized by being highly polysemous: it can sanction spatial, non-spatial, and temporal conceptions that are generally encoded by *to*, along with other English prepositions such as *at*, *by*, *on*, and *for*.

I will first show what I think is the most prototypical sense and the semantic core of the preposition *a*, from which a number of motivated-sense extensions take place. Such sense is mainly structured by the parameter of Directionality or Direction, and it is involved in the proto-scene of *a* as its main feature. According to the *DLE*, *a* denotes direction as well as the path that leads to an end. In the same line, Trujillo (1971) (see also Chéliz 2002), refers to the preposition *a* (and other semantically related prepositional vehicles) as a preposition which indicates *approximation to a limit*. *A* exhibits a telic character since it is generally integrated in constructions that profile a conclusive endpoint of an event.⁸⁰ However, the endpoint of a given event is not as strict or delimited as in other semantically related prepositions such as *hasta* (English *until*). For instance, I can say *Voy a Italia este mes* (I go **to** Italy this month) to indicate a future motion event. On the other hand, if I say *Llegamos hasta la frontera entre Italia y Francia* (We got **up to** the border between Italy and France), I am also referring to a telic event but one that is more delimited in the sense that it describes an absolute endpoint (Trujillo 1971).

Let us consider an example of *a* that denotes directionality. The example below is taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

(17) Salimos del río dirigiéndonos **a** la fragata inglesa Gran Duke [HEADING
TO]

The composite structure *salimos del río dirigiéndonos a la fragata inglesa* (We got off the river heading **to** the English frigate) evokes a sequential scanning in which there is a change of location and ongoing motion toward the goal, here the English frigate. The TR, here the group of people, is approaching the LM, the Gran Duke English frigate.

⁸⁰ For an overview on *telicity* see Radden and Dirven (2007: Ch. 8).

At this point, I want to mention the internal structure of the Direction parameter in that it is constituted by the image-schematic structure of {SOURCE-PATH-GOAL}, along with concepts such as *intentionality* and *futurity*. In (17), we can observe how the TR (the group of people) is approaching its LM (the English frigate): the TR is going through a path to reach its goal (Direction is also present in (18) below, but stationary – the path is the visual field whereas the goal is the visual target). The notion of intentionality, on the other hand, is reflected in the willingness of the group of people to reach the place they want to go to. That concept becomes activated whenever the TR of *a* manifests a volitional character – that is – the TR being an animate entity.

The last concept that lies in the internal structure of Directionality, is the one of futurity. Futurity is a temporal concept that is consonant with the forward motion of the transience types of *succession* and *anisotropic*: time never goes backwards – it is in a constant flow. This convergence between space (i.e., forward motion) and time (i.e., time continuity) provides substantial support for the correlation between futurity and the fulfillment of an expectation like reaching the English frigate in (17) – such an example, shows that intentionality and futurity go hand in hand when it comes to future plans and situated action.

Now consider an example in which Directionality is related to the vantage point of a person from where she can appreciate things such as landscapes:

(18) Localidad conocida por su centro de desintoxicación con vistas *a* la playa.
[VIEW]/[DIRECTION]

In (18) above, we can observe a simplex atemporal behavior of *a* in that it conveys a static scene. Note that in the summary scanning evoked by the composite structure *con vistas a la playa* (English *with views to the seaside*), the parameter of Directionality is the one that receives primary activation since the location of the building makes it face to the seaside. Directionality is reflected in the experiential correlation between the vantage point of a person (i.e. in the balcony), and the attentional focus (i.e. seaside). The plural noun *vistas* stands for the fact of being appropriately located in a certain place and/or angle, to fully appreciate something such as the blue sea. In (18), the profile of *centro de desintoxicación con vistas* elaborates the TR of *a*, whereas the profile nominal *la playa* elaborates its

prepositional landmark. Trajector/landmark alignment in this case is characterized by a TR that is stationary and facing toward its LM.

The Spanish *a*, as mentioned above, can sanction usages in which futurity and intentionality are accessed through the parameter of Directionality, as shown in the corpus example below:

(19) jouuuuuuu mañana me voy *a* la playa hasta el día 30 [FUTURE EVENT]

(jouuuuuuu tomorrow I'm going *to* the beach until the 30th)

The speaker in (19) probably uttered the expression above at her place lying on bed while watching TV. However, Directionality receives primary activation because the construction in (19) points to a future event. It follows that Directionality is not just a matter of spatio-conceptual structure, but also temporal structure. In the case of future plans, Directionality is concerned with upcoming events that can be apprehended via processes such as (*embodied*) *mental time travel*.⁸¹ On the contrary, when recalling past events, Directionality goes in the opposite direction (backwards) since we recapitulate events (also) through embodied simulations but which, nevertheless, are qualitatively different because recapitulation of events is mainly subject to long and short-term memory. On the other hand, embodied projections into possible future scenarios might be regarded more as an imaginative feature that is (also) based on encyclopedic knowledge: we can indeed imagine situations we have never gone through.

As put above for the case of English *to*, there is an experiential correlation between future events and the fulfillments of those events. These types of correlations, in turn, might allow the Spanish preposition *a* to function as a future marker. The notions of Intentionality and Futurity should be considered as sense-extensional units of the parameter of Directionality since they do not constitute the core of the conceptual basis of *a*. We can observe in (18) that these two notions are not present: the composite conception in (18) evokes a static

⁸¹ It is important to highlight that the adverb *mañana* (*tomorrow*) in (19) is a *space builder* (Fauconnier 1994) in that it provides the temporal structure to set up the scene with the composite structure evoked in *voy a la playa* (*I'm going to the beach*). The preposition *a* contributes to the embodied projection into near future events and it does so by profiling the {SOURCE-PATH-GOAL} image schema.

scene in which the building is apparently facing the seaside; this, in turn, makes the parameter of Directionality the key component to apprehend the relation that *a* establishes between the building and the seaside view.

So far, we have seen that *a* behaves similarly to its English equivalent *to*. Both manifest the phenomenological characteristic that their TRs are oriented toward their LMs. Another parameter that they share is the one of Location, and this is evidenced in the following *Spanish Web 2011 (esTenTen11, Eu + Am)* passage:

(20) Para comenzar a utilizar Screencast solo debemos dirigirnos a la página web y hacer click en el botón rojo, ubicado *a* la izquierda
[LOCATION]

According to the *DLE*, *a* denotes a situation of something or someone. In (20), the relational profile of *ubicado* (located) elaborates the TR of *a*, whereas the prepositional landmark is elaborated by *la izquierda* (the left). This locative function is more specific than say, the one below:

(21) A la salida, en el hotel Miguel Ángel, esperaba el embajador Ulf Hjertsonsson para la notificación oficial de Suecia
[CO-LOCATION]

We can observe from the examples (20) and (21) above, that the preposition *a* is characterized by exhibiting a considerably wide locative function. For instance, compare *A la salida* (**at** the exit) to *A la derecha* (**to** the right). The former locative function is more schematic than the latter.

As evoked in (21), *a* not only can sanction the [LOCATION] sense, but also the [CO-LOCATION] one. The composite structure *a la salida* (**at the exit**), evokes a spatial scene in which the TR (at a higher levels of organization), here the ambassador Ulf Hjertsonsson, is co-located with respect to its LM, here the exit of the Miguel Ángel Hotel: the location is conceptually wide in the sense that it exhibits a fairly high degree of schematicity (i.e. coarse-grained), opposed to the higher degree of specificity evoked in (20).

The preposition *a* also shares with English *to* the capacity to sanction the [EVENT] sense. As pointed out earlier, there exists a deep conceptual link between locations and events. Events then, must be understood as being constituted by temporal structure (i.e. conceived time)

which is interwoven with spatial structure in the form of things and locations. This conceptual link motivates the emergence of the [EVENT] sense, as in (9) above. Consider a *Spanish Web 2011* (*esTenTen11, Eu + Am*) example of this sense:

(22) El juez le declara culpable de asesinato y es sentenciado *a* muerte
[EVENT]

Like in (9) above, example (22) sanctions the [EVENT] sense. This sense, along with all the rest of the senses presented in this research, should always be understood as *situated* due to the highly important role of context and inference in the process of linguistically mediated meaning construction. The composite structure *sentenciado a muerte* (*sentenced to death*) in (22) (as in (9) above as well), might have been uttered in court by the judge. Note how the semantics of such a construction loses its factual meaning if it is uttered by a person's friend as a joke. In other words, some usages of the [EVENT] lexical concept are deeply linked to the idea of social power and/or influence; for instance, the power of a judge to sentence a criminal to death, or the less rigid social power that parents have upon their kids, like when mom says “¡*a comer!*” (*lunch time!*) as a sort of command that everyone must come to the table and have lunch.⁸²

The proto-scene of *a* might be understood similarly to the one of English *to* (see figure 5.1 above). However, the Spanish preposition *a* is more “flexible” since it can sanction senses that English *to* cannot, and this might be due to the locative relation of TR and LM. I suggest that the status of the TR and LM of *a* is different from the one of *to*. Moreover, it seems that the prepositional landmark of *a* does not have a higher-than-usual status – thus – its prepositional landmark is generally *not* over-highlighted as the LM of *to*.

One example of these differences in the trajector/landmark alignment that structures the proto-scene of *a* was shown in (21), in the fact that *a* allows a wider location in space, which is compatible with English *at*. A second difference might be what I call the [INSTANTIATION] sense. When this use type is sanctioned, the prepositional landmark is

⁸² Linguistic reference must be understood as a *social act* within a joint attentional scene. Joint attentional scenes provide the intersubjective context in which symbolization takes place (see Tomasello 1999: Ch.4).

conceptualized as an instantiation of a type (following Langacker 1987, 1991, 2008). Consider the following *Spanish Web 2011 (esTenTen11, Eu + Am)* example:

(23) busco **a** hombre sumiso, de buen nivel social.
[INSTANTIATION]

(I'm looking *for* a mild man, with a good social level)

The composite structure in (23) above has possibly been uttered by a person who is looking for a mild man (with a good social status) probably to take control over him. Note that the prepositional-landmark element *hombre sumiso* is the type of man (even though it is a vague instantiation of a type) that the subject in (23) is looking for – hence, her/his goal. This vague instantiation of the man type makes the prepositional landmark of *a* become a member of a more specific category (i.e. subordinate level).

The preposition *a* can also convey modes of action such as *a pie* (**on** foot), *a caballo* (**on** horse), and *a mano* (handmade). According to the *DLE*, *a* denotes manner of action. Consider a corpus example taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

(24) Más de 700 jinetes **a caballo** y 72 hermandades, incluidas sus correspondientes carretas, participarán este próximo fin de semana en la tradicional Romería al Cerro de los Ángeles de Getafe. [MANNER OF MOTION]

For present purposes, we will focus on the composite structure *Más de 700 jinetes a caballo* (over 700 riders **on** horseback), in which the profile of *Más de 700 jinetes* (over 700 riders) elaborates the TR of *a*, whereas the noun *caballo* (horse) elaborates the prepositional landmark. Note that in this type of relation, TR and LM are in contact with each other: the parameter of Contact, then, becomes prominent and is essential for the correct understanding of the partial composite conception shown above – the riders must be in contact with their horses, otherwise they could not ride them. Also note that the composite structure *a caballo* (on horse) does not necessarily see the LM as primary goal, nevertheless, it profiles it. This might be due to the schematic trajector/landmark alignment of *a*, whose landmark sometimes is not conceptualized as a goal, opposite to the case of *to* shown above in which its prepositional landmark is generally characterized as a goal.

Another conceptual feature of *a* has to do with the notion of *animacy*. Animacy is generally present in the prepositional-landmark elements of *a* in many everyday usages that involve verbs such as the infinitives in cases like *vamos a bailar/comer/comprar/* (we are going **to** dance/eat/buy). However, when animacy is not present, there are cases in which *a* has to be accompanied with the article *la*, if the prepositional landmark is female, like in *vamos a la discoteca* (let's go **to** the disco); and with *al* (*a+el*) in the case of masculine LMs as when Spanish speakers say *vamos al parque* (let's go **to** the park).

It is important to mention at this point that the animacy showed by the prepositional-landmark elements of *a* is a tendency and should not be interpreted as a rule. There are exceptions such as in an utterance that involves animate nominals like *Luisa fue **al** doctor ayer* (Luisa went **to** the (male) doctor yesterday), as well as in *Luisa fue **a la** doctora* (Luisa went **to** the (female) doctor yesterday). One could easily say about these utterances that the notion of animacy in the prepositional landmark of *a* is expressed by *doctor*. However, *a* has to be accompanied by the masculine definite article *el* and get contracted into *al* in these cases, due to the special type of unique reference expressed by these examples; in the case of a female LM, there is no contraction but addition of the female definite article *la*. We can observe then, that the use of the articles, in the case of *el* causing a grammatical contraction, makes permissible the elaboration of animate landmarks. The grammatical contraction, however, is not entirely due to conceptual fusion, but to phonological elision of *e* in rapid speech (*a + el = al*) since the elision still allowed the recognition of the two elements contracted; this is not possible in *a la*.

A conceptual parameter that we could call Instantiation, is present in both the masculine and feminine definite articles. The instance in this case is any person with this function (functional framed uniqueness [Radden and Dirven 2007: Ch.5]).

As seen above, the animacy factor of *a* should be understood as having correspondences with the profile of some prepositional-landmark elements. Inanimate entities can also elaborate the prepositional landmark of *a*, as in *Voy al cine* (*I go to the cinema*). In these cases, there is no activation of Animacy on the LM (see figure 5.4 below). Hence, the preposition *a* exhibits semantic tendencies with both animate and inanimate things.

We have seen thus far that many spatial usages of *a* are equivalent to English *to*, along with other prepositional meanings such as the ones of *for*, *at*, *by*, and *on*. However, there is more to say about the Spanish prepositional vehicle *a*, and this is concerned with its *personal* use, which apparently has no English equivalent. To illustrate, consider the corpus example below:

(25) Cada vez que veo *a* Juan Ferrer se produce una previa extraña simbiosis entre ambos. [SEE]

The composite structure *Cada vez que veo a Juan Ferrer* is understood in English as *Every time I see Juan Ferrer*. The relational unit *a* then serves as e-site in which the TR corresponds to the clause *Cada vez que veo*. On the other hand, there is a correspondence established between the prepositional landmark of *a* and the profile of the nominal *Juan Ferrer*. The resulting trajector/landmark alignment highlights some parameters such as Directionality, Instantiation and Animacy. There is a clear orientation or direction when we see people (eye tracking): our vision must focus to perceive the main figure, so we have to be facing the target. Instantiation, as shown in (23), is a characteristic based on a selective operation and is also present in (25) in the sense that there is only one Juan Ferrer, at least for the speaker, that makes her/him feel that there is symbiosis between them. Finally, Animacy is a parameter that is generally manifested by the prepositional-landmark elements of *a* (as shown above), especially in its personal use type, whose LM is constituted by a specific person or persons.

The last spatial sense I want to present, in this non-exhaustive list, is the one of [DISTANCE], which similarly to English *to*, allows us to determine the final part of a temporal or spatial interval. According to the *DLE*, *a* indicates the end stage of a spatial or temporal interval existing between two things. Consider the example below (taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*):

(26) Estos son los pasos: 1. Doblar el papel por la mitad, *de esquina a esquina*, y otra vez también volver a doblarlo por sus esquinas. 2. Abrirlo y cortar por las líneas dobladas hasta la mitad de cada una. 3. Pintar los triangulitos como cada niño quiera. [DISTANCE]

In (26) we can observe a construction that is similar to English *from...to* in the composite structure *de esquina a esquina* (**from** corner **to** corner). The *from...to* construction, equivalent to the Spanish *de...a*, evokes a beginning and an end of a concrete or abstract thing or event. To conceptualize such a spatial or temporal magnitude, the preposition *a* (equivalent this time to English *to*) determines the end part of the {SOURCE-PATH-GOAL} schema, which is clearly activated under this linguistic context: the TR of *a* in this case meets its prepositional landmark since the instructions in (26) say that we have to fold the paper from corner to corner (*doblar el papel por la mitad, de esquina a esquina*). It follows that the two parameters that receive primary activation are the ones of Directionality and Contact. The very act of folding the paper implies directionality; once the paper is folded, each paper's corner gets into contact.

Figure 5.4 below depicts the conceptual basis proposed in this dissertation for the Spanish preposition *a*:

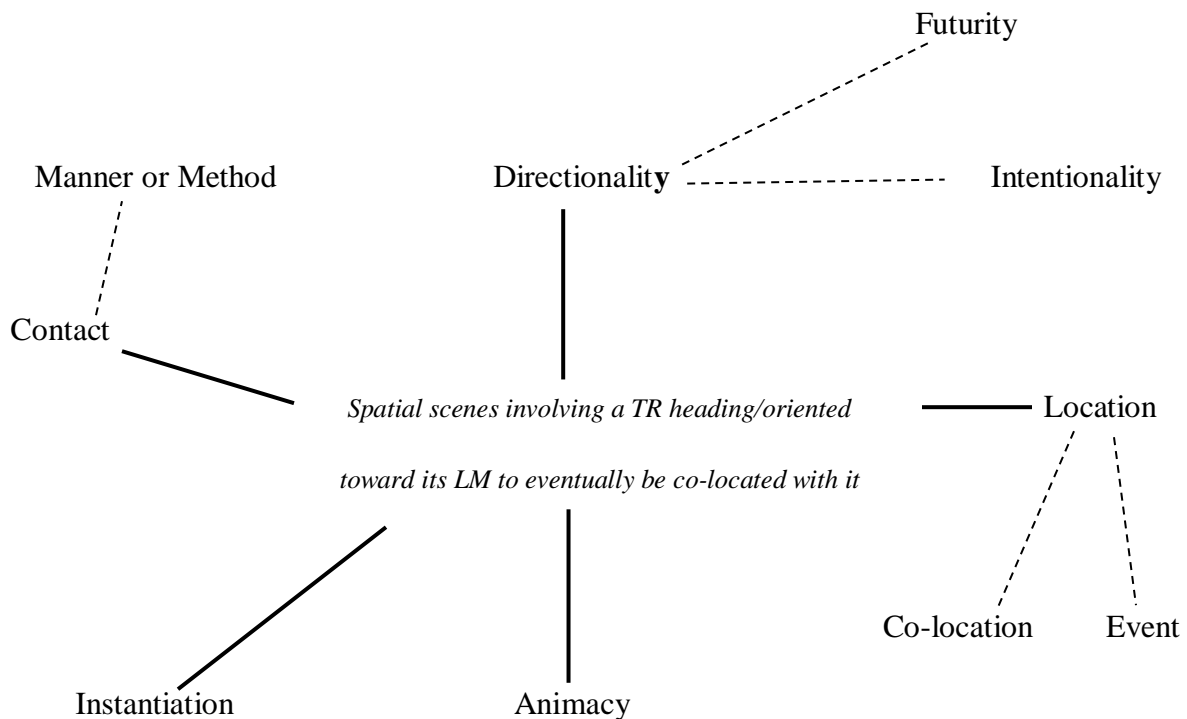


Figure 5.4. Parameters of the Spanish preposition *a* and their relationship with sense-extension units

Figure 5.4 above depicts the conceptual basis of *a*. The parameters represent what I think are the main semantic components of the conceptual basis. The dashed lines indicate semantic extension. This gives rise to new semantically related sense-extension units.

The parameter of *Directionality* could be considered the core semantic value within the conceptual basis of *a* due to its essential role in the proto-scene. From this parameter there are, at the very least, two semantic extensions which I gloss as *Futurity*, and *Intentionality*. Both sense-extension units are, including *Directionality*, similar to the *Orientation* parameter encoded by English *to*; this, in turn, explains why *a* is used as equivalent for many use types of *to*. However, the sense-extension units of *Futurity* and *Intentionality* exhibit subtle conceptual differences with respect to *Futurity* and *Primary goal* (from which *Intentionality* is a sense extension) in *to* (see figure 5.3 above). In addition, the *Primary goal* parameter is absent in the conceptual basis of *a* since its LM does not generally exhibit a higher-than-usual status – that is, it is highlighted less frequently compared to the LM of *to*. It follows that *Intentionality* is derived from *Directionality* rather than from *Primary goal* as in the case of English *to*. In sum, I propose the sense-extension units of *Futurity* and *Intentionality* as functional elements that emerge from the core parameter of *Directionality*.

The next parameter is *Location* and is also prominent in the conceptual basis of *a* since it is an active conceptual structure that is present in the proto-scene of *a* (shown in italics in figure 5.4 above). As seen above, the Spanish preposition *a* can cover a wider spatio-conceptual spectrum (including temporal location) compare to the English *to* – this wider locative function is in fact represented in examples (20) and (21) in which the [LOCATION] and [CO-LOCATION] senses are sanctioned respectively. In the English language, the prepositions *to* and *at* would be needed to sanction these two senses, respectively. Such corpus evidence, in turn, substantiates the conceptual import of *a* regarding its spatial distribution compared to the one offered by *to*: both can sanction the [LOCATION] sense but only *a* can sanction the [CO-LOCATION] sense. It follows that the parameter of *Co-location* emerges as a semantic extension of *Location*. As previously mentioned, there are solid reasons to posit that semantic extension is due to the prevalent role of the *trajector/landmark* locative alignment in the proto-scene of *a*. On the other hand, the *Event* sense-extension unit, as in the conceptual basis of *to*, is the other semantic extension of *a* that comes from the *Location* parameter. This extension, in turn, is attributed to the correlation existing between a place, and the event that occurs at that location.

Animacy and Instantiation are also parameters that highly contribute to the unique polysemous behavior of *a*. As examples (23) and (25) show above, *a* can be used when a person is looking for someone else, as in (23), and when a person is just seeing or staring at someone else, as in (25), among other use types of *a* in which the parameters of Animacy and/or Instantiation get activated. Note that in both examples above, the prepositional-landmark elements of *a* are instances of the type *human being*. Such instances in turn, are based on both Instantiation (i.e. a person's name) and animacy (i.e. the fact that persons are living things).

The last parameter that constitute, at the very least, the conceptual basis of *a* and which is also shared with *to*, is the one of Contact. However, the semantic extensions that might emerge from Contact are not the same for each preposition. In the present case, the Contact parameter of *a*, apart from encoding the [ATTACHMENT] sense just like *to* as in *pegaré la foto a la muralla* (*I'll glue the picture to the wall*), it can also denote manner of action or method. A method is understood as the way people act to get what they want, as in *a golpes* (*by hitting*). Manner of action is mainly related to transportation, as evidenced in example (24) wherein *a* sanctions the [MANNER OF MOTION] sense. Manner and method (along with attachment, even though it is not shown in the conceptual basis of *a*) are then considered semantic extensions that come from the Contact parameter. The very nature of the motivation behind these semantic extensions might lie in the complexities of the trajector/landmark alignment that is at the core of the conceptual basis of *a*. On phenomenological and/or philosophical grounds, we can say that there is an experiential correlation between the functional-actioning character of manner of motion such as *a pie* (*on foot*) or *a caballo* (*on horseback*), methods such as *a golpes* (*by hitting*), and the image-schema of {CONTACT}. Such an experiential correlation, along with the conceptual qualities of the trajector/landmark alignment of *a*, are what allow this preposition to sanction these senses.

If we take a look at all the corpus examples of *a* shown thus far, we can effectively interpret how different sense activation – a.k.a. polysemy – works. For instance, example (17) sanctions the [HEADING TO] lexical concept which is jointly conveyed by the composite structure *dirigiéndonos a la fragata* (*heading to the frigate*). According to the conceptual

basis for *a* proposed above, the parameters that are most directly involved in (17) are Directionality and Location (Animacy might receive secondary activation). Note the flexible patterns that parameters exhibit in that they conceptually adjust themselves to context: both examples in (17) and (18) activate the parameter of Directionality. However, in the former direction involves motion whereas in the latter it is understood as perspectival (visual) orientation (e.g. a person standing looking at the sea). We can also find in (17) the activation of the Intentionality sense-extension unit which has its roots in the sensory-motor activity of navigating through space in order to accomplish our goals. Example (18) sanctions the [VIEW] lexical concept since the composite structure *con vistas a la playa* (with views *to* the seaside) evokes a certain location from which a person can appreciate the sea. There is primary activation, at the very least, on the parameters of Directionality and Location which jointly allow us to conceptualize a vantage point, a visual target, and the direction in which the subject must look to see the target.

Example (19) above sanctions the [FUTURE EVENT] sense. This sense mainly emerges due to the cognitive ability of mental time travel.⁸³ The composite structure *me voy a la playa* (I'm going *to* the beach) evokes a speaker's plan which points to a future event – that is, the construction is uttered within what James ([1890]/1950) refers to as *nowness* but points to an upcoming event. For that projection to take place, there are some parameters within the conceptual basis of *a* that get activated and therefore, collaborate to the embodied simulation process.⁸⁴ The parameters that receive primary activation are Directionality and Location. Directionality in (19) encodes the {SOURCE-PATH-GOAL} schema in that the passage of time can be understood as a line that moves forwards (i.e., the arrow of time [following Eddington 1928]).⁸⁵ However, the part of the schematic structure that most directly participate in the construction – its active zone in current parlance – is the end of the “temporal path”. This stands for the moment the speaker in (19) will reach the seaside. Note how the semantic extension of *Futurity* is motivated (and substantiated, considering

⁸³ For details on mental time travel see Corballis (2011: pp. 81-127).

⁸⁴ For full details on embodied simulations see Bergen (2012).

⁸⁵ Recall that even though time does not literally flow in any direction, the schematic temporal structure that emerges from the succession transience type (earlier/later temporal relation), corresponds with the conceptual content of the metaphor PASSAGE OF TIME IS FORWARD MOTION.

how space and time complement each other) by spatial scenes that involve objects undertaking forward motion – thus – there is an experiential correlation between forward motion in space, and transience (the hallmark of time). The second parameter that receives activation in (19) is the one of Location since the speaker can imagine herself being in other place in a near future. Being in other place means to encounter or see new things – hence, the Location parameter gets extended in order to conceptualize the event itself, which is going to the beach. Example (20), on the other hand, sanctions the [LOCATION] sense – hence, there is primary activation of the Location parameter. The composite structure *ubicado a la izquierda* (located **to** the left) also involves Directionality. Such an activation provides a more specific location of the main attentional figure, here the red button (*botón rojo*).

Example (21) sanctions the [CO-LOCATION] lexical concept, which is a sense that is usually encoded by the English preposition *at*, but which, nevertheless, is equivalent to some usages of *a*. The locative function of the composite structure *a la salida* (**at** the exit) in (21), allows us to co-locate an attentional figure with respect to a reference object. Primary activation, then, goes on the parameter of Location, a parameter that in the case of *a*, and as opposed to English *to*, can cover a wider spatial organization and this is reflected in the fact that conceptual activation spreads onto Co-location.

Example (22) sanctions the [EVENT] sense. The composite structure *sentenciado a muerte* (*sentenced to death*) indicates a future event regarding a person's fate. The parameter that receives primary activation is Directionality which then spreads onto Futurity since the construction in (22) refers to a future event that a person must meet. I think that Instantiation receives activation as well since we refer to an instance of a type of sentence, which in the case at hand has to do with death.

There is also primary activation of the Instantiation parameter in example (23), which is evoked by the composite structure *busco a hombre sumiso* (I look **for** a mild man). The speaker in (23) is on the lookout for a specific type of man. Animacy and Directionality may receive secondary activation. As pointed out above, the main conceptual import of *a* in the construction in (23) is provided by the Instantiation parameter even though in (23) the

instance – that is, the possible candidate who is a member of the MILD AND WEALTHY MEN category, profiles an undefined instance of a type.

Examples (24) and (25) sanction the [MANNER OF MOTION] and the [SEE] lexical concepts, respectively. In the former, the composite structure *Más de 700 jinetes a caballo* (over 700 riders *on* horseback) evokes a conceptual relation in which TR and LM must be in contact – hence, the Contact parameter receives primary activation. However, the parameter of Contact manifests functional consequences in that the LM provides support to the TR (e.g. horse riding): contact is a requisite to undergo motion on horseback. In the latter example in (25), we can observe the *personal* use type of *a* which has no English equivalent and is used when the direct object is one or more people. In (25) above, we can observe the activation of three parameters which might shed light on the things Spanish speakers pay attention to at the moment of using the personal use type of *a*. In the composite structure *cada vez que veo a Juan Ferrer* (every time I *see* Juan Ferrer), the parameters that participate most directly in the composite conception are Directionality, Animacy, and Instantiation. As mentioned earlier, Directionality has to do with the visual trajectory. I suggest that Animacy and Instantiation are the key parameters in order to properly understand the personal use type of the Spanish *a*. Instantiation allows us to specify the people we are referring to, whereas animacy is considered an essential feature of human beings. Note however, that people who are dead can also be referred using the personal preposition *a*, like if someone said *ayer fui al cementerio a ver a Juan* (yesterday I went to the cemetery *to see* Juan). It follows that the parameter of Instantiation (along with Directionality) might be more relevant than Animacy for the correct understanding of the personal use type of *a*.

Finally, example (26) sanctions the [DISTANCE] sense in which the composite structure *doblar el papel por la mitad* (fold the paper in the middle) profiles the folded paper. However, this partial composite conception is then integrated with *de esquina a esquina* (from corner *to* corner) which provides an adverbial function since it denotes the “*how to perform an action*”. The Spanish preposition *de* in the *de...a* Spanish construction (English *from... to*), evokes the beginning of a spatial distance: it begins a path. On the other hand, *a* denotes the end of that path. Note how in (26) there is motion of the TR (*the paper*) toward

its LM (*the paper's corner*) to the point they meet – hence, there is activation of the Directionality and Contact parameters.

In this section we have approached the spatial organization exhibited by the Spanish prepositional vehicle *a*. This organization is motivated by its proto-scene which provides the conceptual content for parameterization to take place. The proto-scene of *a* is characterized by a TR that is oriented toward and/or approaching its LM to eventually become co-located with it. This sort of trajector/landmark alignment in turn, might shed light on the highly polysemous character of *a*. The conceptual basis for *a* proposed above, is an attempt to understand in a better and easier way how spatio-conceptual structure becomes parameterized for linguistic communication. Parameters are then in a continuum with their proto-scenes in that abstractions of specific spatial arrangements give rise to idealized spatio-functional configurations, like the ones exhibited by *a* and other prepositions analysed in this research. Hence, parameters are essential for their proto-scenes to be structured, but at the same time they must become linguistically packaged.

The conceptual basis for *a* depicted above, shows how conceptual parameters are the result of abstractions of spatial arrangements that we encounter since the early stages in life. Children first acquire the conceptual basis in its most prototypical stage, that is, non-linguistically through joint attentional scenes (Tomasello 1999, 2003) and then they acquire the linguistic symbol (e.g., prepositions) which embodies (through the process of parameterization) the conceptual character of a given spatial arrangement. With time and practice, children eventually fully master all the senses or lexical concepts that a given preposition can offer.

The conceptual phenomenon of polysemy might also be understood using the notion of conceptual basis, along with processes such as highlighting and profile/active-zone discrepancy. The conceptual bases proposed so far, allow us to see how parameters get activated differently depending on the linguistic context prepositions are placed in, and the activation route that there might be in cases of semantic extension.⁸⁶ This understanding, in turn, might shed light on how English and Spanish speakers apprehend spatial

⁸⁶ As shown above, spatial lexical concepts also activate sense-extension units for their proper realizations. This in turn, blurs the traditional and rigid distinction between literal and figurative conceptions.

arrangements, and it may also offer a new and dynamic view to English and Spanish teachers and students on how spatial language works.

5.2.1 Non-spatial domains of *a*

Non-spatial conceptions, as seen throughout this research, are ultimately motivated by the parameters that constitute the conceptual basis of a given preposition. The same parameters can acquire a spatial or a non-spatial realization of its semantics. To see this point, consider a *Spanish Web 2011 (esTenTen11, Eu + Am)* corpus example that shows how the Directionality parameter is used figuratively:

(27) Estamos dirigiéndonos *a* los agentes económicos y sociales más representativos
de la Región [COMUNICATION]

In (27) the composite structure *Estamos dirigiéndonos a los agentes* (literally *we are heading to the agents*), profiles a TR that is heading toward its LM. However, *dirigiéndonos a*, rather than being taken literally as *heading to*, should be paraphrased as *establishing communicative relations with* – hence, the composite structure *Estamos dirigiéndonos a los agentes* must be interpreted in English as *We are sending a message/addressing to the agents*. It follows that there is a metaphorical thinking behind such a Spanish idiomatic expression as *dirigirse a alguien*, which roughly means *to communicate something to someone*. This Spanish expression has unit status (in the sense of Langacker 1987) and is motivated by the fact that when a TR is heading to its LM, there is one moment in which they meet. This scene is analogous to a person who wants to approach another to tell her/him something. To perform such an action, the person must head to the right direction. Going on the right direction allows the speaker to meet the person she wants, and it also allows the speaker to achieve her goal, which is to convey the information she wanted to. In sum, in example (27) the parameter that receives primary activation and gets figuratively extended is the one of Directionality since it contributes to the semantics that a message is being transferred from the group of people to the economic and social agents.

Let us now consider another figurative use type of *a*. This time, the figurative extension comes from the parameter of Instantiation, as shown below. The following example was taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)* corpus:

(28) ahora hay nuevos mapas multi jugador recoloreados, sólo *a* 10 dólares el pack
de 5 [PRICE DESIGNATION]

According to the *DLE*, *a* precedes price designation. In (28) the composite conception evokes the price of the new multi-player maps, which is 10 dollars. Note how the price designation is conveyed by the composite structure *sólo a 10 dólares (only for 10 dollars)*. The profiled nominal *10 dólares* elaborates the prepositional landmark of *a*, whereas its TR is elaborated by the nominal *el pack de 5*. The adverb *sólo (only)* functions as quantifier for the prepositional landmark. This adverb evokes a mental space (within the adequate script) that has to do with an exact size or amount of something (money in this case). In this example, the relation between TR and LM is driven by Instantiation, one of the parameters that constitutes the conceptual basis of *a* and which I think receives primary activation in (28). As we saw above, particularly in (23) and (25), the Spanish preposition *a* can specify or instantiate its LM: it can profile an instance of a type. The type in (28) might be PRICE and instances of it can be 1, 2, 3, or more dollars.

The metaphorical understanding of the [PRICE DESIGNATION] sense comes from more mundane usages of *a* in which Instantiation is prominent and therefore achieves primary activation such as in (25) above. If one says *ayer vi a Pedro* (“yesterday I saw Pedro”) or *busco a alguien que me quiera* (“I’m looking for someone who loves me”), one specifies an instance of a type even though in the former utterance the level of specificity is higher than in the latter. Both are good candidates for instantiation; constructions such as the two above, serve as conceptual sources for figurative extensions like the one used for designating a price for things.

Now consider an example in which Instantiation is activated, along with more parameters such as Location. The sample below is taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

(29) Todos sabemos que la ciencia avanza, *paso a paso* consigue grandes innovaciones que nos alargan la vida. [PROGRESS]

According to the *DLE*, *a* indicates distribution or proportional counting. In the example above, we can observe how *a* jointly encodes this, along with the rest of the symbolic units in the Spanish idiomatic expression *paso a paso* (step *by* step). The idiomatic expression *paso a paso*, behaves similarly to the English expression *step by step*: they are used to refer to the fact that some progress on something is going on – one stage at a time until the whole task is complete. Note that the *paso a paso* idiomatic expression consists of a sequence (*path*) that leads to an end (*goal*). In (29), the scientific progress indicates the maximal discourse scope in which the idea that big innovations are acquired step by step is profiled. The scientific progress stands for the path whereas the innovations stand for the goal.

The figurative composite conception in (29) might be attributable to spatial scenes that involve, at the very least, directionality, location and instantiation. Directionality is understood temporally due to our very temporal concept of {EVOLUTION}.⁸⁷ There are also other structures such as the image schema of {SOURCE-PATH-GOAL}. Progress, as is widely and generally apprehended, implies moving forward rather than backwards or going up instead of down. The metaphor that might be involved in (29) is PROGRESS IS FORWARD MOTION.

The parameter of Location is also involved in the figurative conception in (29), in that it provides spatio-conceptual structure for the reification of spatial structure onto a non-spatial location. The composite expression *paso a paso* implies succession – hence, the location of a thing with respect to another in a path or sequence. Finally, we can observe that the last parameter that is apparently active in (29) is the one of Instantiation, and is reflected in the fact that each “step” of the *step by step* (Spanish *paso a paso*) idiomatic expression, is a *unique* step, period of time, or stage of a given procedure, that is different from the previous or the upcoming one.

Let us consider another figurative corpus example of *a* to see how the activation of parameters varies depending on the linguistic context:

⁸⁷ This temporal concept is primarily structured by the transience type of succession.

(30) Todo un lujo tener un profesional como él *a* mi lado
[SUPPORT]

The composite conception in (30) evokes the [SUPPORT] sense that the preposition *a* partly conveys along with the rest of the symbolic units. The composite structure *Todo un lujo tener un profesional como él a mi lado* is interpreted in English as *It's such a luxury to have a professional like him next to me* (or *on my side*). Of particular interest for the present analysis is the composite structure *a mi lado* (next to me/ *on my side*). Such construction profiles a relation between TR and LM that has to do with an over-than-average professional (TR) that is closely located to the speaker's side (LM). However, the seemingly locative function of *a mi lado*, is far from encoding physical proximity. Rather, it has to do with mental and professional support.

The experiential and motivational structure for this expression might lie behind humanly relevant scenes that involve closeness between two things that are located next to each other – a mundane spatial organization – serves as metonymic conceptual source (and this metonymy generalizes into metaphor) for non-spatial conceptions. It follows that the Location parameter is the one that receives primary activation and is figuratively interpreted in that it does not point to the fact of physical location but to psychological and interpersonal closeness. Moreover, we can observe a degree of schematicity in that *a mi lado* does not profile a specific direction (left or right for instance), rather, it profiles closeness between the TR (the professional) and the LM (the speaker in (30)) – they are within their *influence zone*. In sum, the parameter of Location gets figuratively extended by virtue of the experiential correlation between two objects in space that are closely located to each other, and two people that establish psychological and interpersonal closeness since they support each other and work together.

We can appreciate, then, that location of objects in space plays a central role as spatio-conceptual structure for the apprehension of non-spatial domains such as personal and/or psychological closeness between people. In addition, the parameter of Instantiation (along with Animacy, which is reflected in the LM) also receives activation since *mi lado* (*my side*) is an instance of the type *lado*. Now the metaphor that could be at play in (30) is SUPPORT IS THINGS ON ONE'S SIDE.

As shown in the examples of figuration above, the Spanish preposition *a* has a highly polysemous character. This is reflected in the many use types it can sanction. This highly polysemous character of *a* overrides the semantics of *to* in that *a* is equivalent to many of its senses, but *a* goes beyond because it can also sanction some instances that are evoked by other English prepositions such as *by*, *on*, *for* and *at*. Furthermore, the Spanish preposition *a* is also characterized by exhibiting the personal use type as in (23) and (25), which has no English equivalent.

As previously mentioned, the two sections above, which were concerned with spatial and non-spatial conception, are not intended to provide an exhaustive list of all the possible senses of *a*, nor do they strictly posit a rigid difference between literal and figurative conceptions. The former point, from which I agree on with Taylor (2006), has to do with an encyclopedic view of word meaning rather than a dictionary-like view (see Langacker 1987: 154-166). To try to pin down all the possible meanings that any lexeme may have is an ill-conceived quest for lexical semantics. Under my perspective as a cognitive linguist, this would downplay our human capacity to create meaning based on symbolic representations. The conceptual bases proposed in this research – contrary to the dictionary-like view – are intended to comprehend better and more clearly how conceptual processes that are triggered by linguistically mediated communication such as elaboration and extension, can take place. Regarding the literal/figurative language continuum, there are (many) cases that hinge in the middle, as for example the [FUTURE EVENT] lexical concept.

The next two sections of this analysis of *a* are concerned with its role as an infinitival complement, followed by its temporal behavior.

5.2.2 Complementation

I now briefly turn to show the conceptual character of *a* as an infinitival subordinator in complementation. Following Tyler and Evans (2003a) in their suggestions on the motivation of *to* in complementation, we may posit the idea of the role of *a* as an infinitival complementizer. This function may also be ultimately derived from the [EVENT] lexical concept. Such a hypothesis in turn, might be supported by the conceptual basis proposed for *a* in figure 5.4 above, which may shed light on the motivation underlying linguistic usage events that involve this preposition. It follows that complementation functions could

be understood as sense extensions from a more prototypical space-rooted meaning and be apprehended as a single category due to the broad range of phenomena it covers (Achard 2007).

To illustrate, let us consider a corpus example taken from the *Spanish Web 2011 (esTenTen 11, Eu + Am)*:

(31) el horno del obrador comienza *a* calentarse mientras las hermanas Clarisas
amasan harina, azúcar y huevo [START]

(the worker's oven starts *to* heat up/ *heating* up while the Poor Clares mix flour, sugar and egg).

In (31), we can observe how *a* jointly contributes to the sanctioning of the [START] sense. It is partly conveyed due to the nature of spatial semantics, which, in line with Sinha and Kuteva (1995), assumes a view of meaning construction as being distributed along all the symbolic units that make up a linguistic construction. In complementation particularly (following Givón 1980, 1990), the distribution of a complement form with the main verb it occurs with is understood as the motivational factor that links the semantics of that verb with the complement distribution.

As seen in figure 5.4 above, the conceptual basis of *a* has to do with spatial scenes that involve a TR that is oriented and/or undergoing motion toward its LM with the purpose of being co-located with it. In (31), we can observe that some characteristics of this proto-scene are present, particularly the sense-extension unit of Futurity (derived from Directionality) which in the case of *a* and English *to*, is a prominent feature. The sense-extension unit of Futurity (see figure 5.4 above) is the main semantic value in the clause *empezar a calentar* (*starts to heat up/ hitting up*) since *a calentar* elaborates a subpart of the verb *empezar*: it particularly specifies the “*what*” of the process. The verb *empezar* (*to start*), then, evokes a mental space of {BEGINNING} which is partially structured by the {PATH} image schema due to temporal evolution: if a person starts an action, this action has a beginning and an end stage. The {SOURCE-PATH-GOAL} schema in turn, conceptually underlies the parameter of Directionality. Once the mental space of {BEGINNING} is evoked, the relational profile of *a calentar* specifies a subpart of the process. Futurity is involved

because it evokes the process in which the oven's temperature reaches its adequate level to bake.

There are also two more sense-extension units that might receive (secondary) activation in (31) and these are the ones of Intentionality and Event. The former has to do with the volitional act of turning on the oven for a purpose such as bakery, whereas the latter gets activated due to the animacy that is required to turn on the oven and begin the heating up process (i.e., temporal evolution) in order to bake or do any other related activity within that particular scenario or script (in the sense of Schank and Abelson 1977) which might be glossed as WORKING IN THE BAKERY INDUSTRY.⁸⁸

I want to highlight that *a* apparently exhibits a sort of “one-viewing frame” – the locus of viewing attention (Langacker 1991). *A* can be construed as a complementizer just in one way as shown in (31), compared to the English infinitival and gerundive complementizers. The composite structure *el horno del obrador comienza a calentarse*, as pointed out above, can be interpreted in English as either with an infinitival complement as in *the worker's oven starts to heat up* or with a gerund as in *the worker's oven starts heating up*. This difference in construal represents a conceptual feature of the complementation category of the English language system that is not found in Spanish. For instance, while the English verb *start* can be lexically integrated with either complementizer as in the *BNC* corpus samples (32a) and (32b) below, the Spanish language uses only *a* as a complementizer.

(32) a. Tuckett gets badly scared and starts **running** for where he thinks his old friend Lucy Scarrott lives. [START]

b. I start **to** run across the grass, as fast as I can. They are chasing me [START]

Note how in (32a) and (32b) the verb *start* is integrated with a gerund and an infinitive complement, respectively. Even though both complements have an atemporalizing character since they combine with ungrounded structures and are not grounding

⁸⁸ It is important to mention that events do not require intentional participants, but only a subtype of events. Actions, as in (31) above, do require an agent, which is prototypically human and intentional. In these cases, we might expect activation of the Event sense-extension unit.

predications themselves (Langacker 1991:440), they are considered to exhibit *sameness in time* (Wierzbicka 1988) (also known as *temporal coincidence* ([Langacker 1991]) in the case of the gerundive complements, as in (32a), or *future orientation* (Wierzbicka 1988) in cases like the infinitive in (32b). Both complementizers are based on *summation* (following Langacker 2012b); however, summation in the *-ing* complementizer results in summary scanning whereas in the *-to + infinitive* construction, summation is related to a *suspension* of a sequential scanning: a profiled process at one level of organization is superseded by another at a higher level. This causes the former profiled process to be pushed to the background – hence, there is a cancellation of sequential scanning.

On the other hand, the preposition *a* does not seem to exhibit this fine-grained temporal feature. Consider the following corpus sample taken from the *Spanish Web 2011* (*esTenTen11, Eu + Am*):

(33) Empezaron *a* correr como locas. ¡¡¡¡Que felicidad!!!! [START]

In (33) the composite structure Empezaron *a correr como locas* has two English alternatives, (i) *they started to run like crazy* or (ii) *they started running like crazy*. This in turn, shows that *a* is the only option to linguistically encode these types of conceptual subordinations in Spanish. Furthermore, this amounts to evidence of relativistic effects in language and cognition in that Spanish speakers might conceptualize the complementation function of *a* as something that *always* points to the future: the future orientation predominates in *a* as a complementizer.⁸⁹ It follows that this only option for complementation does not allow Spanish speakers to linguistically encode the fine-grained distinction between *temporal coincidence* – the “happening-now” feature of *-ing* – and the “this-will-happen” feature or temporal-evolution character of *-to*.

5.2.3 Temporal domain of *a*

⁸⁹ Recall that the complementation function of *a* might be ultimately derived from the Event sense-extension unit. Futurity contributes with the temporal structure of a *future event* (i.e., mental projection). Note how Futurity can temporally range from an event that is about to happen as in *Estoy a punto de comer* (*I’m about to eat*), to an event that is located farther in time as in *Voy a Alemania el próximo mes* (*I’m going to Germany next month*).

Temporal conceptualizations of time, as shown so far, not only are apprehended using spatio-conceptual structure, but also schematic temporal structure. Space and time complement each other but they also differ since they are qualitatively different. For instance, when it comes to dimensionality (as seen in chapter 2), space is concerned with length whereas time has to do with duration. In other words, time is unique because its hallmark – transience – is something that space lacks: time always moves forward (unless people create a time machine to go back) whereas spatial navigation can take place in any direction (e.g., backwards, sideways, forward).⁹⁰ In sum, there is indeed space-time analogies and disanalogies that can be spotted at the conceptual and linguistic level (Langacker 2012a).

Let us consider an example of the temporal behavior of *a* to see how spatio-conceptual structure contributes to the conceptualization of time, which in turn, needs temporal structure for a complete apprehension of this domain:

(34) Opencor es una cadena de tiendas de conveniencia con 156 tiendas distribuidas por toda España, que tiene como principal característica su amplio horario de apertura de 8 *a* 2 de la madrugada. [TERMINAL POINT WITHIN AN EXPLICITLY DEMARCATED PERIOD]

In (34), we can appreciate how *a* denotes the end of a demarcated period in the composite structure *de 8 a 2 de la madrugada* (*from 8 till/to 2 in the morning*). The demarcated period, in turn, is partly structured by the {PATH} image schema: the Spanish preposition *de* (English *from*) is the one which initially triggers such a schema, whereas *a* is the relational unit that marks its end. This structuring might be driven by the primary metaphor DURATION IS LENGTH (Grady 1997). However, for the metaphorical mapping to take place, we also make use of additional temporal and spatio-conceptual structure.

⁹⁰ Recall that when we refer to this aspect of time – moving in a forward manner – we indeed use metaphor. However, the temporal evolution that broadly characterizes the three types of transience is based on phenomenologically real temporal experiences (as well as internal temporal mechanisms). Hence, transience is non-metaphorical. Temporal evolution is not necessarily seen as moving forward, nor past and future necessarily are seen as being behind and ahead, respectively. This latter case has been showed by Núñez and Sweetser (2006) in the Aymaran culture. To sum up, transience is the hallmark of the temporal domain, it is phenomenologically real and is absent in space.

For instance, we make use of our human ability to understand repeatable systems such as the 24-hour cycle, which constitutes our notion of what a day is. This specific type of temporal cycle ({DAY/NIGHT} cycle based on a 24-hour or 12-hour system) locates the target event (TE) and anchors it (with the help of an origo (O)) to a time-reckoning system in which time is *metonymically represented* by a clock face: the motion of the hands around a clock face is a metonymic representation of the elapse of time.

Furthermore, to understand this mensural cycle, we also make use of the extrinsic or absolute temporal frame of reference (t-FoR) (Evans 2013: Ch.6), which derives from the phenomenologically real experience of *duration*. The schematic temporal structure evoked by this t-FoR in (34) can be glossed as [TE FIXED TO AN RP WITHIN THE 12-HOUR SYSTEM]. The TE is the opening hours of the store, the reference point (RP) is *8 a.m. - 2 a.m.*, and the O (origo) is fixed as 00:00 since it is from where the count of this repeatable time-reckoning system begins.

If we take a look at figure 5.4 above, we can observe how some parameters get activated for temporal conceptualization. The first parameter is Directionality and is reflected in the temporal elapse – *from 8 a.m. to 2 a.m.* Direction in this sense is analogous to the transience type of *duration*: a temporal vector that always goes forward and never stops, but which nevertheless, can be demarcated by the *from...to* construction (the *de...a* construction in Spanish) where *a* denotes the end point within the temporal elapse existing between 8 a.m. and 2 a.m.

The second parameter that is most directly involved in (34) is the one of Co-location since we temporally co-locate the opening hours (TE) with respect to the temporal matrix (i.e., the 12- or 24-hour system), specifically within the demarcated period (RP) evoked in (34). This semantic extension in turn, might be underdetermined by the LOCATION IN TIME IS LOCATION IN SPACE metaphor. In addition, the preposition *a* also activates the Instantiation parameter since *8 and 2 de la madrugada* (*2 in the morning*) represent instances of a type, which is “time period”.

Finally, I want to remark the strikingly high level of similarity between examples (34) and (26) above since the same *de...a* Spanish construction is used for talking about space and time, respectively. This corpus evidence along with the present linguistic analysis intends to

put forward the idea that temporal conceptualizations are only partly supported and structured by spatial experience and representation because space and time are distinct at the experiential level.

Now consider another temporal lexical concept of *a*. This one has to do with less fine-grained periods within the {NIGHT/DAY} cycle. The example below was taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

(35) una fruta *a* la mañana con el desayuno, otra *a* media mañana o en la merienda
[MOMENT]

(one piece of fruit *in the morning*, then another *before midday or after lunch*)

The corpus sample in (35) shows how the preposition *a* can denote temporal location in that it refers to particular periods of the {DAY/NIGHT} unit. Once again, we can observe how this cyclical temporal unit is key for the understanding of the temporal semantics in (35) along with the transience type of *succession* due to its temporal structuring in the chain of events that characterizes temporal concept such as {DAY/NIGHT}.

There are two composite structures that provide *a* with the [MOMENT] sense. The first one is *una fruta a la mañana* and the second is *otra a media mañana*. In both composite structures the TR is the same (the piece of fruit) whereas the prepositional landmark is elaborated by “*early morning*” and “*mid-morning*” respectively.⁹¹

The semantic import of *a* in (35) can then be approached by applying the conceptual basis proposed in figure 5.4 above. I suggest that primary activation is attributable to the parameter of Location which then conceptually spreads onto Co-location and Event. There is a conceptual link between Location and the event-reckoning system that allows us to distinguish between the different episodes that constitute the {DAY/NIGHT} unit. That is, temporal concepts such as {MORNING}, {MIDDAY}, and {EVENING}, among others.

The first composite structure *una fruta a la mañana* has as its TE the very act of eating a piece of fruit. On the other hand, the prepositional phrase *a la mañana (in the morning)*

⁹¹ The Spanish adverbial expression *a media mañana* is roughly translated into English as *before midday* (and literally into “*to mid-morning*”).

serves as RP to locate the TE. In addition, the (temporal) RP requires an *origo* to anchor the TE to the transience type of duration within a repeatable event-reckoning system (a sort of calendar-like thinking). In this case, the *origo* corresponds to {MIDNIGHT}.

In the second composite structure *otra a media mañana* (*another (piece of fruit) at “mid-morning”*), the TE is the same while the temporal location changes due to a new prepositional element filling the RP slot. The temporal location evoked in *a media mañana*, is partly supported and structured by spatio-conceptual structure that comes from the location parameter (and the Co-location sense-extension unit). This is so because there is an inherent temporal structure that is evoked in linguistic constructions whenever temporal reference is established. In the present case, the schematic inherent temporal structure that is part and parcel of our human conceptual system might be glossed as [TE FIXED TO AN RP IN A REPEATABLE EVENT-RECKONING SYSTEM].

The last temporal sense of *a* that the present author wants to show, is concerned with the [AGE] lexical concept, and is structured by the extrinsic t-FoR since it is periodicity-based. To exemplify this sense, consider a corpus example taken from the *Spanish Web 2011* (*esTenTen11, Eu + Am*):

(36) *Su vida cambió a los 10 años.* Abandonó el colegio de su pueblo, Puebla del Prior, en Badajoz, para pasar al Colegio San José, en Villafranca de los Barros.
[AGE]

(Her life changed *at* the of 10. She abandoned the school of her town...)

The temporal lexical concept of *a* evoked in (36), can be distinguished from the [TERMINAL POINT WITHIN AN EXPLICITLY DEMARCATED PERIOD] and [MOMENT] senses even though they all emerge from the duration transience type – the extrinsic matrix that is employed to fix events in time independently of the subjective experience. In this case, the example in (36) is characterized by an open-ended event-reckoning system, which, following Evans (2013: 133), can be informally referred to as *linear time*. In (36), the TE, here the subject’s life change due to unknown reasons, establishes a temporal relation (by virtue of the preposition *a*) with the temporal RP which functions as LM, here *10 años*. The *origo* – that is, the initial point for setting the system in operation – starts at day 1 considering this is the

beginning of the subject's life (i.e., her day of birth): the point from which the count begins. The schematic temporal structure that underlies example (36) can be glossed as [TE FIXED TO AN RP IN AN OPEN-ENDED EVENT-RECKONING SYSTEM].

I think that the supplemental spatio-conceptual structure that contributes to a fully apprehension of the temporal conception in (36) above comes from the activation of the *Location* parameter, which subsequently spreads onto *Co-location*, as in the cases shown above. The parameter of Location shares conceptual features with some purely temporal structure in the conceptual system. These links in turn, may be guided by the metaphor LOCATION IN TIME IS LOCATION IN SPACE. The combination of these types of knowledge results in the domain of time being conceptualized as either event-like or time-based depending on the temporal tool that is used: calendars or clocks (i.e., cyclical and mensural temporal understandings that lie at the heart of the extrinsic t-FoR).

5.3 Summary

This chapter has focused on the English preposition *to* and Spanish preposition *a*. This set of prepositions, contrary to the previous case of *entre* as equivalent to the English prepositions *between*, *among*, and *amid*, exhibits less semantic overlap in terms of the semantic parameters that constitute each conceptual basis. This, in turn, might be due to the conceptual structuring of the trajector/landmark alignment in each preposition. A key conceptual feature of *to* seems to be the higher-than-usual status that is generally exhibited by its prepositional landmark. The LM of *to* is generally conceptualized as a primary goal. On the other hand, the prepositional-landmark elements of *a* need not necessarily be considered as primary goal. This difference in the proto-scene of each preposition, is reflected in parameterization – the process of the constitution of the conceptual parameters within a conceptual basis. As a result, the Spanish preposition *a* can sanction lexical concepts that are also partly triggered by English *at*, *for*, *on*, and *by*. Hence, *a* exhibits a highly polysemous character. Complementation was also briefly addressed and the main idea that can be extracted has to do with the role of the Event sense-extension unit as main motivational factor. Futurity turns out to be a key temporal unit to differentiating the infinitive from the gerund complement in the case of English *to*. On the other hand, *a* does not exhibit such a fine-grained temporal distinction between temporal sameness and succession or temporal evolution. Finally, the chapter finishes with some remarks on the temporal behavior of *to* and *a* by showing how spatio-conceptual and purely temporal structure interact in linguistic temporal conceptualizations. The conceptual metaphor LOCATION IN TIME IS LOCATION IN SPACE may underdetermine these correspondences.

Chapter 6: English *for* and Spanish *para*.

6.1 Spatial lexical concepts for *for*

I now turn to the English preposition *for*, which contrary to the preposition *to*, its prepositional-landmark elements do not generally achieve a higher-than-usual activation level. To illustrate this point, consider the corpus example below:

- (1) Once all nine barrels have been discharged the weapon is of no further use, although hopefully it will have done its job by this time, and your enemies will be running *for* the hills [HEADING TOWARD]

Note how in (1), the English preposition *for* acquires a similar reading as it does so the preposition *to* under some specific linguistic contexts such as the one evoked above. Such linguistic behavior, in turn, suggests that both prepositions designate a TR that is oriented and sometimes undergoing motion toward its LM. However, the trajector/landmark alignment in the proto-scene of *for* is driven by the notion of *oblique goal*, that is, the TR of *for* appears to be related to an ulterior purpose and is contingent upon reaching its LM (Tyler and Evans 2003a: 146). Due to the oblique character of the prepositional landmark of *for*, the landmark is not conceptualized as primary focus (as in the case of *to*). This *primariness* versus *obliqueness* in turn, allows us to distinguish conceptual differences, for instance in utterances like *running to the hills* compared to *running for the hills*: in the former the hills are apprehended as primary goal whereas in the latter they are seen as a *means* to an end rather than the end itself.

According to Tyler and Evans (2003a), the interpretation of the prepositional landmark of *for* as an *oblique goal* serves as previous step to achieve the ultimate purpose. There is a salient element of *intentionality* on part of the TR. For instance, in example (1) above, to run for the hills in order to escape shows a level of calculation and purposeful planning that goes beyond simply designating the hills as the end point. Intentionality seems to constitute a conceptual feature that is highly relevant and hence characterizes the trajector/landmark alignment of *for*.

The highly prevalent role of purposefulness of the TR of *for* is evidenced in sentences such as * *the ball rolled for the wall*, compared to *the ball rolled to the wall*. We understand a

ball as an inanimate entity whose movements are controlled by physical forces such as gravity. Its rolling cannot be construed as self-initiated in order to achieve a particular purpose. It is in this sense that *for* requires an intentional or purposeful TR – hence, it involves intentionality.

Consider below the proto-scene for *for*:

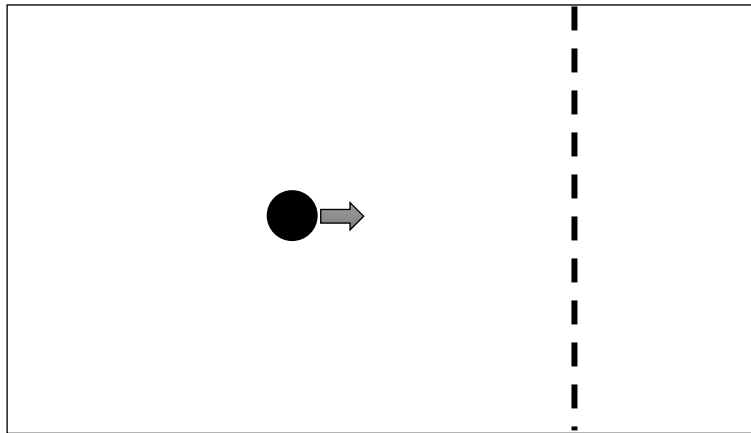


Figure 6.1. Proto-scene for *for* (Adapted from Tyler and Evans 2003a: 148)

As mentioned above, both prepositions *to* and *for* designate TRs that are oriented with respect to their LMs. However, the trajector/landmark alignment status associated with each preposition is different and the consequence of this is reflected in the functional elements associated with *to* and *for*. Whereas *to* denotes a spatial relation in which an oriented TR is directed toward its highlighted LM (the functional element, as seen in the previous chapter, is the landmark as goal), *for* denotes a similar spatial scene, particularly on the notion of orientation, but the functional component of *for* has to do with the oblique or secondary nature of the LM. This secondary nature is reflected in the fact that reaching or attaining a LM facilitates the primary purpose.

Figure 6.1 above represents the proto-scene that is associated with *for*. The circle stands for the TR of *for*, whereas the arrow represents the orientation (just as the proto-scene associated with *to*). The vertical line indicates the prepositional landmark. Note that it is a *dashed* line in that it reflects the fact that the LM of *for* is not highlighted. This in turn, is due to the very oblique nature of it. The oblique or secondary nature of the LM represents the notion that reaching or attaining the LM facilitates the primary purpose. The LM is not

highlighted because it does not achieve enough conceptual prominence due to its role as *facilitator* of the ulterior purpose of the TR. Hence, it remains in the base while other substructures are selected as the profile.

Now consider another *BNC* example of *for* to see its prepositional-landmark oblique character:

(2) He was driving a car chased *for* twenty miles by police [DISTANCE]

According to the *CED*, *for* is used to show an amount of time or distance. In (2) above, *for* conveys a complex atemporal relation (since it involves trajectory) in which the relational profile of *He was driving a car chased* elaborates the TR of *for* and its prepositional landmark is elaborated by *twenty miles*. Note how orientation, a conceptual feature of the TR, is inherently understood within the trajectory that the vehicles undergo, which presumably is in a forward-like manner.

We could also observe the oblique nature in the trajector/landmark alignment of *for* in that the prepositional landmark in (2), which is elaborated by the nominal profile of *twenty miles*, is conceptualized as the way or opportunity that the police have to hopefully reach the car. That is, the twenty-mile length is seen as a means to an end, which is to capture the driver.

Let us now consider the [INTENDED RECIPIENT] sense of *for*, which may shed light on the impersonal character of this preposition as well as on the intentional character of the functional element associated with its proto-scene:

(3) 'Excuse me, Doctor. There's a package *for* you [INTENDED RECIPIENT]

According to the *CED*, *for* denotes a thing that is intended to be given. In (3) the pronoun *you* stands for the antecedent *Doctor*, which elaborates the prepositional landmark of *for*, and is conceptualized as the receiver of the *package*, which is the TR of *for*. The doctor is the intended recipient of a situated (and purposeful) action. It follows that the intended recipient motivates such an action, which in (3) has to do with the delivery of the package.

According to the *CDE*, *for* also denotes the purpose of doing something. In the same line, there might be a correlation (following Tyler and Evans 2003a) between a recipient and the

purpose of the action. If we consider the action of buying something with an intended recipient in mind and then post it, that is a purposeful/volitional action. In (3), the purpose of sending the package to the doctor is for him to receive what is inside. Crucially, the very scene in which the doctor opens the delivered package is when the ulterior purpose is met. This ulterior purpose in turn, is achieved through an oblique feature that apparently (partly) structures the “other-orientedness” character (in the sense of Wierzbicka 1988) of the English *for*. The fact of interpreting the LM of *for* as an oblique goal that serves some ultimate purpose, points to a salient element of intentionality manifested by the TR, which in (3) is the willingness and desire of the sender to get her/his package received by her/his intended addressee.

Consider another example of *for* taken from the *BNC*:

(4) He says they are now going *for* pubs [PURPOSE]

The composite structure *going for pubs* in (4), not only points to the fact that the people have to physically move themselves to arrive at the place they want to go, but it also represents the way or method they have to accomplish their goal, which presumably has to do with having fun from bar to bar. The prepositional phrase *for pubs*, then, serves as oblique goal – a conduit to the ultimate objective. Note how the action of the TR, here the group of people, is associated with a particular purpose. In (4) above, the TR performs a particular activity in order to achieve something: the act of going for pubs is motivated by the willingness and desire of having fun.

Following Tyler and Evans (2003a), I agree with the hypothesis that the [PURPOSE] sense might have been partly originated by virtue of a TR undergoing motion and reaching a particular location which concomitantly served an ultimate purpose. For instance, in (4) *they are now going for pubs*, the act of heading to the pubs serves to achieve a particular purpose, namely having fun and recreate. As such, the act of going to the pubs correlates with the ulterior purpose. From this example we can shed light on the idea that once the implicature of purpose associated with motion becomes strengthened, this meaning can be generalized to activities that have an ultimate purpose, irrespective of whether they involve motion as in (4) above. We will see those non-spatial usages in the following section.

The English preposition *for* can also sanction what is known as the [BENEFICIARY] sense in that it denotes a relation between an action and a beneficiary. To illustrate, consider the following *BNC* sample:

- (5) Guinness also encourages others to use its sponsorship programmes to raise money
for charity [BENEFICIARY]

In (5) the prepositional landmark of *for* is elaborated by *charity*. This means that the sponsorship programs to raise money, which function as TR, would go directly to the beneficiary. This sense seems to be closely related to the [INTENDED RECIPIENT] sense evoked in (3) above. The difference between these senses may lie in the *entailment* of the receipt (Tyler and Evans 2003a: 154). While in (3) it is still felicitous to infer that the doctor received the package, in (5) the receiver, here a supposedly charity organization, does receive the intended benefit, here the money that would be collected. Because the intended recipient is a beneficiary (i.e., a charity organization), then a possible motivation for this use type may be due to the correlation between the purpose of performing a certain action like raising money, and the benefits for the people or entity that receive the result of such an action. In other words, this specific sense of *for* may be due to the relationship existing between benefactor or giver and beneficiary. Nevertheless, the suggestions offered by Tyler and Evans seem not to be satisfactory at all because it is still unclear. To say that under the [INTENDED RECIPIENT] sense the actual delivery to the recipient does not necessarily take place or is not entailed, whereas it necessarily takes place (i.e. it is entailed) under the [BENEFICIARY] sense, is to discard situations where, due to a number of causes the money never reaches the beneficiary (the sponsor deceives the donors, the beneficiary refuses it, the money gets lost in the process, and so forth). In these cases, we cannot be totally sure about this entailment that according to Tyler and Evans is supposedly conveyed by [BENEFICIARY] but not by [INTENDED RECIPIENT].

The lexical concept of [BENEFICIARY] is then understood in this research as a recipient that receives something which is positive, as opposed to negative.

According to what we have seen so far about the spatio-conceptual behavior of *for*, I now propose the following conceptual basis for this preposition:

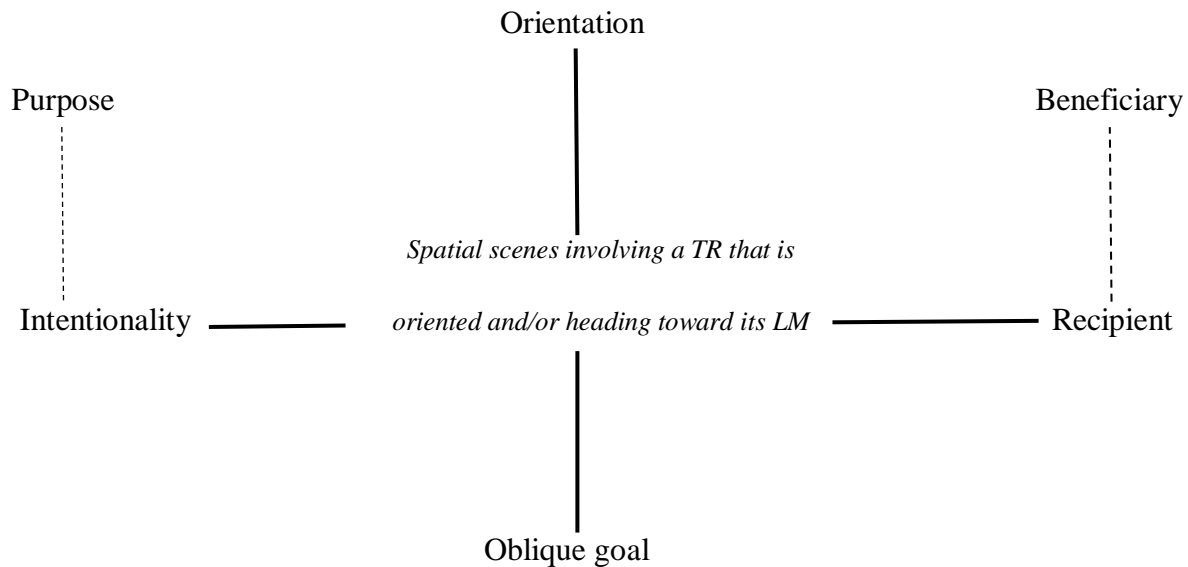


Figure 6.2. Conceptual basis proposed for the English preposition *for*

The conceptual basis for *for* in figure 6.2 above, depicts a similar organization as the English preposition *to*: both have to do with spatial scenes that involve a TR that is oriented and/or undergoing motion toward its LM. However, even though the construal of these seemingly similar prepositions involves oriented TRs, the conceptual activation is different. The prepositional-landmark elements of *for* do not have a higher-than-usual status as the ones of *to*. This difference in LM status carries significant functional consequences. It follows that the functional element of *to*, as seen in chapter 5, comes from conceptualizing the prepositional landmark as primary goal. On the other hand, the functional element associated with *for*, comes from its LM status being apprehended as an oblique goal – that is – the prepositional landmark of *for* is considered a *means* to a result.

If we look at the composite structure in (1) *running for the hills* and compare it with a similar expression such as *running to the hills*, we can say that both *for* and *to* appear to prompt for an oriented TR which is undergoing motion toward its LM (orientation). We can also observe motion due to the trajectory encoded by the verb. However, subtle but important differences in interpretation exist between these two prepositional use types. As noted earlier, by using the preposition *to* as in *running to the hills*, the act of reaching the hills is emphasized – the hills are conceptualized as primary physical goal or objective. On the contrary, by using the preposition *for* as in *running for the hills*, this implies that reaching the hills is a means to an end, rather than the end or goal itself. Example (1) might

be put in a context of warfare in which reaching the hills would serve the purpose of providing safety. In sum, we can appreciate how the preposition *for* appears to relate its TR to an *ulterior purpose* that is contingent upon reaching a LM. Because the LM of *for* is not the primary focus, I assume its function, in line with Tyler and Evans (2003a), as an *oblique goal*.

From the proto-scene depicted at the center of the conceptual basis, we can appreciate that some parameters emerge consequently (i.e. abstractions) from our humanly relevant interaction in space and time. The fact that the TR of *for* is oriented (and probably manifests a tendency to motion) toward its LM, makes the parameter of *Orientation* emerge. As seen in figure 6.1 above, the arrow represents the TR's orientation with respect to its LM (which is represented by a dashed line since it is not the primary focus). Orientation could be considered the semantic core value of *for*, along with Intentionality.

The second parameter that constitutes, at the very least, the conceptual basis of *for* is *Recipient* and it has to do with the prepositional-landmark elements of *for* being conceptualized as intended recipients of a particular action as in (3) and (5) above. This parameter is driven by the correlation between a purposeful activity and the intended recipient to whom such an action is aimed at. For instance, one can say *I bought this scarf for Tom* – the very action of buying a scarf is done with a recipient in mind, here Tom. Now note the sense-extension unit of *Beneficiary* that comes from the Recipient parameter (see figure 6.2 above). A recipient and a beneficiary are two closely related concepts; however, the difference may hinge on the factual benefit of the intended recipient who is receiving the action. As mentioned above, if one says *the money was raised for charity*, we may understand that the receiver of the money, here a charity organization, is directly benefited. The transfer may be *entailed*. On the other hand, if I say *I bought a scarf for Tom*, we understand that Tom has not received the intended transfer yet. However, this idea of Tyler and Evans (2003a) seems to be proposed based on speculations since such a hypothesis needs to be further corroborated and developed in more detail.

The reason why the parameter of Beneficiary is an extension of Recipient is because Recipient is conceptually more primitive and schematic: it offers the enough conceptual ground to understand more complex concepts such as Beneficiary. The nature of the entity

that is transferred is also important to understand this concept, in that it can carry good or bad consequences for the recipient. As previously mentioned, the lexical concept of [BENEFICIARY] gets activated whenever the recipient of an action receives something that is *positive*.

The next parameter, which is assumed to be of vital importance within the conceptual basis of *for*, is the one of *Oblique goal*. This is indeed a characteristic of the elements that elaborate the prepositional landmark of *for*. Recall that the LM of *for* is conceptualized as an oblique goal due to its function in facilitating the ulterior purpose of the TR once the LM is attained. Crucially, the impersonal and committal character of the prepositional landmark is understood as the functional element that is associated with the proto-scene of *for*. It follows from such an assumption that the concept of *Intentionality* is a clear indicator and hence, salient element that characterizes the conceptual behavior of *for*'s TR. This element apparently is entrenched enough, through processes such as pragmatic strengthening and bridging contexts, to the extent it becomes parameterized in the conceptual basis of *for*. Intentionality is thus the last parameter (at the very least) that should constitute *for*'s conceptual basis. In line with Tyler and Evans (2003a), I thus assume Intentionality as an important aspect of the functional element (Oblique goal) associated with *for*. Hence, this parameter is part of the core semantic value of *for*.

Before carrying on with more details about the conceptual basis of *for*, I want to clearly state the differences between the notion of intentionality in both prepositions *to* and *for*. In the case of *to*, Intentionality is a sense-extension unit that jointly comes from *Futurity* and *Primary goal*, whereas in the conceptual basis of *for* Intentionality is a constituent parameter that is part of the core semantic value of *for*, rather than an extension. This difference in conceptual status might be due to the functional element of each preposition: while the functional element of *to* has to do with the parameter of Primary goal, the one of *for* is concerned with the committal Oblique goal. Hence, the oblique goal is conceptually more complex since it involves recursion in that it serves an ultimate purpose: oblique and primary goals are linked recursively so that the former (the oblique goal) is completely necessary for the realization of the latter (the ultimate purpose).

Regarding Purpose in figure 6.2 above, this sense-extension unit might have emerged due to Intentionality having a highly active and structural role in the obliqueness that underlies the LM of *for*. As we have seen, the preposition *for* is not generally integrated with non-purposeful TRs for it would sound semantically anomalous. For instance, if we compare expressions such as * *the ball rolled for the end of the road* vs. *the ball rolled to the end of the road*, we can appreciate a lack of intention of the TR in the former expression, whereas in the latter it sounds acceptable. This difference in readings is due to the semantics of each preposition, particularly to the existence of the Oblique goal parameter, a parameter which serves as functional element in the conceptual basis of *for*, but which is absent in the one of *to*.

Following the conceptual basis proposed in figure 6.2 above, we can see how parameters get activated differently depending on the linguistic contexts that the preposition *for* is put in. In other words, by applying the conceptual basis, we can observe *for*'s conceptual import in a situated linguistic construction. For example, in (1), the composite expression *running for the hills* involves, at the very least, the activation of a number of parameters that constitute the semantics of the relational unit *for*. The first one is Orientation, which in (1) is also accompanied by Forward Motion. This activation has to do with an oriented TR, here the *group of people*, which is moving toward a LM, here *the hills*. The second parameter that receives activation is the one of Intentionality, and it is reflected by the volitional action generated by the TR in (1) which is running for the hills, probably to reach safety. Safety in this case might be the ulterior purpose – hence, there might be activation of the sense-extension unit Purpose. The last parameter that becomes activated in (1) is Oblique goal. As mentioned above, reaching the hills represents a means to the ultimate purpose, rather than the ultimate purpose itself.

In (2), the parameter that appears to be most directly involved in the sanctioning of the [DISTANCE] lexical concept is Orientation. The composite structure *He was driving a car chased for twenty miles by police*, involves a sequential scanning of two cars that are presumably undergoing forward motion. Because of the complex atemporal behavior of *for*, the parameter of Orientation plays a role in that it serves as conceptual bedrock to

understand things such as motion as well as the spatial length where the car chase took place.

The Oblique goal parameter might also get activated in (2) (probably secondarily). This parameter may evoke more emotional aspects that underlie linguistic structure, particularly in that there was an opportunity that the police had to catch the driver: twenty miles builds up the spatial scenario in which this situation occurred. The twenty-mile distance was a way and/or opportunity (i.e., spatial setting) to achieve the ultimate purpose.

Note also that there is a certain degree of intentionality on part of the TR when it comes to the [SPATIAL DISTANCE] lexical concept. In (2) There was a clear intention of the driver to get rid of the police, and a clear intention by the police to catch the driver, but these factors appear not to be as conceptually relevant as Orientation for the present example.

There are other cases in which we can appreciate a higher activation of Intentionality as in (3) above, in which the composite conception evoked in *There's a package for you* conveys a scene in which a delivered package was sent to an intended recipient. Under this context, the preposition *for* establishes a conceptual relation between the intentional object transfer (i.e., sending) and the intended recipient. As mentioned above, there is indeed a correlation between the “intentional spark” that results in a purposeful situated action which is done by the person who wanted the doctor to receive the package, and a recipient, here the doctor in (3). However, the fact that the delivered package arrived at the doctor’s hands could be interpreted as the oblique goal since the ulterior purpose is to open the package, see what is inside, and use it for a given purpose. In sum, the parameters that are most directly involved in (3) are Oblique goal and Recipient. Oblique goal is manifest by the successful delivery of the package to the doctor’s hands, whereas Recipient is reflected in the successful transfer from the sender to the doctor.

It is good to mention at this point that Intentionality might also receive activation in (3) since it represents the sender’s willingness to send the package to the doctor for any reason she might have had. On the other hand, the activation of the Recipient parameter is due to the doctor receiving the package. Note that the sense-extension unit of Beneficiary does not get activated since we do not actually know whether the package represents positive or

negative things for the doctor.⁹² Lastly, Orientation may receive secondary activation considering the trajector/landmark alignment evoked in (3). After all, the delivered package had to travel to reach its intended recipient – that is to say, the TR approached its LM by undertaking an oriented path/trajectory.

Let us now look again at example (4) in which the parameter that is most directly involved is Purpose (this semantic unit, in turn, is accessed through Intentionality). The composite structure *He says they are now going for pubs*, particularly the *going for pubs* construction, conveys a sequential scene in which a group of people has made the decision of going and hanging out in some pubs. The crucial point is that the group of people agreed on a purposeful action: go to pubs *in order to*, or with the *intention of* having fun. It follows that such a volitional decision carries some phenomenological consequences in that the group of people must move to reach the pubs – hence, activation of the Orientation parameter is to be expected. There is also activation of the Oblique goal parameter, since reaching the pubs (i.e. obliqueness) facilitates the ultimate purpose, here to have fun (i.e. primariness).

Example (5), on the other hand, highlights more the Beneficiary sense-extension unit (accessed through Recipient) than all the rest. The composite expression *raise money for charity* not only conveys an intended recipient, here any organization that helps the needy, but also makes clear (supposedly) that the intended recipient will benefit from the reception of the intended transfer. Intentionality may also receive activation considering what it takes to collect money. Finally, Oblique goal is also activated, and this is reflected in the fact that the money collected would eventually help people who live under difficult economic conditions.

In the next section I will proceed to show how the conceptual basis proposed for the English preposition *for* may shed some light on how non-spatial lexical concepts are motivated and ultimately grounded in spatio-physical experience.

6.1.1 Non-spatial lexical concepts of *for*

⁹² Recall that this is why the present account distinguishes between the more semantically primitive notion of {RECIPIENT}, and the more specific one of {BENEFICIARY}. In this dissertation, the sense-extension unit of Beneficiary is understood as a person or thing that receives something positive.

The preposition *for* seems to be deeply related to emotions, this in turn might be due to a higher concentration of introspective structure in its conceptual basis. Such a pattern might be reflected in the Oblique goal parameter. Most of the usages related with *for* are primarily concerned with motives, intentions, and purposes. This points to the more intentional character of the functional element associated with the proto-scene of *for*.

Consider the *BNC* example below:

- (6) Desperately she reminded herself that she was Eddie's sister and prayed *for* courage
[PURPOSE]

In (6), we can see how the semantic import of *for* consists in a conceptual relation that is held between the act of praying and the thing prayed for. The composite structure *prayed for courage* clearly points to this import. Now note how the image schematic structure of *for* (in the sense of Lakoff 1990) is projected onto the non-spatial domain in that praying for courage is to ask God to give us something which cannot be seen but felt, here courage. This invariance in image schematic structure comes from the spatio-physical experience which is embodied in linguistic structure as in (3) above, where the intended recipient gets the package. This package, in turn, is a concrete thing, considering it is an object. On the other hand, in (6) above the subject prays for getting (i.e., receiving) courage: an abstract concept that is subjectively built mostly by introspective structure.⁹³

It follows from this situated use type of *for* that the parameters that might be mostly involved in (6) – its active zones – are Purpose and Oblique goal. Remember that the notion of active zone is treated somehow differently in this research. In this nuanced perspective, it also deals with the different activations of the parameters of a word's conceptual basis depending on the linguistic context that prepositions are placed in. Indeed, the conceptual bases proposed so far allow us to pin down the semantic areas (i.e. conceptual parameters) of a closed-class item that are most directly involved in a given construction.

⁹³ Recall that the types of conceptual structures that underlie all concepts are perceptual, situated-like, and introspective (and temporal). Concrete and abstract things distinguish themselves by their situational focus. Different amounts of these types of knowledge constitute a given concept.

Purpose, as mentioned earlier, has to do with the purposeful act of praying for something (this in turn is accessed through Intentionality), in this case courage. Oblique goal, on the other hand, is concerned with the hypothetical scenario in which courage arrives at the speaker's persona. Such a situation would then facilitate the speaker in (6) to do the thing she needed courage to proceed and act upon. Recipient and Beneficiary would also get activated in this situation since the speaker would be the recipient of the thing she needed.

Consider another example in which *for* highlights its purposeful character:

(7) 'I've invited Felipe up to my villa *for* dinner'. [PURPOSE]

Note how the preposition *for* sanctions the [PURPOSE] sense similarly to (6). However, even though both examples sanction the same lexical concept as well as profile the same relation, there still exist subtle differences which might be the result of a *situated* trajector/landmark alignment. Such a situated alignment implies assuming an encyclopedic view of lexical semantics. One consequence of this is that a lexical item takes a subtly different value every time it is used. That value depends on the array of associated conceptions it happens to evoke on a given occasion, and the specific level of activation that a word's parameters achieve (following Langacker 2000). For instance, we can observe that Felipe in (7) is not seen as a recipient of the event, here dinner, On the other hand, speaker in (6) may be conceptualized as a recipient of an abstract thing (courage). We can observe from such a subtle difference, that *secondary activation* is also important for linguistic realization due to its contribution to a complete informational characterization of a situated construction. Recall that Secondary activation is the activation of semantic elements that are less involved in a given construction. However, this is a sort of conceptual "back up" for primary activation.

In (7) the LM of *for*, which is elaborated by *dinner* and is closely related to the subject's purpose since the subject in (7) wants Felipe to be there and share with the other guests, represents the physical place for a purpose, which may ideally be to enjoy, share, and have fun among relatives and/or friends. Dinner in turn reflects obliqueness in this respect so we can expect activation of the Oblique goal parameter. There is also activation of Intentionality as trigger factor for the subject in (7) to invite Felipe, this activation is then spread onto the sense-extension unit Purpose. In addition, there might be secondary

activation of the Recipient parameter if we think of Felipe as metaphorically receiving something, like an invitation.

Let us consider another *BNC* example in which *for* deals with abstract things:

(8) 'I hope to have some good news *for* you soon.' **[INTENDED RECIPIENT]**

Example (8) evokes a person's wish to have good news for other people. The speaker in (8) has turned her attention to another person's interests. This attention, in turn, is driven by the intentionality that ends up becoming a purposeful wish, which is to bring some good news to a target. The intended recipient motivates the particular action designated, which in (8) is reflected in the speaker's willingness and desire to have some good news for her/him/them.

Once again, we can observe invariance in terms of image-schematic structure of the conceptual basis of *for* that is mapped onto non-spatial realms. Good news is something which is generally abstract in that it makes people enter into psychosomatic states such as happiness, sadness or excitement, among others. The intended recipient of the good news in (8) might additionally receive a positive hit of adrenaline and happiness when hearing the good news. Such a figurative receipt is partly the result of the invariance in the image-schematic structure of *for*, which is ultimately grounded in spatio-physical experience. Now the parameters of *for* that are mostly involved in the figurative conception in (8) are Recipient and Purpose. Recipient is manifested in the intended recipient to whom the speaker in (8) wishes to have good news for. In the hypothetical case that the intended recipient had the good news, she would then become a beneficiary considering that good news evokes something positive rather than negative. Purpose, on the other hand, is concerned with the purposeful decision of trying to communicate good news to the intended recipient. That purposeful activity is undertaken expressly with a recipient in mind. Finally, Oblique goal might receive secondary activation since in the hypothetical scenario in which the intended recipient received the good news, she might be able to do something regarding this new situation. In other words, receiving good news may facilitate the undertaking of some other things.

The {SOURCE-PATH-GOAL} image-schema is indeed used for metaphorical reasoning in that it provides source domain inferences due to cognitive topology – that is, image schematic

structure (Lakoff 1990: 54). Example (8) above may also be schematically interpreted as {X HOPES Y TO RECEIVE Z} in which X stands for the person who wishes, Y stands for the wish itself, and Z for the intended recipient. We also have to consider the temporal factor that is characterized by the {PATH} schema and it means that the person in (8) must start doing something (i.e. a process) in order to achieve her goal, which is to communicate good news to a specific person.

Now consider an example in which the Beneficiary sense-extension unit gets more directly involved in the meaning of *for* below:

(9) Well, doesn't seem as if anyone else has put up the score but it was Tottenham 1 - Leeds 1. Deane scored *for* Leeds [BENEFICIARY]

In (9) we can note how in the composite structure *Deane scored for Leeds*, the prepositional landmark, here *Leeds*, is conceptualized not only as a recipient, but also as a beneficiary. The football team of Leeds does receive a benefit, here a goal. That is what makes the Leeds football team to be considered – loosely speaking – as a sort of recipient. Note that the receipt might presumably be entailed, as pointed out by Tyler and Evans (2003a), when the Beneficiary sense-extension unit becomes activated. It follows that under this context there is activation of the parameter of Recipient and then this activation spreads onto Beneficiary.

Every goal that is scored contributes to the likelihood of the team to win the match. When Deane scored, the team immediately became a beneficiary. They were probably 1-0 with that goal (or 1-1 in the other possible situation). In the case of the positive scenario (1-0 for Leeds), this would lead to an eventual win, which is supposedly to be the ulterior purpose of each football team. It follows that activation of the Oblique goal parameter may also be expected because scoring goals in any sport approaches the team or player to the victory.

Now consider some examples in which the semantics of *for* is less clear-cut when it comes to providing an explanatory motivation behind non-spatial usages. However, the conceptual basis proposed for *for* might prove itself useful to pin down a motivation. To see this point, consider the following *BNC* example:

- (10) The Duchamp exhibition curated by Pontus Hulten opens at the Palazzo Grassi (21 March-4 July) and coincides intentionally with a show of drawings by Victor Hugo, better known *for his novels* such as *Les Miserables* and *The Hunchback of Notre Dame* [BECAUSE OF]

The composite structure *Victor Hugo, better known for his novels* in (10) above, evokes the main attentional figure, here Victor Hugo, who is better known for his written work (LM). Note how Victor Hugo is integrated in a higher-order structural level in which the relational profile of *better known* elaborates the TR of *for* whereas its prepositional landmark is elaborated by *his novels such as Les Miserables and The Hunchback of Notre Dame*. The result of such a higher-order composite structure highlights *Victor Hugo* against a background which consists of his literary work that makes him easier to be recognized. This particular trajector/landmark alignment shows how the TR becomes easier to identify once we take a look at the relations it has with respect to its LM: the landmark in (10) facilitates the recognition of the TR by evoking background information about it.

The parameter that receives primary activation in order to sanction the [BECAUSE OF] sense of *for* is Oblique goal. Identifying the TR by the background information provided by its LM is key to the understanding of this lexical concept – the author in (10) can be identified much faster once a couple of his novels are mentioned (*Les Miserables* and *The Hunchback of Notre Dame* in (10)). Hence, mentioning the novels would further facilitate his recognition. To put it differently, the novels represent the obliqueness element of *for* while the mental access to the complex {VICTOR HUGO} concept, i.e. its recognition/identification, is the primary goal.

There is another sense that is generally related to the semantics of *for* and is the [OCCASION] sense. Consider the following *BNC* example:

- (11) 'They are not going home *for Christmas*?' [OCCASION]

As shown so far in the non-spatial conceptions of *for*, there is a clear preponderance of senses associated to this preposition that are primarily concerned with motives, intentions, and purposes. This in turn, reflects the intentional character of the functional element of the proto-scene of *for*.

It is important to recall at this point that spatial language is constituted by spatial and non-spatial parameters. Crucially, concrete and abstract parameters emerge from the very same *situational content* (Barsalou and Wiemer-Hastings 2005),⁹⁴ that is, through embodied experience. Concrete and abstract concepts differ in situational *focus* – while concrete concepts are concerned with objects and their possible affordances in space, abstract concepts are focused on events and introspections. This is not to say, however, that concrete concepts are not developed by conceptual structure that comes from events and introspection; rather, it means that the amount of event-like and introspective conceptual structure in concrete concepts is apparently less concentrated due to the immediacy of visual perception. Lastly, a parameter such as Oblique goal might be considered an abstract concept since its focus is on multiple components that are not localized but widely distributed. An oblique goal includes, at the very least, a trajector/landmark alignment in which the TR is oriented or heading toward its LM, and an ulterior purpose which is generally manifest as a feature of the TR: reaching or attaining the LM facilitates the ultimate goal. It follows that the non-spatial or abstract content of the Oblique goal lies in-between these events.

Returning to example (11), we can now see how the Oblique goal is the parameter that is most directly involved. The composite structure *for Christmas*, evokes an occasion of the year in which people have different plans for gathering and enjoy together. Now the particular semantic import of *for* concerns the fact that Christmas is conceptualized as an event in which more subordinate events will occur. In current parlance, Christmas in (11) serves as oblique goal for an ulterior purpose. If I say *they are not going home for Christmas?* I point to the fact that staying at home for Christmas might be a good occasion to enjoy with the family and have a memorable moment or any other subordinate event people may encounter when celebrating Christmas with family at home.

Consider now the [COMPARING] sense of *for*, which according to the *CED*, is used for comparing one thing with others of the same type:

⁹⁴ See Barsalou and Wiemer-Hastings (2005) for a preliminary account of abstract concepts.

- (12) She's forty-one now, but she's young. She looks young *for her age* and she acts young. People think of her as younger. [COMPARING]

The composite structure *She looks young for her age* refers to the fact that considering that the woman who is being referred to in (12) is forty-one, she looks younger than an average forty-one-year-old woman. The woman referred to, is an instance which is being compared with respect to its type. To achieve such a communicative purpose, the composite structure *She looks young for her age* jointly contributes (along with the whole discourse context) to the composite conception evoked in (12) with a conceptual relation that is driven by the preposition *for* in which *She looks young* profiles the forty-one woman who looks younger than the average. The clause *She looks young* is what elaborates the TR of *for*.

On the other hand, the nominal *her age* elaborates the prepositional landmark. Considering the status of this trajector/landmark alignment, we can observe that the LM opens a comparative mental space since it evokes the group of 41-year-old women to which the woman referred to in (12) is compared in terms of how young women are supposed to look at that age (the LM presupposes a norm with the average degree of youthful appearance for this age group, the type). The TR provides the instance of the type against which it is being compared.

The whole composite conception evoked in *She's forty-one now, but she's young. She looks young for her age and she acts young. People think of her as younger*, jointly contributes to the scope of the comparative event. I think that the semantic import of *for* hinges on the trajector/landmark alignment. In (12) the TR in *She looks young for her age* is identified by its type but is also compared to it. The type in this case serves as evidence that the woman referred to does actually look younger than an overall woman of the same age. It follows that the type, which consists in the prepositional landmark, serves a double function: (i) it identifies the woman referred to with respect to its type, and (ii) it activates the mental space of {COMPARISON} in the *for her age* prepositional phrase by providing the schematic information to do so.

Note that in (12) the woman is first recognized with respect to others of her type and then once this recognition has been computed, contingencies such as the fact that she indeed looks younger than the rest of the people of her age can come up. Such a contingency might

be motivated by an elaboration of the Oblique goal parameter that gets activated in order to conceive the [COMPARING] sense: we do make use of one thing to think about another. Hence, the use of *for* in (12) exhibits obliqueness in that the TR is first recognized with respect to its LM (i.e., obliqueness) to *eventually* extract some conclusions from that recognition (i.e., primariness).

I now show what is understood as the [RESPONSIBILITY] sense of *for*. According to the *CED*, *for* is used to say whose responsibility something is. Consider the *BNC* example below:

- (13) Japan alone is *responsible for* about 100,000 dolphin deaths a year.
[RESPONSIBILITY]

In the composite structure *Japan alone is responsible for*, the relational profile of *Japan alone is responsible* elaborates the TR of *for*. The main attentional figure, here *Japan*, is conceptualized as the doer of what its LM, here *about 100,000 dolphin deaths a year*, specifies. The first mental space evokes Japan as responsible for something which is specified in the second mental space. Now there are features in the conceptual basis of *for* proposed above that may shed some light on this specific figurative usage. Note that the first mental space evoked by *Japan alone is responsible for*, can be metaphorically understood as if Japan was a recipient of a responsibility. Then, this composite conception is integrated and specified by the second mental space which functions as prepositional landmark. This second mental space, then, complements the figurative understanding in that it contributes with an “object” that goes into the recipient, which in the current case is an abstract thing – about 100,000 dolphin *deaths* yearly. We might think of the RESPONSIBILITY IS AN OBJECT IN A RECIPIENT metaphor as partly structuring this figurative usage. This is driven by the Recipient parameter. Thus, there are correspondence links between these bodies of knowledge.

In addition, we might also say that there is (secondary) activation of the Purpose sense-extension unit (accessed through Intentionality) considering that the country of Japan deliberately takes the decision of killing 100,000 dolphins yearly.

The English preposition *for* can also sanction the [SUPPORT] lexical concept. According to the *CED*, *for* is used to show support for or agreement with something. Consider the following *BNC* sample:

- (14) Of those who voted, virtually all *voted for either* the Conservative or Labour parties [SUPPORT]

To explain the semantic import of *for* in (14), particularly on the *virtually all voted for either the Conservative or Labour parties* composite structure, we can once again use the conceptual basis of *for* in figure 6.2 above. I think there is a figurative extension that is partly facilitated by the Oblique goal parameter in that obliqueness is manifested more schematically in the act of voting. It follows that a political thinking of a person becomes embodied during election days in the votes themselves. To say that I voted for a certain party, then, implies that my thinking became embodied in a piece of paper – that is, there is obliqueness – and once this first event is met, then the ulterior goal comes, which is to contribute to the possible victory of the party that one supports.

There is also activation of Beneficiary (along with Recipient). The party in (14) that is voted is conceptualized as a “figurative recipient” of the intended vote. It follows that being a recipient of a vote means that the recipient is receiving something which is beneficial – therefore, Beneficiary gets activated and contributes to the realization of the [SUPPORT] lexical concept. The last parameter that should be considered in the realization of this sense is Intentionality (and Purpose), considering the intentions that lie behind the act of voting.

Consider another example in which *for* evokes a semantically related but distinct relation:

- (15) It would be bad *for me*. [IN RELATION TO]

According to the *CED*, *for* denotes someone or something that is in some relationship with someone or something. We can appreciate from the composite conception evoked in (15) that the speaker got to the conclusion that a certain situation or thing would not be suitable for her, probably on the basis of her reflection upon it. Note also that *for* in (15) shows a self-oriented character rather than other-oriented as it is usually the case with *for*.⁹⁵

⁹⁵ We can also use the other-oriented feature of *for* and say *It would be bad for you/her/him/it/them/us*.

To conceptualize the hypothetical scenario due to the modal *would*, which serves as space builder in (15) above, the speaker simulates (i.e., conceptualizes) herself as a recipient of an event that carries bad consequences. The conceptualizer might be considered as a “recipient” because it is anaphorically used to refer back to an object that can be transferred spatially or metaphorically (e.g., She proposed an *idea*, but *that* would be bad *for me*).

In (15), the Recipient parameter gets activated and probably extended by providing the invariant image-schematic structure that drives this figurative thinking. This image-schematic structure, as mentioned earlier, is highly flexible. For instance, imagine that example (15) had the adjective *good* rather than *bad* as in *It would be good for me*, then the trajector/landmark alignment would present other type of configuration, particularly in that the LM (*me* in (15)) might be willing to be the beneficiary of a TR that carries good news. However, because the TR in (15) is linked to a bad situation, the speaker (represented by the prepositional landmark and conceptualized as the metaphorical recipient) might not want to be the recipient of bad consequences. In the hypothetical case the speaker did receive the bad consequences, she would not become a beneficiary.

Finally, it is important to mention that a second parameter that may receive activation is Oblique goal. If someone says that something is good or bad for someone else, she refers to the fact that the outcomes of an event may affect or benefit a person in different ways. The preposition *for* in this case is highly linked to the results behind receiving good or bad news. For instance, I can say *a part-time job would be good for me because I had more time*. Note the obliqueness of *for* in that it provides the conceptual ground to introduce the primariness which is reflected in the reasons and/or results of a thing or event, which in the utterance just given is related to having more time. In sum, I suggest that the [IN RELATION TO] lexical concept that is generally sanctioned by the preposition *for* is due to the activation and extension of the Recipient, and Oblique goal parameters.

I now present the last figurative use of *for* in this non-exhaustive list of figurative conceptions. The sense I want to analyze can be glossed as [PAYMENT]. According to the *CED*, *for* is used to refer to the act of getting things in exchange. To illustrate, consider the following *BNC* sample:

- (16) I've *paid for* your education, fed and clothed you. [PAYMENT]

Let us focus on the composite structure evoked in *I've paid **for** your education* in (16) above. The relational profile of *I've paid* elaborates the TR of *for* whereas its prepositional landmark is elaborated by the nominal *your education*. It follows that in order to understand the contribution of *for* in (16), we need to again consider the trajector/landmark alignment that underlies the linguistic construction. The TR in this case is a relation – the very act of paying education fees– which represents a purposeful event. Hence, activation of the Purpose sense-extension unit is to be expected, along with Intentionality. On the other hand, we have the prepositional landmark which is elaborated by the nominal *your education*. Note that *your education* refers to the education of a specific person. That person is the recipient of the action of paying education fees and hence, she or he becomes a beneficiary. Thus, the parameter of Recipient also gets highlighted and then this activation spreads onto Beneficiary.

Lastly, the very fact that the TR in (16) meets its LM – that is, the act of paying the education fees was followed by the beneficiary going to school/college, concomitantly serves an ulterior purpose, which is possibly related to the knowledge that the person will acquire, along with the academic degree and array of job opportunities that an educated person can apply for. Note that there is also activation of the Oblique goal parameter since it evokes the notions of obliqueness (and primariness). These are reflected in the fact that reaching or attaining the LM facilitates the primary purpose, here to be able to find better opportunities in life through education. In sum, the parameters that get activated in order to apprehend the [PAYMENT] lexical concept in (16) are Recipient, Beneficiary, Purpose (accessed through Intentionality), and Oblique goal.

6.1.2 Temporal domain of *for*

I now turn to the temporal domain of *for*. To do so, I will show two temporal lexical concepts: [DURATION] and [EVENT]. Both lexical concepts are grounded in what is known as the extrinsic temporal frame of reference (or t-FoR for short).

Before proceeding to analyze the first sense, which is [DURATION], it is important to recall that space and time have fundamental roles in grammar. Objects and events are the prototypes of nouns and verbs respectively and hence, are conceptualized as spatial and temporal entities. That parallelism might evoke the illusion that these two foundations of

human cognition should be treated as unified. However, time seems to manifest a special status (following Evans 2004, 2013; Galton 2011; Langacker 2012b; Pöppel 2004, 2009; see also Sinha et al. 2016) because it is always the *medium* for conceptualization itself (i.e., processing time), and many times also serves as an object of conception. It follows that the dynamic conception of space, *through time*, makes possible the “metaphorical” conception of time itself in terms of space. That is one of the reasons why the present research assumes the weak version of Conceptual Metaphor Theory,⁹⁶ particularly in the TIME IS SPACE metaphor (Lakoff and Johnson 1999). The apprehension of the temporal domain involves both *purely* temporal and spatial knowledge.

Consider the *BNC* example below:

(17) Stanley Peters has been with the company *for* five years [DURATION]

Example (17) evokes the [DURATION] sense. Here the main attentional figure, *Stanley Peters*, had a relationship with the company that lasted for five years (this latter relational profile elaborates de TR of *for*). It may be suitable in this example to apply Grady’s (1997) DURATION IS LENGTH primary metaphor to shed light on the partial structuring and supportive role of spatio-conceptual structure in temporal understanding. This metaphor may well provide the conceptual ground in order to understand the primary concept of *length* – a spatial feature *per excellence* – with respect to *duration*, which is a type of transience and the feature that makes time having its own structure. Recall that while the substrate of space is matter, the one of time is action. The former domain is isotropic while the latter is anisotropic.⁹⁷

The spatio-conceptual motivation for the partial structuring of temporal scenes may come from spatial situations as evoked in example (2) above. In the clause *He was driving a car chased for twenty miles by police*, in which the preposition *for* (together with the LM *twenty miles*) clearly denotes spatial magnitude, there is image-schematic structure that is preserved and thus, serves as conceptual source for apprehending the temporal magnitude – that is, the primary target, as evidenced in (17) above. In addition, such space-time mapping

⁹⁶ For an account and neuropsychological evidence that space and time might be represented and processed independently of each other in the brains of modern adults, see Kemmerer (2005).

⁹⁷ For a review of time vs. space, see Evans (2013: 142-166).

might also be motivated by what is known as *conceptual alternativity* (Talmy 2000). This conceptual phenomenon, as previously mentioned in chapter 2, has to do with our cognitive ability to conceptualize time in terms of space and vice versa. I can say that *Málaga is 200 kilometers from Córdoba*, this way I use space to indicate the distance existing between those two Spanish cities; but if I say *Málaga is 2 hours by car from Córdoba*, I use temporal structure instead.

Going back to example (17) and considering the notions of primary metaphor and conceptual alternativity, we can now observe how the composite structure *for five years* evokes a mental space about the duration of the relationship that is held between *Stanley Peters* and the company he works for. I suggest that the semantic contribution of *for* in (17) might be partly attributed to the parameter of Orientation. As the proto-scene of *for* shows above (see figures 6.1 and 6.2), the TR of *for* is generally oriented or heading toward its LM. In addition, motion is understood as going forward rather than backwards. This behavior parallels the temporal nature of the succession transience type. The orientation feature (plus forward motion) of *for* may be considered as the only topological (i.e. spatial) image-schematic structure that is preserved for the temporal understanding in (17).

We can (again) appreciate how purely temporal cognition is at work in that we have a TE (target event) which is located by an RP (reference point), here *5 years*, and further anchored by an O (origo) (represented by day 1: the day Stanley started working in the company) to the transience type of duration. The highly schematic temporal knowledge that emerges from this extrinsic t-FoR can be glossed as [TE IS FIXED TO AN RP IN THE GREGORIAN CALENDAR].

Temporal reference is indeed one of the types of knowledge involved in temporal conceptions. The parameter of Orientation contributes (as another type of knowledge) to fully fledge our understanding of temporal evolution via metaphorical extension. Metaphor is also a type of knowledge that is involved. It has a relevant role in partially structuring and supporting temporal conceptions.

I now want to briefly highlight the importance of the *extrinsic* t-FoR in our ability to conceptualize time in (17). Recall that the extrinsic t-FoR is perhaps the most complex of the three t-FoRs. This t-FoR is known for its “*absolute*” character since it fixes events in

time regardless of individual human experience.⁹⁸ It follows that the extrinsic t-FoR is *periodicity-based*, compared to the egocentric and event-based reference strategies that characterize the deictic and sequential t-FoRs, respectively.

As pointed out earlier, there is a bifurcation within the extrinsic t-FoR which comes from the use of *calendars* and *clocks* – two temporal artefacts that embody this t-FoR. It follows from this that we must distinguish between *event-reckoning* systems, embodied in calendars, and *time-reckoning* systems, which are embodied in clocks. Both types of systems serve to count *periodicities*. The distinction goes on their relative complexities: time-reckoning systems (i.e. clocks) are considered to be more complex because they can fix events with finer precision against the temporal matrix. In example (17) above, the (temporal) semantics of *for* is partly motivated by the temporal structure which is derived from event-reckoning systems since the prepositional phrase *for five years* makes use of cyclical (and mensural) time for conceptualization. However, we also make use of features of time-reckoning systems to fully understand the [DURATION] temporal lexical concept. Time-reckoning (and event-reckoning) systems, in turn, are divided into three categories: the *repeatable* type, like the 24-hour system and the {YEAR} temporal unit, the *closed* type, as in the case of countdowns, and the *open-ended* type, such as a long count that might never end. The system that serves to apprehend example (17) is the repeatable one since it involves the temporal unit {YEAR}, which is cyclical (and mensural in that a year consists of 365 days which can be further calculated into hours). We could say, then, that the periodicity-based temporal strategy used in (17) is mainly characterized by a repeatable system that allows us to temporally measure the elapse of 5 years.

To merely understand the prepositional landmark of *for* which is elaborated by the nominal profile of *five years* in (17), we need to understand cyclical units such as {DAY/NIGHT}, {WEEK}, {MONTH}, the 24-hour cycle, among others. Indeed, we do need temporal cognition to understand temporal concepts such as {YEAR} or {HOUR}. This in turn is developmentally complex in that human beings seem to start acquiring temporal concepts gradually: from simple to more complex ones – that is, {DAY}<{WEEK}<{MONTH}<{YEAR}.

⁹⁸ Note the parallelism in this regard to the absolute spatial frame of reference (see Levinson 2003).

In sum, we have seen how time contributes with its own structure to the realization of the [DURATION] temporal lexical concept of *for*. As suggested above, the temporal structure that is reflected in the periodicity-based temporal strategy is a much-needed complementation for conceptual and primary metaphors as well as for the situated semantics of *for* in (17). It seems that all these types of knowledge (i.e. metaphor, spatio-conceptual structure, temporal structure, and semantic tendencies) establish correspondences to jointly conceive temporal scenarios.

I now present the second and last temporal sense of *for*, as mentioned at the outset of this section. Consider the following *BNC* example:

- (18) She saw him pick up the sweater her parents had bought her *for* her birthday
[EVENT]

Example (18) is similar to (11) because both are structured by temporal knowledge that comes from a repeatable event-reckoning system. In (18) the TE consists in the manipulation of a woman's sweater by an unspecified man. This sweater in turn, is a birthday gift that was given by her parents. The information that the sweater is a birthday present is provided by the prepositional landmark, or RP in this temporal location strategy, *her birthday*.

A key characteristic of a repeatable event (and time)-reckoning system is that it requires an origo – the point that *initiates* the cycle – to properly function. In the case of (18), and similarly in (17) above, the cyclical unit {YEAR} is of vital importance since it allows us to set the origo (prototypically) as *January the 1st*. This allows us to start the count and anchor the TE to the duration transience type.

I think that the fine-grained contribution of *for* in (18), is similar to (11) above (so it could be partially structured by spatio-physical experience) since activation might fall on the parameter of Oblique goal. The script or cognitive model of {BIRTHDAY} exhibits as one of its attributes the concept of {GIFT}. Hence, the prepositional phrase *for her birthday* represents an occasion in which many subordinate events can take place. There might also be activation of Recipient (which may spread onto Beneficiary), and Purpose (which is accessed through Intentionality). Recipient has to do with the person who celebrated her

birthday and thus received a gift. This in turn, may be interpreted as a beneficiary. The Purpose parameter may also get activated (secondarily) considering the purposeful activity of buying a present with an intended recipient in mind.

Note that the parameter of Orientation might not get activated in (18) (contrary to in (17)). This may be due to duration not being conceptually prominent for the composite conception in (18). Rather than duration, what is profiled is the event as a whole.

6.1.3 *For...to* construction

I now want to briefly offer some remarks on the *for...to* complement type that is usually found in the English language. In line with Michel Achard (2007), I agree that the distribution of a complement type is mainly a matter of semantic compatibility between meaningful elements. For these semantically compatible elements to be integrated in a complement clause as in *She wishes for Tom to be famous*, they have to undergo *conceptual subordination* (Langacker 1991: 440). Conceptual subordination may be the key to understanding the four complement types commonly found in English, namely *-to*, *-ing*, *-that*, and *-for...to*. In the utterance just given above, the act of wishing something is superimposed by the clause *Tom... be famous*. This process is construed holistically and hence, manipulated unitarily. This means that the *for...to* complement type, as well as the rest of the complement types, encourage summary scanning.

One of the possibly main differences between the *-to* and the *for...to* complement clause types may lie in the notion of “*self*”, compared to “*other*” (in the sense of Wierzbicka 1988). This is linked to the other-oriented character of *for* as pointed out earlier. While *-to* complements tend to be more focused on the ego’s experience, *for...to* complements usually express the experience of others. Such conceptual behavior can be explained by virtue of the parameters of Primary goal and Oblique goal that characterize and are considered functional elements of the conceptual bases of *to* and *for*, respectively. In addition, these two parameters may shed light on the specific contribution that each preposition offers in the *for...to* construction. I think that there is indeed obliqueness encoded in *for* and primariness in *to*. To illustrate this point, consider a *BNC* example of the *for...to* complement type:

(19) Stopping at one of the doors, he waited *for her to catch up*

We will focus on the composite structure *he waited for her to catch up*, in which the clause *he waited* profiles the man and elaborates the TR of *for* whereas *her* elaborates its LM in *He waited for her*. Due to conceptual subordination, this composite structure is then superimposed in a summary-like manner by the infinitival subordinate clause *to catch up*, which elaborates a secondary LM and specifies the reasons behind the subject's act of waiting for the woman in (19).

Note how obliqueness and primariness are present but construed holistically due to the atemporalizing character of complement types (Langacker 1991). In (19), the composite structure *he waited for her* clearly shows obliqueness in that the trajector/landmark alignment of *for* is characterized by a purposeful TR that is oriented with respect to its LM. The LM, in turn, is crucially conceptualized as an oblique goal: attaining the LM facilitates an ulterior purpose, which in (19) is evoked by the infinitival subordinate clause *to catch up*. Note the semantic import of *to* in that it evokes the primary goal of the purposeful TR, which is to catch up. It follows from this that there is activation, at the very least, of Oblique goal and Purpose on part of *for*, and activation of Primary goal on part of *to*. Furthermore, the conceptual activations of each preposition jointly work via correspondence links between their substructures, as well as between the lexico-grammatical elements within the *for...to* construction.

This preliminary analysis of the conceptual activation that may occur in *for* and *to*, might contribute to a more complete understanding of the *for...to* complement. It contributes in that it provides some ideas on what is the specific semantic import that each preposition offers in the construction. Hence, it helps to pin down the very nature behind linguistic structure.

Thus far we have seen how the English preposition *for* is conceptualized spatially, non-spatially, and temporally. We have also seen the *for...to* construction, how is motivated and the principal differences it exhibits with respect to the *-to* complement type. Such insights can indeed be applied to English and Spanish language teaching in a quest for a better explanation and comprehension by both teachers and students regarding spatial, non-spatial, and temporal prepositional usages. This is indeed one of the issues we will develop

in the next chapter. For now, we continue with the analysis of the Spanish preposition *para*, which in some respects, is equivalent to the semantics of *for*.

6.2 Spatial lexical concepts for *para*

The Spanish preposition *para* is usually considered to evoke an event's ulterior purpose (Trujillo 1971: 273) and is also used to introduce a participant that receives the end of a process (Chéliz 2002). In this first brief glance at its predominant semantic description in the literature, we can already appreciate that *para* is deeply related to intentions, motives and purposes, in a similar way as English *for*.

The Spanish preposition *para* is used to introduce the recipient of a process. Hence, it expresses the final purpose which lies behind movement itself. This is actually what the *DLE* shows as the prototypical meaning of *para*, a meaning that denotes the end of an undertaken action. Such a prototypical meaning, I might add, is motivated by more spatially grounded scenarios that exhibit a sense of movement. Indeed, this sense is the second entry that the *DLE* offers. Consider now a corpus example (taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*) of this sense:

- (20) A las cinco y media saldrá el ministro ***para*** Madrid [DEPARTURE]
[At half past five, the minister will go ***to*** Madrid]

In (20) above, the composite structure *A las cinco y media saldrá el ministro*, evokes a relation, which is driven by the verb *saldrá* (this in English literally means *will go out*) and the preposition *a*, between the time (expressed using a repeatable time-reckoning system) and the TE (target event), here the minister's trip. Then this expression is integrated in the higher-order composite structure *A las cinco y media saldrá el ministro ***para*** Madrid*, in which the TR of *para* is elaborated by the clause *saldrá el ministro*, whereas the prepositional landmark is elaborated by the profile of *Madrid*.

There is indeed a sense of movement that is jointly accomplished by the verb and the prepositional vehicle *para* (as well as by the whole construction in general). Hence, we can appreciate that direction is a prominent feature in the spatial usages of *para*. Note that direction can be conceptualized as static or dynamic. To put it differently, *para* can behave as a simplex or complex atemporal relational unit. In (20), the scene evoked might be

thought of as simplex since it refers to a future event: the event is not currently happening, but it will. On the contrary, I can say *Vamos yendo para Madrid* (*we are (now) going to Madrid*), in this way, sequential scanning is more immediate since it is not being mentally simulated through mental time travel but currently experienced.

As put above, *para* evokes an event's ulterior purpose. In (20) above (as well as in the invented utterance *Vamos yendo para Madrid*) this is reflected in the fact that reaching the LM might facilitate an ulterior goal. This conceptual import is in fact what *para* has in common with *for* – that is, *obliqueness*. This in turn, reflects the atelic character of *para* and *for* in that they participate in constructions that evoke events which lack a conclusive endpoint.

In the same line, *para* also evokes a recipient of an action, just like *for* does. Consider a *Spanish Web 2011* (*esTenTen11, Eu + Am*) example of this usage:

- (21) Si formas parte de la gran cantidad de deportistas que participan cada fin de semana en alguna de las numerosas pruebas deportivas que se celebran en nuestra Comunitat, esta tarjeta es *para* ti [RECIPIENT]
[If you are part of the sporty people who participate each weekend on the sport events of our community, this card is *for* you.]

In (21) the composite structure *esta tarjeta es para ti* (*this card is for you*), encodes the [RECIPIENT] sense similarly to *for* in (3) above. The nominal *esta tarjeta* profiles the card (*la tarjeta*), which elaborates the TR of *para* while its prepositional landmark is elaborated by *ti* (you). Note how, as pointed out by Chéliz (2002), *para* denotes a participant that receives the end of a process. In the current case, a person can get a sports card if and only if she participates each weekend in the sporting events of the community. In other words, after the process of constantly participating in sport activities each weekend, that person becomes a recipient of the sports card. Crucially, and consonant with English *for*, a recipient who receives something that is supposedly categorized as “good” or “positive” becomes a beneficiary. On the contrary, and as mentioned earlier, if I say *Tengo malas noticias para ti* (*I have bad news for you*), the interlocutor is considered as a simple recipient rather than a beneficiary. From this it follows that Beneficiary might well be considered a sense-extension unit of Recipient just like in the conceptual basis of *for*.

There is another factor in (21) which has to do with obliqueness since the very fact of receiving a sports card facilitates access to certain things such as sport facilities, discounts, and the like.

Examples (20) and (21) exhibit an atelic character in that the events evoked by *para* lack a definite endpoint. However, the highly polysemous behavior of *para* allows this preposition to sanction telic events as well – that is, events that evoke a conclusive endpoint. To illustrate, consider a corpus example taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

- (22) Me realizaron una radiografía **para** ver que tenía [PURPOSE]
(I had a radiograph made **to** see what I had)

In (22) the clause *me realizaron una radiografía* (*I had a radiograph made*) profiles the subject's radiograph which then is integrated with *para ver que tenía* in order to achieve the higher-order composite structure *me realizaron una radiografía para ver que tenía*. The profile of the clause *Me realizaron una radiografía* elaborates the TR of *para* and its prepositional landmark is elaborated by *ver que tenía*. From this example we can observe that there is no obliqueness whatsoever. Rather, the primary goal is immediately accessed due to the role that the prepositional-landmark element of *para* has in the construction in (22).

If we compare example (22) to example (4) above, we can appreciate that even though both prepositions *para* and *for* can sanction the [PURPOSE] sense, the *activation route* (in the sense of Evans 2009) is different. It follows from this idea that the functional element of *para* might be considered as a sort of hybrid that is highly context-dependent: the LM of *para* can function as either *oblique goal* or *primary goal* as in (22) above. That shift in LM status posits a challenge when it comes to the understanding of the polysemous behavior of *para*. However, the conceptual basis that is about to be proposed for *para*, may provide some insights to approach such a polysemous character.

Note that the activation route that leads to the highlighting of the [PURPOSE] sense in (4) above, particularly reflected in the composite structure *going for pubs*, is achieved by virtue of the semantic import of *for* that serves as a conduit to the ultimate goal (e.g., to have fun)

– that is, there is a TR, here the group of people who is going for pubs, which undergoes motion and then reaches its LM that concomitantly serves an ulterior goal. If we take a look at figure 6.2 above, we can observe that the Purpose parameter is a sense-extension unit of Intentionality, which is reflected in the purposeful character embedded in the TR of *for*; hence, the Intentionality parameter is activated and then this activation spreads onto Purpose (there is also activation of the parameters of Orientation and Oblique goal for a complete apprehension of the composite conception evoked in (4) above). On the other hand, the activation route of the [PURPOSE] sense of *para* is more direct since the primary goal is evoked in the prepositional landmark *para ver que tenía* (to see what I had), rather than by a purposeful TR as in the case of *for* in example (4).

In sum, I think that the Spanish preposition *para* behaves in a hybrid-like manner since it exhibits semantic features (i.e., conceptual parameters) that are found separately in the English prepositions *to* and *for*, namely *obliqueness* and *primariness*. This latter conceptual parameter is apprehended as Purpose in the conceptual basis of *para*.

Figure 6.3 below depicts the conceptual basis proposed for *para* that intends to shed some light on its hybrid character:

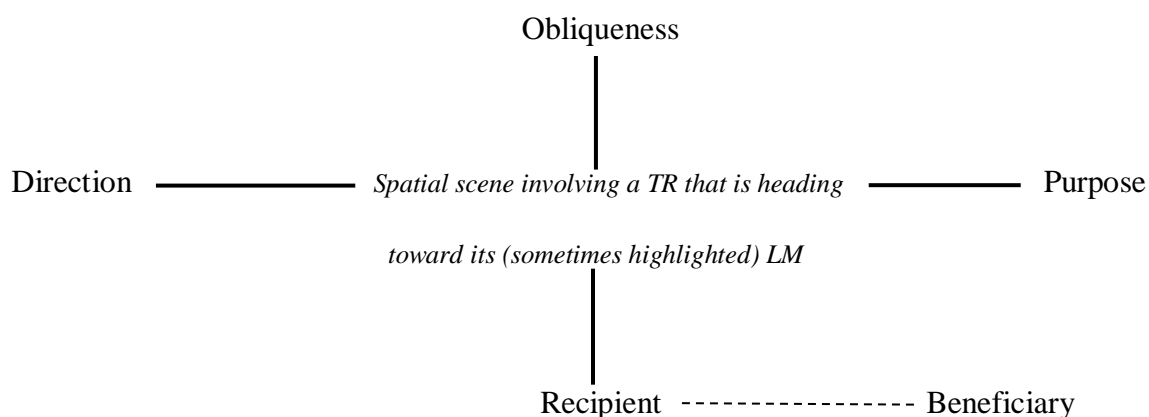


Figure 6.3. Conceptual basis proposed for the Spanish preposition *para*

Figure 6.3 above depicts the conceptual basis of *para*. As mentioned earlier, the hybrid character of this preposition is mainly due to the parameters of Obliqueness and Purpose, these are referred to in the conceptual bases of *for* and *to* as Oblique goal and Primary goal, respectively. These parameters in turn, might be understood as emerging from the proto-scene(s) of *para* in which the TR is not simply oriented but undergoing actual motion

toward its LM. These two conceptual parameters can be considered the functional elements of *para*.

Indeed, the hybrid-like character of *para* is related to the conceptual nature of its prepositional landmark since it can be conceptualized as either primary or oblique goal. Note that all the parameters of *para* that are proposed in figure 6.3, except Direction, are generally related to features that are exhibited by the elements that elaborate the prepositional landmark.

Obliqueness, as previously mentioned, has to do with a TR attaining its LM in order to reach an ulterior purpose and this is deeply related to the intentions or purposes behind a certain action. The parameter of Purpose, then, complements somehow the semantics of Obliqueness and is an important aspect of the hybrid-like functional element associated with the proto-scene of *para*. Such a hybrid functional element, in turn, is motivated by the fact that the prepositional landmark of *para* is highlighted *at times* – hence, it is sometimes conceptualized as goal, whereas in some other occasions it is apprehended as the facilitator of an ulterior purpose.

The parameter of *Purpose* in the conceptual basis of *para* manifests a double function since it can get activated as a semantic feature of the LM or TR depending on the construction that *para* is put in (i.e., meaning determination). If the LM of *para* is conceptualized as an oblique goal, the parameter of Purpose is generally understood as a semantic feature of the TR like in an utterance such as *Este juguete es para ti* (This toy is **for** you), uttered by a father to his daughter or son. Under that context, the Purpose parameter might be embedded in the toy since it is the intention of the father to give a toy to his daughter/son for her/him to play with. On the other hand, obliqueness is embedded in the prepositional phrase *para ti* (*for you*) since by accepting the toy, the kid will be able to play with it – this in turn, represents the ultimate purpose that lies behind giving a toy as a present. Now there are some situations in which the Purpose parameter falls on the prepositional landmark. For instance, in an utterance such as *Estas gafas son para ver mejor* (These lenses are **to** see more clearly), where the prepositional landmark *ver mejor* (*see more clearly*) is the primary goal since that is exactly what lenses are made for.

Recipient, as put above, is related to one of the most prototypical senses that is generally associated with the semantics of *para* since this preposition is used to introduce the participant(s) that receive the end of a process or action. Hence, this parameter is related to *conceptual transfer* in that it serves as motivational source, through reification, to express non-spatial transfers such as the one in an utterance like *Mis mejores deseos para ti* (My best wishes *for* you), where the transfer is clearly not about a concrete thing but rather about feelings and emotions. Now from the Recipient parameter we can expect the related concept of beneficiary, which in the present account is treated as a sense-extension unit due to some recipients becoming actual beneficiaries in some situations involving transfer. Such a status depends on whether the transferred object carries good or bad consequences for the receiver – the prepositional-landmark element(s) of *para*.

The last parameter that makes up (at the very least) the conceptual basis of *para* is *Direction*. This semantic feature is generally associated to the presence of a TR undergoing motion toward its LM. An important aspect of the conceptual behavior of this parameter is that it differs from Directionality or Orientation, which are exhibited by English *to*, *for*, and Spanish *a*, in that those prepositions exhibit TRs which can be either oriented *or* undergoing motion toward their LMs. In the case of *para*, I would say that motion (rather than mere orientation) is what is more prominent and hence, drives its proto-scene.

If we use the conceptual basis proposed for *para* in figure 6.3 above, we can observe and therefore understand how conceptual activation works. It also sheds some light on the conceptual phenomenon known as *polysemy*. For instance, in example (20) particularly in the composite structure *saldrá el ministro para Madrid* (*the minister will go out to Madrid*), the parameters that are mostly involved and hence contribute to the semantics of *para* in that situated realization are Direction, Obliqueness and possibly Purpose. Direction is reflected in the fact that the minister will have to take a specific direction through a path in order to reach Madrid (LM). As mentioned above, example (20) evokes a future event due to the Spanish future marker *-drá* in *saldrá*, which is equivalent to the English modal *will*. That is, the action of going to Madrid is not happening right now but it will – thus, the notions of direction and movement (i.e., sequential scanning) is achieved through mental time travel. In the case of Obliqueness, its contribution in (20) has to do with facilitating an

ulterior purpose, which might be related to the activity that the minister must do in Madrid. For instance, imagine that example (20) were more specific and said *saldrá el ministro para Madrid a una reunión* (the minister will go to Madrid for a meeting). Under this context, then, we could appreciate more easily the obliqueness character in the realization of *para* since reaching the LM is a requisite in order to attend the meeting. Lastly, the parameter of Purpose may also get activated, perhaps secondarily, since attaining the LM is in turn a condition for the fulfillment of the goal. There is also a clear disposition of the TR to reach its LM.

In example (21), specifically in the composite structure evoked in *esta tarjeta es para ti* (this card is for you), there is activation of different parameters in the conceptual basis of *para*. The composite structure profiles a transfer in that someone is receiving something, here a sports card. Hence, the activation of Recipient is to be expected. In addition, and as previously mentioned, a transfer can carry good or bad consequences for the recipient. In the present case it seems to carry good ones – benefits – considering our notion of what sports cards are used for. We can then, also expect activation of Beneficiary, which emerges as a sense-extension unit of Recipient. Finally, the last parameter that I think is involved in (21), yet not as strongly as Recipient and Beneficiary, is Obliqueness, since it helps the addressee to apprehend the fact that once a person receives the sports card, she will be able to opt for benefits such as discounts and sport facilities. In other words, she will be able to make the most of her sports card.

Example (22) on the other hand, sanctions the [PURPOSE] sense. This sense is not achieved concomitantly but directly. In the composite structure evoked in *me realizaron una radiografía para ver qué tenía* (I had a radiograph made to see what I had), the patient's radiograph elaborates the TR of *para* and is conceptualized as the means that the doctors used to see what the patient's problem was. It follows that knowing about the patient's problem constitutes the main goal behind taking the radiograph and that is exactly what is evoked in the prepositional phrase *para ver que tenía*. It also follows from this idea that in (22) the parameter that is most directly involved in the realization of *para* is Purpose.

In the final analysis, the conceptual basis of *para* seems to prove useful to apprehend the motivation that underlies prepositional usages. Indeed, we can see how parameters are

activated differently depending on the linguistic contexts that *para* is used in. It also sheds light on the dynamic and flexible (rather than static) patterns of linguistic structure and human cognition. The conceptual basis can also be used as a pedagogical tool for L2 learners, as we shall see in the next chapter. For now, I will proceed to show a non-exhaustive list of non-spatial usages of *para*. These seem to be more frequent than spatial usages, since the very nature of this preposition is related to motives, intentions, and purposes – that is, it exhibits a considerable level of introspective knowledge in its conceptual structuring. This is reflected in the parameters of Obliqueness and Purpose.

6.2.1 Non-spatial domains of *para*

As just announced, I now turn to analyze some of the prototypical non-spatial lexical concepts that are related to the semantics of the Spanish preposition *para*. The first sense I consider, is the [USE] lexical concept.

According to the *DLE*, *para* is used to determine the use of something. To illustrate this point, consider the following example taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

- (23) Antiséptico, *para* la limpieza de las heridas [USE]
(*Antiseptic, for the cleaning of the wounds*)

In (23) *Antiséptico* elaborates the TR of *para* whereas its prepositional landmark is elaborated by *la limpieza de las heridas*. Trajector/landmark alignment in this case manifests a similar organization as its English equivalent expression *Antiseptic, for the cleaning of the wounds*, since both convey an impersonal perspective, that is, both expressions suggest that the antiseptic is there just *in case*, not because a particular person needs it right now.

Note that English speakers generally use the preposition *for*, alongside with *to* to convey this sense. However, there are some cases in which *for* is the only option to express such meaning as in *What are antiseptics for?* (Spanish *¿Para qué son los antisépticos?*), as compared to **What are antiseptics to?* On the other hand, the Spanish language only has *para* at its disposal to convey that meaning.

Regarding conceptual activation, I think that the parameter that is most directly involved in (23) is Purpose and is evoked by the prepositional phrase *para la limpieza* (*for the cleaning*). This structure is then integrated in the higher-order composite structure *para la limpieza de las heridas* in which the profile of *de las heridas* (*of the wounds*) elaborates the secondary landmark that specifies the thing to which the antiseptic is aimed at. Note that Purpose is accessed directly (rather than via conceptual spreading) due to the very nature of the proto-scene of *para*, particularly because its LM can function as either primary or oblique goal.

On the other hand, English speakers may access the [USE] sense in alternative ways depending on the perspective (personal or impersonal) that the [USE] sense is meant to take. For instance, the English equivalent of (23) *Antiseptic, for the cleaning of the wounds*, makes use of *for* rather than *to* as relational unit. It follows that the parameters that are activated are Oblique goal and Purpose (the latter is a sense-extension of Intentionality and it might receive secondary activation). Obliqueness is represented by the cleaning of the wounds – if they get cleaned, then they can recover faster, hence, the primary purpose of *healing* would be met. On the other hand, I think that the Purpose parameter is reflected on the conceptual nature of the TR, here *antiseptic*. An antiseptic is a chemical used for preventing infection in an injury, especially by killing bacteria – that is, it is made with a specific purpose in mind. Once the antiseptic is applied, wounds get cleaned and then start to heal.

As pointed out by Wierzbicka (1988), there is an impersonal nature behind the use of the English preposition *for*. For instance, the composite structure *for the cleaning of the wounds* refers to a general action and/or purpose rather than to a more specific – personal one. On the contrary, imagine now we say *This antiseptic is to clean the wound*, which in Spanish is equivalent to say *Este Antiséptico es para limpiar la herida*. Under this context, *this antiseptic* represents an instance of a type. The definite article *the*, along with the determiner *this*, are conceptually anchored to the current discourse space and mental

contact that exist between hearer and speaker (Langacker 1991: 96-103).⁹⁹ This in turn, is the reason why it sounds more personal: there is a higher level of definiteness.

As the examples just given above show, the Spanish preposition *para* is the only option to construe each event. On the other hand, English speakers have to distinguish every time they want to convey personal or impersonal expressions involving *to* and *for*. If we take a look at the conceptual basis of *to* in figure 5.3 in chapter 5, we could observe that in an expression such as *This antiseptic is to clean the wound* (Spanish *Este Antiséptico es **para** limpiar la herida*), primary activation falls on the parameter of Primary goal (Purpose in *para*), which is accessed directly rather than concomitantly or through extension, and, as opposed to *for*, Primary goal is a parameter exhibited by the prepositional landmark of *to*, here *limpiar la herida* (*clean the wound*), rather than by a purposeful TR.

In sum, the linguistic distinction in the English language is due to a different *conceptual distribution* of the semantics of *to* and *for* that is reflected in their trajector/landmark alignment. Such conceptual behavior, in turn, amounts to evidence to posit a hybrid status of the Spanish relational unit *para* which hinges between some characteristics of *to* and *for*, particularly primary goal or purpose, and obliqueness, respectively. This hybrid status is also reflected in the personal and impersonal perspectives that the English language can express. We can observe that both English prepositions *to* and *for* manifest implicatures. Now the crucial difference is in the scope of such implicatures, which in line with Wierzbicka (1988), I think it lies in the personal and impersonal characters of *to* and *for*, respectively, as in (23) and in the invented personal-oriented construction that follows that example (*This antiseptic is to clean the wound*). The Spanish preposition *para*, on the other hand, exhibits a hybrid character since it can cover both personal and impersonal implicatures.

Consider another non-spatial usage of *para*. According to the *DLE*, *para* denotes aptitude, willingness or capacity:

⁹⁹ For a definition of current discourse space, mental contact, and a characterization of the definite article *the*, see (Langacker 1991: 96-103).

- (24) La desactivación o desinstalación de programas es una *medida eficaz para acelerar el PC*. [FUNCTION]/[CAPACITY]

(The deactivation of programs is an effective way to accelerate the PC)

Example (24) is similar to (23) in that both are driven by the Purpose parameter which is exhibited as a feature of the prepositional landmark of *para*. In the clause *La desactivación o desinstalación de programas es una medida eficaz para acelerar el PC*, the profile of *una medida eficaz* (an effective way) elaborates the TR of *para* whereas its prepositional landmark is elaborated by the relational profile of *acelerar el PC*. The relation that *para* holds in this TR/LM alignment is driven by the activation of Purpose. Recipient receives secondary activation considering that the PC is the recipient of such an action.

Besides, we should not discard secondary activation of Obliqueness in the semantic import of *para* in (24). The composite structure evoked in *para acelerar el PC* (*to accelerate the PC*), may point to this idea in that once some programs get uninstalled or disactivated, the computer will operate faster.

Another sense I want to present, which I gloss [ABSTRACT TRANSFER], is motivated by spatially grounded scenarios where actual transfer takes place. To illustrate, consider the following *Spanish Web 2011* (*esTenTen11*, *Eu + Am*) corpus example:

- (25) Te mando todos mis mejores deseos *para* ti, y espero que de verdad te recuperes. [ABSTRACT TRANSFER]

(Best wishes *for* you and I really hope that you get well soon)

Examples such as the one in (25) above, are motivated by spatially grounded events in which movement toward a LM is involved. If we go back to example (3) above, we can appreciate an actual transfer in which a sender posted something, in this case a package, to an intended recipient. That very schematic notion of transfer is indeed what provides the image-schematic structure to understand a transfer of an abstract thing such as wishes and feelings (e.g., positive vibes).

In the composite structure *te mando todos mis mejores deseos para ti*, which literally means *I send all my bests wishes to you*, the person who sends the wishes occupies the role of the sender, the wishes are conceptualized as the entity sent, and the receiver is apprehended as

the intended recipient: these are the elements that constitute our notion of conceptual transfer and hence are essential structures within the image schematic structure that is mapped from the spatial domain onto the non-spatial. Now the specific import of *para* in (25) has to do with the metaphorical interpretation of the parameters of Recipient and Direction.

Direction is metaphorically extended in order to understand the transfer itself. The transferred object must move from point A, here the sender, to point B, here the intended recipient. Just like objects in space can undergo movement for a transfer to take place, feelings, thoughts, and emotions are apprehended similarly in that they can also be sent. If I say *My best wishes for you*, I am clearly sending good vibes to my intended recipient and she can actually feel it through intersubjectivity, which is the ever-present and necessary context of a joint attentional scene (see Tomasello 1999, 2003). In other words, abstract things such as feelings can travel intersubjectively from the self to the intended recipient just like a concrete object in the spatial realm can move, or be moved, from point A to point B.

The second parameter that receives activation is Recipient. This parameter is metaphorically interpreted since the receiver in this case is not receiving something which is concrete, but rather abstract. The recipient cannot literally receive anything but feel the positive vibes that are sent. In addition, the receiver might feel herself a beneficiary of such good vibes depending on how close her relationship with the sender is, so secondary activation of the Beneficiary sense-extension unit might be expected.

Note also the impersonal character of *para* in (25) in that it is other-oriented. This might indicate a degree of obliqueness considering that once an intended recipient receives the abstract transfer, it concomitantly serves the ulterior purpose which could be to make the intended recipient feel good, supported, or happy, and boost up her confidence. Thus, Obliqueness and Purpose might receive secondary activation.

The next and last non-spatial lexical concept of *para* in this non-exhaustive list that the present author wants to analyze, can be glossed as [IN RELATION TO]. Consider the following example extracted from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

(26) ¿Qué es *para* ti la solidaridad?
What is for you solidarity?

[IN RELATION TO]

In this sense, as in (15) above with *for*, I think that the parameter that is most directly involved in the figurative conception is Recipient. This comes from the phenomenological experience of being given an object (i.e. transfer) and the manipulation of that object. Such a spatially grounded scenario offers the image-schematic structure to metaphorically extend the Recipient parameter and apprehend the figurative conception in (26). The Recipient parameter in this sense triggers a subjective personal vantage point from which one gives an opinion of an abstract concept in our mind. In the composite structure ¿*Qué es para ti la solidaridad?* (*What is solidarity for you?*) a person asks her interlocutor about her opinion of a concept inside her mental repository – that is, the human conceptual system.

The act of being given an object is followed by the ability we have to scrutinize the object given: we can check its details, interact with it, and the like, since we have control upon it. This last stage of the TRANSFER event, that is, the one in which we have the object in our hands, so we can scrutinize it, might be the image schematic structure that is projected onto the non-spatial realm. However, note that neither the sender nor the transferred object is projected onto the [IN RELATION TO] sense, but only the recipient who has the “object” under control. By the same token, if I asked someone *what solidarity is for her/him*, I am assuming that my interlocutor has indeed such an abstract concept stored in her mind and now I want to know what she thinks about it: the person is actually a recipient of that concept since she has already acquired it.

Note that *para* in this sense, along with English *for*, can be used either personally or impersonally. Example (26) evokes a scene that is other-oriented; but imagine that we say *La solidaridad para mi es amor* (*For me, solidarity is love*); in this way, the expression exhibits a self-oriented character due to the first-person vantage point. However, the conceptual motivation in both examples is the same: people might use the Recipient parameter to characterize the ego in the sense of a “knowledge container”. Note that in the case that we asked someone *what is 2 plus 2 for you?* (*¿Cuánto es 2 más 2 para ti?*), this would sound inappropriate due to the fact that the answer itself cannot be subjective. Everybody would agree that 2 plus 2 equals 4 – that is, an ever-present mathematical truth.

On the other hand, subjectivity comes into play when non-rigid truth is in focus. By “non-rigid” we mean, a flexible truth: something that can be true for a person might not be so for another. If I ask someone what solidarity is for her, she might differ from my own view of solidarity even though we might agree on some points. The same goes for many abstract concepts such as {LOVE}, {HATE}, {ANGER}, {HAPPINESS}, {SADNESS}, among others. It follows from this idea that the parameter of Recipient in the [IN RELATION TO] lexical concept is metaphorically extended and helps us to conceptualize the ego who has gone through certain humanly relevant experiences that have made her develop an abstract concept such as [SOLIDARITY]. In other words, she has been the recipient of certain (subjective) experiences that made her develop that concept. By using the preposition *para* in a construction such as *¿Qué es **para** ti la solidaridad?* people want to know about their interlocutor’s personal experiences.

6.2.2 Temporal behavior of *para*

I now turn to the temporal behavior of *para*. This Spanish preposition, compared to its English equivalent *for*, cannot sanction the [DURATION] sense as in (17), but only the [EVENT] sense, as in (18) above. This behavior parallels its spatial behavior because *para* cannot sanction the [SPATIAL DISTANCE] sense either, like English *for* in (2) above. If we go back to example (2), we can observe that the contribution of *for* in the composite structure evoked in *He was driving a car chased **for** twenty miles by police*, designates the amount of distance travelled by the cars. The conceptualization of spatial distance is mainly driven by the parameter of Orientation (see figure 6.2 above). On the other hand, if we try to translate the expression *for twenty miles* into Spanish, we must say ***por** veinte millas*, ***-a lo largo de** veinte millas*, or even ***durante** veinte millas*, rather than ****para** veinte millas*.

Note that even though the preposition *para* has in its conceptual basis the parameter of Direction, which is similar to Orientation in *for*, it cannot sanction the [SPATIAL DISTANCE] nor the [DURATION] sense.¹⁰⁰ This might be due to lexical concepts, along with parameters – I might add – being considered to be language as well as vehicle-specific (in the sense of Evans 2009). The naïve view of linguistic structure that holds that a language represents an

¹⁰⁰ Both senses can be sanctioned by the Spanish preposition *por* as in ***por** veinte millas* (***for** twenty miles*) and ***por** 5 años* (***for** 5 years*).

inventory of language-specific vehicles encoding cross-linguistically identical semantic units is rejected by the approach to lexical semantics adopted in this dissertation. To illustrate this point, consider the way Spanish and English speakers encode what is ostensibly the same spatial relationship. In order to prompt for the spatial scenes evoked by the utterances in (27), the Spanish lexical concept that I gloss as [PLACEMENT OF ONE ENTITY BETWEEN ONE OR MORE ENTITIES] associated with the Spanish prepositional vehicle *entre* (seen in chapter 4), has to be triggered.

- (27) a. Ella se aparcó *entre* el coche azul y el negro.
(She parked *between* the blue and the black car)
- b. Ella se aparcó *entre* muchos coches
(She parked *among* many cars)

As examples in (27) show, Spanish speakers use the preposition *entre* as the one and only option to linguistically encode these qualitatively different spatial scenes. However, the situation in the English language is different. The Spanish examples in (27) are categorized into lexical concepts of two different kinds in English. This is achieved by using the two distinct symbolic units, here *between* and *among*.

In addition to the language-specific character of lexical concepts, we should also take into consideration the parameters that contribute to the realization of a lexical concept. They are also language-specific, and this is evidenced by the parameters of Orientation and Direction in the conceptual bases of *for* and *para*, respectively. Even though these prepositions share parameters that at first glance can be used interchangeably, the elaboration and extension of those parameters do not work in the same way. It follows from this that parameters must be vehicle-specific (not the other way around). In sum, conceptual parameters that seem to be shared cross-linguistically do not necessarily sanction identical senses.

Now consider an example in which *para* can equate the semantics of the English lexical concept [EVENT], which is achieved (in a distributive way) by *for* in an utterance such as the one below:

- (28) Hoy queda un mes *para* navidad [UPCOMING EVENT]
(We are (just) one month away *for* Christmas)

In (28) the preposition *para* helps the speaker to jointly convey, along with the rest of the elements in the construction, the [UPCOMING EVENT] lexical concept. Under this context, *para* establishes a relation between *Navidad (Christmas)*, here the target event (TE), and the time remaining for this event to happen, here *un mes* (the temporal reference point or RP).

The first thing we need to account for in order to apprehend this temporal conception is temporal cognition. We make use of the temporal unit {YEAR}, whose origo (O) is fixed as *January the 1st*, to temporally anchor the relation between the TE (*Christmas*) and its RP (*one month*) to the transience type of duration. Hence, we make use of the extrinsic temporal frame of reference (t- FoR) since we are dealing with *periodicities*. In addition, I think that we also make use of the *deictic* t-FoR (see Evans 2013: Ch. 4), whose O is constituted by what James ([1890]/1950) refers to as *nowness* and is reflected in the egocentric experience of now (here the term deictic). It follows that the O of this t-FoR is related to the phenomenologically real experience of anisotropy: the inherent asymmetry of the passage of time. This is reflected in the felt distinction between future (present) and past. The O in this temporal reference is set one month *before* Christmas since it is where the subject in (28) is spatio-temporally located.

In the composite structure *Hoy queda un mes (just one month away)* in (28), we co-locate the ego with respect to an upcoming event – that is, an event which is relatively close. The upcoming event is then specified by the prepositional phrase *para Navidad (for Christmas)*, where the event is conceptualized as being one month ahead from the current temporal location of the ego. This, in turn, allows us to arrive at the conclusion that the speaker is temporally co-located with respect to the month of November, probably on the 24th. It follows that *Hoy queda un mes* is apprehended as the reference point (RP) from which the target event (TE), here Christmas, is located using an ego-based temporal strategy. Alternatively, and as put above, we could also attribute this temporal location to an extrinsic strategy where we use a repeatable event-reckoning system to locate the TE with respect to its RP and further anchor it to the duration transience type. This alternative in terms of temporal location, works irrespective of the subjective experience of {NOW} since its O is external to the system, rather than internal.

Regarding the specific contribution of *para* in (28) we could say that there is activation of the parameters of Direction, Purpose, and Obliqueness. Direction gets extended since it allows us to conceptualize the passage of time as well as to locate the ego which can be either approaching the TE or static waiting for the event to come: the MOVING EGO and MOVING TIME metaphors both involve direction (and movement) of one of their constituents within an egocentric temporal strategy.

The activation of Purpose and Obliqueness, I think, may vary depending on what is the real focus of the speaker in (28). If the speaker conceptualizes the prepositional landmark *Christmas* as primary goal, then Purpose would achieve primary activation whereas Obliqueness receives secondary activation. Obliqueness in this sense points to the sub-events within the {CHRISTMAS} cognitive model/script such as {GIFT TIME}. On the other hand, if the speaker in (28) conceptualizes Christmas as an oblique goal, primary activation falls on the parameter of Obliqueness while Purpose receives secondary activation. Under that perspective, Christmas is apprehended as something which facilitates an ulterior purpose, such as sharing a lovely moment with the family and enjoy dinner together. Such a difference in conceptualization may amount to evidence for the hybrid-like character of the Spanish preposition *para*.

Consider now another example taken from the *Spanish Web 2011 (esTenTen11, Eu + Am)*:

- (29) Top 10 juegos iPad *para* Navidad [EVENT]
 (*Top 10 iPad games for Christmas*)

To understand the temporal conception in (29) it is first necessary to use the notion of extrinsic temporal reference. The TE in (29) corresponds to the *top 10 games* that are available for iPad. These are conceptualized as possible things that people want as a Christmas gift. Christmas, on the other hand, is the RP that locates the TE (which is of course a time before Christmas). We also make use of an O which is fixed as *January, the 1st*. This (temporal) element anchors the relation between TE and RP to the transience type of duration and begins the count in an event-reckoning system. The temporal structure that constitutes the “temporal semantic scaffolding” in (29) can be glossed as [TE FIXED TO AN RP IN A REPEATABLE EVENT-RECKONING SYSTEM].

Now the parameters of *para* that could be mostly involved in the temporal conception in (29) are Obliqueness, Purpose, and Direction. Obliqueness is reflected in the fact that one event might facilitate another. Christmas in (29) is conceptualized as a great occasion for iPad gamers to acquire one (or more) of the top 10 games for that device. On the other hand, the activation of Purpose is reflected in the gamer's primary goal to get one of the top 10 games for Christmas. Finally, Direction is activated due to the temporal projection existing behind thinking of a product that can be given for Christmas – that is, a future event. For instance, if say *Quiero un portatil para navidad (I want a laptop for Christmas)*, I clearly point to an upcoming event which may offer me the opportunity to acquire what I want.

I now finish this analysis by showing the [POINT IN TIME] sense of *para*, which similarly to English *to*, is used to express fine-grained temporal reference. To illustrate, consider the following *Spanish Web 2011 (esTenTen11, Eu + Am)* corpus example:

- (30) Faltaban *pocos minutos para las ocho* de la tarde y los dos equipos ya
estaban en el terreno de juego [POINT IN TIME]
(It was *few minutes to/till 8 p.m.* and the two teams were already in the pitch)

As mentioned earlier, events that involve fine-grained temporal units such as seconds and minutes, are fixed with respect to the 12- or 24-hour cycle in a repeatable time-reckoning system. In (30), the RP is evoked in the clause *pocos minutos para las ocho de la tarde (few minutes to 8 p.m.)*. Its O is fixed as 00:00 and anchors the TE (i.e. the sporting event) to the transience type of duration.

Now if we focus on the composite structure *pocos minutos para las ocho de la tarde (few minutes to 8 p.m.)*, we can appreciate how the TR of *para* is elaborated by the profile of *Faltaban pocos minutos (few minutes)* while its LM is filled by *las ocho de la tarde*.

The activation of *para* in (30) falls on the Direction parameter and then gets extended to facilitate the conceptualization of the passage of time in a sort of linear manner that moves forward (i.e., temporal evolution). The nominal *pocos minutos* stands for the elapse of time that exists until it is *8 p.m.*, which according to the maximal discourse scope evoked in (30), is the time at which the match begins. From this idea, we could say that Obliqueness

may receive secondary activation since the football match, which is conceptualized as the TE and hence the thing that acquires primary focus, is dependent on the time at which it is supposed to start. Once the time is met (obliqueness) the main event can take place (primariness). Lastly, the schematic temporal structure that might underlie example (30) could be glossed as [TE FIXED TO AN RP IN A REPEATABLE TIME-RECKONING SYSTEM].

The present section aimed to shed some light on the conceptually complex behavior of *para* regarding its temporal domain. The conceptual basis proposed above for *para* seems to be suitable for a clear understanding of its semantic spectrum. It also helps us to spot differences and similarities with respect to its English equivalent *for* (and *to*). Lastly, the conceptual basis also provides a psychologically and cognitively plausible account of language use and amounts to evidence for the hybrid character of this Spanish preposition.

6.3 Summary

This chapter has presented a contrastive analysis of the English preposition *for* and the Spanish preposition *para*. We saw that *for* is mainly integrated with lexical concepts that are related to reasons, purposes, and intentions. This in turn, might be due to the prepositional landmark of *for* being conceptualized as an oblique goal. Obliqueness seems to be key in the conceptual basis of *for* and is apprehended as a functional element. This parameter represents one of the main distinctions between the prepositions *to* and *for*: primariness vs. obliqueness. We also saw the temporal behavior of *for* and could appreciate the amount of purely temporal cognition that is needed for temporal conceptualization, along with other types of knowledge such as spatio-conceptual structure and conceptual metaphor (and metonymy). These types of knowledge may help us to approach a more complete account of temporal semantics. As shown in this chapter, the parameter that might be mostly involved in the space-time mapping of *for* is Orientation, considering it resembles one of the transience types of time, which is succession (anisotropic may also share substructures with this parameter). The *for...to* construction was also briefly analyzed and the main idea that can be taken from this is that the parameters of Oblique goal and Primary goal play a substantial role in the conceptual subordination that is involved in these types of constructions. On the other hand, the chapter also presented the analysis of the Spanish preposition *para*, which seems to be constituted in a hybrid-like manner in that it exhibits characteristics that can be found separately in the English *to* and *for*. This could be due to the proto-scene of *para* where its LM might or might not get highlighted. That behavior, in turn, makes the conceptual basis of *para* be structured by conceptual parameters such as Purpose and Obliqueness. This explains why *para* can, at times, be the equivalent to some English expressions that involve the prepositions *to* and *for*. The peculiar conceptual structuring of *para* not only is reflected in spatial and non-spatial instances of language use, but also in temporal ones: *para* is used similarly to *to* and *for* in that it partially sanctions temporal lexical concepts such as [UPCOMING EVENT] and [POINT IN TIME].

Chapter 7: Discussion

The analysis presented in chapters 4, 5, and 6 is an attempt to understand more clearly how spatial language works and how spatial configurations, that is, the internal structures that are abstracted away from humanly relevant interactions in space called proto-scenes, are the bedrock and conceptual source for processes such as elaboration and extension – which broadly speaking – deal with literal and figurative conceptions, respectively. The analysis also helps us to appreciate how distinct but semantically related parameters get activated differently depending on the linguistic context that prepositions are integrated in.

Proto-scenes not only are fundamental to spatial language, but to word meaning in general. In addition, constructs such as *situatedness*, *scope*, *prominence*, *specificity*, *perspective*, *figure/ground alignment* and *force dynamics* are supposed to represent cognitive abilities that allow us to achieve those abstractions and functional components that a given proto-scene may offer to the human conceptual system. This takes us to a view of language that is based on conceptualization and enactment, rather than purely on perception. This is the reason why the present research assumes an *enactive* approach to mind and language (following Thompson 2007, 2005; Di Paolo and Thompson 2014; see also Varela, Thompson and Rosch 1991), in which cognitive processes and structures emerge from recurrent sensorimotor patterns of perception and action. Moreover, our nervous system should not be apprehended as an information processor (in the computationalist sense), but rather as a *meaning maker* (Thompson 2007). This view of phenomenology (following Husserl (1980) and Merleau-Ponty (1962)) as the philosophy of the *lived body*, deserves great attention if we want to fully account for the structuring of the mind, spatial language, and word meaning in general. Lastly, and linked to the importance of situated action and introspection, is the claim that feelings are not self-enclosed but present in an “affective atmosphere” which deeply influences how we perceive and respond to experience. In other words, within phenomenology, we must also consider such things as feelings and emotions (see Damasio 1999 for such a view), which constitute the *aesthetics* of phenomenological

human experience (in the sense of Johnson 2007, 2005). Moreover, feelings and emotions have their roots in autopoietic and metabolic processes (see Maiese 2014).¹⁰¹

The analysis of English and Spanish prepositions presented in this dissertation, posits a challenge to the static view of grammar in that parameters are flexible bundles of schematic information which constitute the semantic pole of a symbolic unit, including more complex assemblies such as sentences. Language is then not seen as a language acquisition device in the brain (Chomsky 1995) but rather as a manifestation of how human cognition works. Human cognition, in turn, exhibits a high level of flexibility, including the *dark matter* (Everett 2016),¹⁰² which allows us to go through processes that involve “cognitive plasticity” such as enculturization (Thompson 2007: Ch.13). Such a cognitive diversity (see for instance Levinson 2003) might in turn explain how humans can arrive at semantically similar concepts through conventionalized and entrenched space-rooted symbolic units, which are then extended onto the non-spatial and temporal domains.

Space provides human beings with a rich conceptual stock that the various cultures around the world use differently. This is due to the communicative needs and cultural scripts they have (Everett 2009, 2012; see also Kövecses 2005). This is the reason why I think, following Evans (2009), that not only lexical concepts are language/culture-specific, but so are parameters since they get activated and extended differently depending on the language one speaks. For instance, two parameters that partly constitute the conceptual basis of *to* are *Orientation* and *Location*. They partly allow us to interpret temporal conceptions evoked for example in utterances such as *See you at a quarter to 1* in that Orientation is implied in the forward motion of time which is approaching *1 o' clock*, whereas Location helps English speakers to support that temporal conception by temporally co-locate the event (i.e. meeting) with respect to the temporal matrix, here the 12-hour clock. Recall that this lexical concept is glossed as [POINT IN TIME].

¹⁰¹ Autopoietic processes have to do with the creation or reproduction of an autonomous system. And metabolic processes have to do with how an autonomous system obtain energy from organic molecules (See Thompson 2007: Ch. 5 for details on autopoiesis.)

¹⁰² The term *dark matter* is a complex notion developed in Everett (2016) which deals with, at the very least, “personal interpretations of experiences, acquired concepts, and their cultural-internal interpretations” (*ibid.* 18).

On the other hand, the Spanish preposition *para*, which is equivalent to English *to* in some respects, is also used to convey the [POINT IN TIME] temporal lexical concept, but it does so through an alternative activation route, as when Spanish speakers say *queda un cuarto de hora para la 1* (*a quarter to 1*). Now if we take a look at the conceptual basis of *para* in figure 6.3 (chapter 6), we can see that Location is not present, hence, it cannot be considered for this temporal realization. Nevertheless, *para* conveys the [POINT IN TIME] lexical concept due to the activation of the *Direction* parameter as seen in example (30) in chapter 6 (Obliqueness may receive secondary activation). In this sense, the partial supportive and structural role of spatio-conceptual structure in temporal conceptions of this type is analogue to succession and anisotropic. Recall that this latter transience type consists of the felt experience that time evolves from future to present to past. This “arrow of time” (in the sense of Eddington 1928), exhibits correspondences with substructures of the semantics of *para*.

Note that different languages can convey semantically similar lexical concepts; nevertheless, the way in which they arrive at the intended meaning and the conceptual nature of the parameters involved in a given construction are culturally driven. We can say, then, that knowing a language is to know the culture in which it is embedded (Everett 2009, 2012). Take for instance Chilean and Colombian Spanish. In Chilean Spanish and some other types of Spanish as well, people say *Estoy en el cine* (*I am at the cinema*), whereas in some parts of Colombia people say *Estoy en cine* (*I am at cinema*) – they omit the Spanish definite article *el* (*the*). This in turn, is due to the tight link that exists between mind, culture, and language (i.e. cultural conventionalization). What sounds completely normal for some Colombian Spanish speakers, sounds incomplete for a Chilean Spanish speaker like me. The same goes for temporal expressions. Peninsular Spanish speakers, for instance, say *La 1 menos cuarto* (literally translated into English as “*a quarter less to 1*”), whereas most countries in Latin America say *Un cuarto para la 1* (*a quarter to 1*). In addition to cultural aspects, entrenchment is also key since we deal with different expressions of fairly similar temporal lexical concepts in which the MOVING TIME metaphor is likely to be involved, along with temporal structure in the form of an extrinsic temporal reference that can be glossed as [TE FIXED TO AN RP IN THE 12-HOUR CLOCK SYSTEM].

Now the general picture of spatial language and its non-spatial usages comes from the fact that once we thoroughly analyze the spatial roots, we are able to understand figuration. If I say for example *I am in love*, the preposition *in* clearly does not convey a spatial scenario but a psychosomatic state whose motivation comes from the very interaction we have with containers in general, and this might not be due to the Enclosure parameter (see figure 2.1 in chapter 2), but because containers offer certain *conditions* that *affect* the entity contained. If I put a cheese sandwich in my backpack to store it on a hot day, it will be rotten the next day, whereas if I put the cheese sandwich in the fridge, it can last longer. Containers do provide affecting conditions to the entity contained, and this in turn allows us to talk about things that affect us by using the prepositions *in* (and *en* in Spanish) metaphorically, as in *Estoy en problemas* (*I'm in trouble*) and *Estoy en shock* (*I'm in shock*). From this it follows that figuration is ultimately a result of humanly relevant interaction with the world in the sense of proto-scenes. These interactions provide us with the *image-schematic* structure to talk about, and hence conceptualize, abstract domains.

As mentioned earlier, in addition to the embodied character of word meaning and its manifestation in the process of parameterization, we must also add, following Barsalou (1999, 2003, 2008) that this process, along with our notion of proto-scenes, is not only the result of perception alone but also of *situated action* and *introspection*. Therefore, we can encounter parameters such as Primary goal and Obliqueness in English *to* and *for* respectively (and both in the case of Spanish *para*),¹⁰³ which are abstract concepts that have to do with intentions, motives and purposes. It follows that the development of *all* concepts – concrete and abstract – needs perception, situated action, and introspection for their proper acquisition. In other words, they all need situational *content*, but their situational *focus* is different. As previously mentioned, abstract concepts are indeed more focused on situated action and introspection since the immediacy of perception is absent. This in turn, is evidenced in the fact that if we think of an abstract concept such as {HAPPINESS}, we are likely to recollect a certain positive state of mind rather than visualizing just one thing, like imagining a guitar. When imagining a guitar, we also make use of event-like and introspective structure (in the case we have emotions attached to a specific guitar), but we

¹⁰³ Primariness is captured by the parameter of Purpose in the conceptual basis of *para*.

still can imagine it just like it is, because is a concrete object that offers specific affordances to interact with.

We can now get a picture of human cognition and language as totally interwoven, flexible and dynamic, and based on perception, situated action and introspection. Grammar is the conceptualization (Langacker 2000), through enactment, of interaction in space. Humanly relevant interactions start from the very beginning in the form of {CONTAINMENT}, considering we as fetuses are in the womb. These pre-conceptual stages end up structuring human cognition and language in the form of image-schemas way before the first words are taken up.

Space and interactions are then the bedrock from which abstractions in the form of conceptual parameters emerge and are responsible for the human capacity of moving from the spatial to the non-spatial. If I say *the cat is climbing up the tree*, it is because I can see the cat doing the action right now (in the case that I am not imagining it) – the sentence is based on spatial factuality, but if I say *She is climbing up the social ladder*, the meaning of the particle *up* is clearly not literal but metaphorical. Nevertheless, the non-spatial utterance is ultimately motivated by spatial usages of *up*. Interestingly, a child may take considerably longer to say that someone is climbing up the social ladder than saying that a cat is climbing up a tree. This in turn, might amount to evidence that figurative language use comes after spatial affairs are fairly entrenched in the infant's mind.

We can observe that non-spatial domains are notably motivated by proto-scenes, even in prepositions that seem to have a high frequency in non-spatial constructions such as the English *for* and Spanish *para*. In addition, proto-scenes also help to structure the temporal domain. However, temporal cognition is required (following Evans 2004, 2013; Galton 2011; Pöppel 2004, 2009) to a large extent to apprehend temporal linguistic realizations. This special status of Time comes from the very nature of it in structuring human cognition since it serves as a pre-semantic operation in terms of temporal integration systems at the neuronal level. We do need time for conceptualization. After all, spatial relations could not be conceived without the temporal structure to do so. In this regard, I assume that time is more basic than space even though both are the foundations of human cognition. Conceptualization and enactment occur through conceived and processing time (Langacker

1987) within the three-fold structure of time-consciousness (Husserl 1991) which has to do with *primal impression* – akin to the notion of {NOWNESS}, *retention*, which deals with the just-past event structure, and *protention*, which has to do with the immediate future – what is about to happen. This in turn, goes hand in hand with Pöppel’s idea (2004, 2009) of the 3-second window.

Interestingly, despite the assumption about the more basic or essential import of time compared to space, temporal concepts may arrive later than spatial ones due to the immediacy of perception. Recall that space is isotropic whereas time is not. This difference is partly what makes us conceptualize time in terms of space, and temporal duration in terms of spatial distance. Such a mapping is reflected in the prepositional usages shown in the analysis in that there is an invariance in image-schematic structure that is mapped from the spatial organization of a given conceptual basis onto its temporal domain, as in when we say *The toy is **between** the teddy bear and the candy box* to refer to the mid-position in which the toy is placed, and *That event happened **between** the years 1999 and 2000*, in which we temporally co-locate an event, which lasted for one year, with respect to its temporal landmark, here *1999 and 2000*. Note the invariance in that we preserve cognitive topological structures (Lakoff 1990) to locate an attentional figure in the middle of two reference points. Now my point about the special status of Time with respect to other non-temporal domains (i.e., abstract domains) is that we do need temporal cognition and this is reflected, for instance, in concepts such as {YEAR}, {WEEK}, {MONTH}, {HOUR}, {MINUTE}, among many others. This in turn, may help us to approach a more complete account of the temporal semantics of prepositional usages. In addition, we must also consider the schematic temporal structure that is exhibited by the three temporal reference strategies (i.e., ego-based, event-based, periodicity-based). Nevertheless, there is a strong tendency to conceptualize time in terms of space and this is likely to be due to temporal experience being fundamental to the construction of events. Temporal representation has to be supported by correlated spatial experience and ensuing spatial representation (Evans 2013).

7.1. Word meaning and spatio-conceptual structure

The perspective of language taken in this research is clearly opposite to what is known as literalism, which according to Recanati (2004), is the dominant position in modern linguistics with respect to word meaning, sentence meaning, and speaker meaning.¹⁰⁴ Literalism takes the traditional distinction between semantics – the context-independent aspects of meaning – and pragmatics – the context-dependent aspect. Under this view, word meanings are assumed to be fixed and stable. However, that vision carries some problems because of the following reasons. The first issue has to do with the truth evaluable aspect of sentence meaning. To see this point, consider the example below:

(1) Málaga is 200 kilometers from Córdoba

The utterance above can be evaluated according to whether it is true or false with respect to the world's state of affairs. In this case, the proposition expressed in (1) is true. However, that proposition is independent of any given context of use. To show this fact, now consider the hypothetical scenario in which two interlocutors in (2), who are driving to Málaga from Córdoba, wonder whether they have enough gas to make it.

(2) A: Do you think we can make it to Córdoba without filling up?

B: Málaga is 200 kilometers from Córdoba

According to literalism, the sentence expressed by B means what it does – that Málaga is 200 kilometers from Córdoba. However, it means more than the literal meaning. This is due to the implicatures that the sentential context and pragmatic principles or maxims and metonymy (Barcelona 2003, 2007, n.d.) bring to the front. The implicatures behind B's expression is that they might not reach Córdoba unless they first get more gas. The speaker meaning is then a consequence of interpreting the communicative intention of the speaker's utterance in a given context.

We can see, then, that under the view of literalism, words have context-independent meanings, which in turn would fall under the purview of semantics rather than pragmatics. Such separation between semantics and pragmatics might indeed be illusory (Clark 1996;

¹⁰⁴ The distinction between sentence meaning and speaker meaning was introduced by the British philosopher Paul Grice (1989).

Coulson 2000; Croft 2000; Lakoff 1987; Langacker 1987). Take for example the word *close* in (3) below:

- (3) a. Lucy *closed* the book.
- b. Lucy *closed* her mouth.
- c. Lucy *closed* the door.
- d. Lucy *closed* the curtains.
- e. The surgeon *closed* the wound.

As noted by Searle (1983), in examples like these, the meaning of *close* is a function of what he refers to as *background* – a construct akin to Langacker’s (1987) encyclopedic knowledge. The different ways in which we can close things is a function of our encyclopedic knowledge of the world: we know about experiences that involve different sorts of operations. Therefore, words provide access to encyclopedic knowledge which is non-linguistic (i.e., conceptual) in nature and this access is a function of the context in which the word is embedded. The linguistic context serves to *narrow down* the sort of encyclopedic knowledge to which *close* relates in each example. The protean nature of words is then context-dependent since words offer a vast semantic potential that the present research captures by using the notion of conceptual basis. Such a conceptual basis does need sentential context in order to highlight one or more attributes in a situated linguistic event.

A possible solution to the many entries or senses (variations of word meaning which are stored in long-term semantic memory) that a given word such as *close* can have, is to adopt the Sense Enumerative Lexicon approach, developed in the pioneering work on lexical semantics by James Pustejovsky (1995). However, and as observed by Pustejovsky, even such an account cannot predict the creative use of words in novel contexts. It follows that each unique instance has a distinct utterance context that highlights specific attributes within the semantic potential of words (i.e., a word’s conceptual basis). To take a Sense Enumerative approach would be a mistaken approach since it implies sanctioning an infinite proliferation of word senses which would be stored in long-term semantic memory. Such a position is not psychologically plausible; that is why the prepositional analysis presented in chapters 4, 5, and 6, emphasizes the importance of elaboration and extension,

as well as sentential context at the moment of highlighting the parameters that are most directly involved in a given construction. Language is structured but also highly flexible and dynamic, just like the autonomous system-environment coupling is when it comes to phenomenology. There must be dynamicity and “ecological structures”.

An even further challenge for literalism has to do with figuration, which has been referred to as the “defective” use of literal language (Searle [1979] (1993)). This view sees figuration as a function of language use, and thus, falls under the view of pragmatics rather than semantics. We must first understand what the sentence means and then interpret the speaker’s intended meaning in a non-literal way. However, and as shown by Gibbs (1994), language users appear to be equally as efficient in apprehending literal and figurative conceptions. The challenge of literalism is then to work out the difference, if any, between the role and function of literal conceptions and figuration. To illustrate, consider the following utterance:

(4) Gary’s mother is a witch

The utterance above clearly does not mean that Gary’s mother is a witch, in the sense of a green-skinned woman who can put spells on people and curse them. Rather, the meanings associated with the profiles of *Gary’s mother* and *witch* are integrated with the predicative nominative construction, which might be glossed as “[SUBJECT is an NP]” and it informally means that “The subject is a type of the entity specified”. To make this point more clearly, consider the following utterance below:

(5) Gary’s mother is a teacher

From the utterance in (5), we as language users can derive that Gary’s mother is included in the category of those whose professional career is teaching, and that this situation persists through time.¹⁰⁵ Note that the same construction cannot convey a class-inclusion semantics for the example in (4). We can observe, then, that the ultimate challenge for literalism is to account for the variation in word meaning in that there must be an explanation about why

¹⁰⁵ According to Langacker (1991) the copular verb *be* encodes the “continuation through time of a stable situation characterized only as a stative relation” (*ibid.*65).

(4) means something other than what it literally says, while (5) means what it does literally appear to say.

As we saw above, the protean nature of words neither can be properly described by literalism nor by the Enumerative Sense approach since words exhibit (significant) variation across utterances. As Jean Aitchison puts it: “Word meanings cannot be pinned down, as if they were dead insects. Instead, they flutter around elusively like live butterflies” (1996: 39-40). Work from cognitive psychology (e.g., Barsalou 1999, 2003, 2008; see also Zwaan 2004) points out that words provide access to simulators (i.e., conceptual structure which is non-linguistic in nature). These are large-scale coherent bodies of body-based knowledge. Crucially, this knowledge is of different types due to variation in situational focus (in the sense of Barsalou and Wiemer-Hastings 2005). Nevertheless, it comes from the same situational content that is based on perception, situated action, and introspection. This allows human beings to create embodied simulations (Bergen 2012; see also Bergen and Chang 2005). The semantic potential or conceptual basis of a word, then, is primarily non-linguistic in nature. Words under this view are points of access (Langacker 1987; see also Evans 2009) to a conceptual structure whose active zone is context dependent. The semantic contribution of words is context-induced since the parameters that constitute the conceptual basis of a given word (and cognitive models and frames in the case of open-class items) get activated differently depending on the sentential and situational contexts.¹⁰⁶ This brings the consequence that a conceptual basis of a word is never realized completely (i.e., full sanctioning) but its realization involves only the contextually relevant aspects that are most prominent in a situated usage event.

So far, we can appreciate the existence of two important systems – the conceptual and the linguistic. In line with Barsalou (2003, 2008), the reenactment of perceptual, motor, and introspective states to achieve embodied simulations consists of knowledge of different types that populate the conceptual system. From this idea it follows that words provide access to different types of conceptual contents that might be broadly divided into rich vs.

¹⁰⁶ See Clark (1996) for details on joint action along with other background factors in linguistically mediated communication.

schematic. Open-class words, particularly nouns, verbs, and adjectives, are considered as providing rich conceptual content, whereas closed-class items offer a *narrower* access, and hence, provide schematic content (Talmy 2000, 2007). Note, however, that even among these rich word classes, the content is different since the situational focus varies. Nouns are based more on perception and situated action than on introspection (if it is a concrete entity). Verbs are mainly focused on motor states (situated action), and adjectives – depending on whether they are concrete or abstract – are more based on perceptual and introspective states.

When it comes to closed-class words such as prepositions, conjunctions, pronouns, among others, there is a more schematic rather than rich conceptual structure. Informally speaking, we can note that such a distinction is reflected in the psychological fact that if someone asks us to imagine *a big green lizard that spits fire*, we can certainly get to the mental picture of it due to the adjectives *big* and *green*, the nouns *lizard* and *fire*, and the verb *spit*, these provide rich conceptual structure to achieve this simulation. On the contrary, if someone tells us to imagine the pronoun *she* or the preposition *between* in isolation, we might get to a more schematic embodied simulation of a non-specified female entity for *she*, and a spatial relation between (at least) three things – one entity located in the middle of the other two – for *between*. Now note that just as open-class words manifest different situational focus and thus type of knowledge, so do closed-class items. This clearly points to the fact that encyclopedic knowledge consists of a large-scale body of coherent representations of the world's affairs (i.e., understanding) that emerge from different types of conceptual knowledge.

In the case of prepositions (and particles such as *up*), I think that they are mainly structured by what I call *spatio-conceptual structure*, considering that space (following Talmy 2000) provides a unique sort of conceptual structure. It follows that the relational character of phenomenology in the sense of the connections existing between objects in space and human interaction, constitutes the bedrock of spatial language in the format of proto-scenes, which as mentioned throughout this research, are the humanly relevant interactions in space where abstractions as well as functional elements are derived. However, even though prepositions and particles are mainly configured via perceptual and motor states,

introspective structure is also present in some parameters and sense-extension units shown in the analysis such as *Intentionality*, *Primary goal*, *Obliqueness*, *Purpose*, *Vector*, and *Futurity*. Thus, parameters that are non-spatial in nature also contribute to the conceptual bases of space-rooted English and Spanish prepositions like *to*, *for*, *a*, and *para*.

Even though prepositions and closed-class elements in general give access to a schematic conceptual structure that is primarily based on spatio-conceptual information, we should not regard them as static and fixed due to the fact that they constitute the “semantic scaffolding” – so to speak – of a cognitive representation (Talmy 2000) (i.e., conception). Take for instance the utterance given above, *a big green lizard that spits fire*, in which the closed-class elements are the indefinite article *a*, the third-person inflection *-s*, and the demonstrative *that*. Now imagine we change the open-class words and say *a small gray mouse that eats cheese*. The conception of such an utterance results in a different embodied simulation namely because of the open-class words (*small*, *gray*, *mouse*, *eat*, and *cheese*), whereas the semantic scaffolding remains the same in that we are still talking about an unspecific instance of a type that exhibits a specific quality and/or behavior. This in turn, is the main reason to keep the traditional distinction of open and closed-class vehicles with the extra component which is that these groups of words provide access to rich and schematic conceptual structure, respectively. This might be due to the difference between broad and narrow access to conceptual structure (See Morras [in press] for such a view).

The idea suggested above goes contrary to some cognitive linguistic scholars such as Evans (e.g., 2009, 2010b, 2013), who claims that closed-class vehicles do not provide access to conceptual content but encode purely linguistic content.¹⁰⁷ I think that closed-class items do offer access to conceptual structure, but this conceptual structure is of a different kind, and is reflected in the way prepositions are distributed across a given composite conception. To illustrate this point, consider the following example:

(6) a. She is going *to* the beach right now [FORWARD MOTION]

((*Ella*) va *a/para* la playa ahora)

¹⁰⁷ According to Evans (2009), conceptual content is “the nature of the knowledge encoded by a cognitive model” (*ibid.*107).

- b. She is studying *to* get her degree [PURPOSE]
 ((*Ella*) *está estudiando para obtener su grado*)
- c. She is *to* the right of her teacher [LOCATION]
 ((*Ella*) *está a la derecha de su profesor*)
- d. She feels quite attached *to* me [EMOTIONAL ATTACHMENT]
 ((*Ella*) *se siente muy apegada a mi*)

Prepositional vehicles do provide access to encyclopedic knowledge, but this is of a more schematic type than for example, the semantics evoked by a simple noun such as *car*, which is imaginably easier due to its highly rich and detailed conceptual content.

On the other hand, prepositional vehicles also manifest a semantic potential from which literal and figurative conceptions are achieved through elaboration and extension, respectively. In (6a) the parameters that are mostly involved and distributed along the sentence are *Orientation* and *Vector*, considering that the TR is approaching (this involves orientation and forward motion) its LM. In (6b), the preposition *to* acquires a complemental function and activates the *Primary goal* parameter as the main semantic contributor to understand the purpose that leads the TR to attain its LM. In (6c), *to* highlights the *Location* parameter in order to understand the location of the TR with respect to its LM. Finally, in (6d) *to* is integrated in a figurative conception which activates, and extends, the *Attachment* parameter to apprehend the fact that the TR exhibits psychosomatic states such as affection toward its LM.

Following Barsalou (1999), all concepts are simulators. Simulators are schematic memories of perceived events that allow us to produce simulations that are always partial and sketchy, never complete. Linguistic symbols develop together with their associated perceptual symbol. For Barsalou, linguistic symbols resemble perceptual symbols in that they also are schematic memories of perceived events. They develop in similar fashion. Hence, there are simulators for words that become linked to simulators for entire entities or events. Yet there are also linguistic simulators that become associated with other aspects of simulations (*ibid.* 592); these include properties (e.g., *red*), manners (e.g., *clumsily*), relations (e.g., *to*), and so

forth. This evidence from cognitive psychology supports the idea that all lexical concepts offer access to conceptual structure that *varies* in richness.

Without access to encyclopedic knowledge of the schematic type, particularly spatio-conceptual structure, a preposition such as *to* could not be properly realized and hence would not acquire any situated semantics. Words of any type, then, are *contextual expressions*: they are never completely meaningful independent of the utterance in which they are embedded. Such dependency is deeply related to the encyclopedic knowledge to which words provide access to, as well as to the para-linguistic contexts, such as prosody. All these factors together drive what is known as *interpretation* (See Evans 2009: Ch.13 for details on this conceptual process.)

In the final analysis, we can indeed observe that prepositions provide access to spatio-conceptual structure, which is a type of knowledge that comes from the phenomenology of the lived body and is manifested in parameters such as *Attachment, Separation, Inclusion, Occlusion, Orientation, Location*, among others. After all, space provides human beings with a considerable number of image schemas, which might be considered as the bedrock of spatio-conceptual structure. Spatial relations become parameterized in the semantic potential of spatial language. This is not to say, however, that other grammatical categories lack spatial grams (in the sense of Svorou 1994). For instance, a noun such as *table* has the parameter of *Flat Surface* (i.e., horizontality) as a functional category that must be included in its semantic description, if we really want to understand how people properly interact with tables. On the other hand, a verb such as *jump* does evoke in its semantics image schemas such as {UP} and {DOWN}, implicit in the very action of jumping. The idea I want to emphasize is that the amount of spatio-conceptual structure is higher in prepositions than in other grammatical categories and this is due to the fact that they mostly have to do with spatial relations, rather than with pure objects, feelings, or actions.

Once the spatio-conceptual structure is parameterized and entrenched, the conceptual basis that emerges is a mental representation of a lexical item – that is, speakers store information of a given word in long-term semantic memory. Speakers do have a notion of what a word such as *between* means in isolation – they have a *lexical representation* of it. With the passage of time and practice, young speakers start developing this conceptual basis further

as they encounter different usage contexts for a preposition like *between*, *among* or *amid* (and *entre* in the case of Spanish speakers). This mental representation is then the main motivational factor for apprehending figurative and temporal usages. This in turn, may explain why there is invariance in terms of image-schematic structure that is preserved when we move from the spatial to the non-spatial or the temporal domain.

7.1.1 The functional nature behind spatial semantics

I now want to briefly remark some key ideas on how space provides spatio-conceptual structure, which can be understood as spatio-topological relations of some sort, as illustrated for the English and Spanish prepositions analyzed in this research. As noted earlier, in order to fully understand and employ spatial lexical concepts of a given prepositional vehicle, language users must also allow for non-spatial parameters that form part of the conceptual basis of prepositions. The *functional nature*, then, comes from the fact that such non-spatial parameters are functional consequences of humanly relevant interactions with spatio-topological properties. However, space-rooted parameters like Central position, which partly structures the conceptual bases of *between*, *among*, and *amid*, can also be considered a functional consequence of an entity that is placed in between two or more things. In addition, such a configuration not only would involve human interaction but object-like, as in *My car is parked **between** the red truck and the blue Volkswagen*. Hence, functional elements, even though they are likely to be non-spatial, also imply situated spatial relations that emerge as consequences of an already established spatial organization. Functional understanding is required if spatial lexical concepts are to be correctly interpreted in context.

As put in the work of Herskovits (e.g., 1986, 1988), the traditional view posits that the “basic” function of the senses or lexical concepts associated with prepositional vehicles is to encode purely spatial relations. Recall that such a vision, Herskovits refers to as the *simple relation model*,¹⁰⁸ and states that the semantic contribution of any prepositional vehicle relates to spatio-geometric properties which generally involve notions such as dimensions, axes or proximity (see Bennett 1975 for representative examples). However, and as noted by Herskovits (1988), the simple relation model is unable to account for the

¹⁰⁸ For a survey of the descriptive inadequacies of that model see Herskovits (1988).

range of spatial representations that prepositions can designate. By the same token, Vandeloise (1991, 1994) argues that any account of lexical semantics that leaves aside the importance of the functional nature of spatial language fails to properly account for how they are actually employed.

In sum, the functional consequences existing between objects in a given spatial organization as well as the humanly relevant interaction with such an organization is a critical fact to understand in a better and more clearly way how spatial language works. It also fully fledge the idea that image-schematic structure is invariantly mapped when it comes to the non-spatial and the temporal domain.

7.1.2 Polysemy and conceptual activation (active zone)

I now briefly turn to polysemy and active zones to see how the conceptual bases proposed in this research might shed light on these conceptual phenomena.

Traditionally, polysemy has been related to a relatively abstract underlying mental representation that acquires its meaning under specific contexts. Lexical entries seem to lack details, and hence are filled in by context (see Ruhl 1989 for such a view). According to this view, polysemy is epiphenomenal due to its emergence from monosemy.

On the other hand, the pioneering work of Lakoff (1987) and Brugman and Lakoff (1988) started to change this vision by redefining polysemy as an underlying phenomenon (i.e., conceptual). Rather than words exhibiting polysemy due to a single mental representation, polysemy occurs because of its very conceptual nature: there must be more conceptual content stored in long-term semantic memory, rather than a single abstract monosemous sense.

While the highly influential work of Brugman and Lakoff provided insight and a new perspective on this phenomenon, it leads us to a vision of polysemy that is akin to the Sense Enumerative Lexicon mentioned above. Word senses for Brugman and Lakoff are derived from semantic networks. This, in turn, assumes that such senses or lexical concepts are relatively stable knowledge structures. The difficulty behind such an assumption, comes from the fact that meaning is protean in nature – that is – it always shifts in context. It

follows that when analyzing a preposition such as *over*, *to*, or *for*, we might end up with a longer list of senses for each preposition than the ones shown in the analysis.

Some cognitive linguistic approaches (e.g., Allwood 2003; Croft and Cruse 2004; Zlatev 2003) argue that the semantic contribution of words emerges from context. Under this view, words do not have pre-specified senses but *meaning potential* (Allwood 2003), *purport* (Croft and Cruse 2004) or *use potential* (Zlatev 2003).¹⁰⁹ These different terms point to the same conceptual notion: the potential knowledge that words provide access to, which in the present research is referred to as *conceptual basis*.

Thus far, we can observe that word senses are not pre-specified and stable and that approaches to cognitive lexical semantics are usage-based in character. The contribution of a word is always a function of a situated interpretation in specific contexts of use. However, the difficulty that arises from this view, as spotted by Peter Harder (2009) is that meaning construction depends on language output – that is – comprehension. This underplays the role of production (input). It follows that this perspective is close to the notion of *usage fundamentalism* (Harder 2009), which can be understood as “the risk of eliminating the role of words as prompts for meaning construction” (Evans 2009: 153) or as Harder himself puts: “The assumption that only actualized utterances really exist” (*ibid.* 16). We could say, then, that language users must have some sort of mental representation in order to use words in the way they do. The construct of the conceptual basis is an attempt to get around such usage fundamentalism since it deals with both comprehension and production. It also shows how words are represented at the level of the lexical representation (i.e., in isolation), as well as at the level of contextual realization (meaning determination).

Another relevant construct that might be key to properly understand how polysemy works is *active zone*, which has been thoroughly developed by Ronald Langacker (e.g., 1987, 2000, 2008, 2009). Recall that the present research takes a nuanced approach to this notion and assumes that active zones are akin to what Evans (2009) terms *highlighting*, which has to do with the facets or attributes of an entity that most directly participate in a construction. It follows from this idea that metonymic processes might play a crucial role (following Langacker 2009; see also Barcelona 2011; Herskovits 1985) in constructional

¹⁰⁹ See also *meaning spectrum* (Evans 2015a).

meaning, due to the fact that the very nature of our reference point ability is metonymic (Langacker 1993).¹¹⁰ Reference points often have to do with the *profile/active-zone discrepancy*: TRs and LMs profile relationships that make accessible an array of associated areas that form the reference point's dominion (Langacker 2009: 52-53). Within this dominion, metonymic selection often takes place to highlight the attributes of the construction that most directly participate in the profiled relationship.

If we go back to example (28) in chapter 4 (here repeated for convenience and numbered as (7)):

(7) Anthony Reynolds, vocalista de Jack, se hizo esperar hasta subir al escenario, apareciendo de *entre* el público botella de vino en mano y ataviado con sus gafas de sol.

[SURROUND]/ [OUT-OF TRAJECTORY]

and if we focus our attention on the composite structure evoked by the non-finite clause *apareciendo entre el público*, we can observe that there is a spatial relation between the prepositional TR and the prepositional LM which is characterized by the presence of the parameters of *Surround* and *Proximity*; these parameters in turn, give rise to a center/periphery configuration between TR and LM that generates a shared region. However, the functional consequence of the Central position parameter exhibits a degree of schematicity regarding the exact location of the TR within the spatial arrangement that is partially encoded by *entre*.

If we go back to figure 4.1 in chapter 4, we can see how the triangle (TR) adopts a central position by being in the middle of the three squares (LM). On the other hand, in expression (7), we cannot say that the man (Anthony) is exactly in the middle of the crowd but he is included in a spatial region conceptualized as a mass (the crowd): he could be at any point within the limits established by the crowd.¹¹¹

¹¹⁰ However, a caveat is in order. Not all reference point phenomena involve a metonymic operation, although most of them do. For example, topicalization is not necessarily metonymic: *As for that problem, I think we should just wait and see.*

¹¹¹ This is so until the man comes out of the crowd. This is specified by the Spanish verb *apareciendo* (literally translated into English as *appearing*).

Another important point to mention is the fact that composite conceptions – that is, the very meaning of constructions – usually involve the activation of more than one parameter. For example, in expression (7), the most prominent parameter is the one of Surround, even though Central position, Inclusion, Occlusion, and Proximity also get (metonymically) activated. On the other hand, the attribute of *entre* which is highlighted in example (32) (chapter 4) in the composite structure *203 kilómetros entre Londres y Canterbury* (203 kilometres between London and Canterbury) is the one of *spatial distance* due to the activation of the Separation parameter. Central position might also receive activation.

Figure 7.1 and 7.2 below depict the possible spatial conceptions that could be derived from expression (7) above and example (32) in chapter 4:

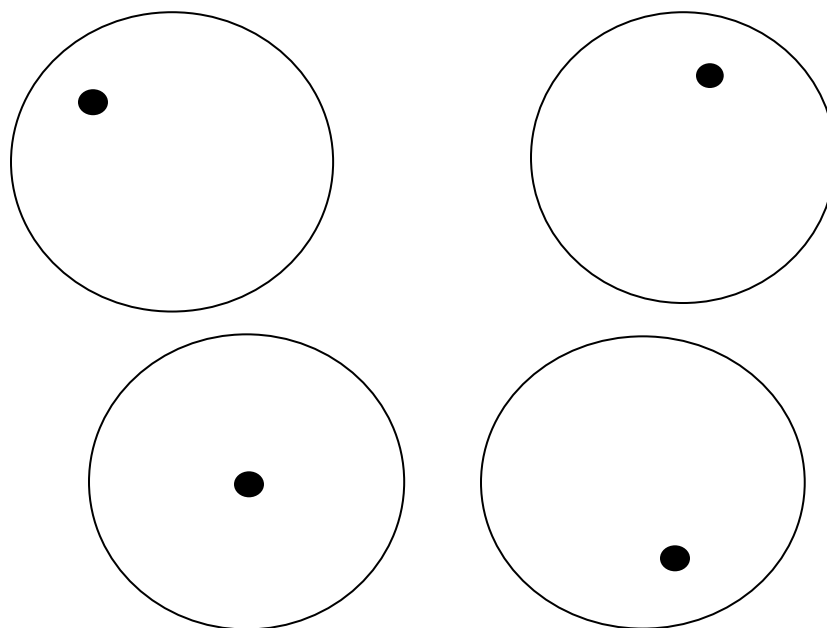


Figure 7.1. Array of possible spatial locations in (7)

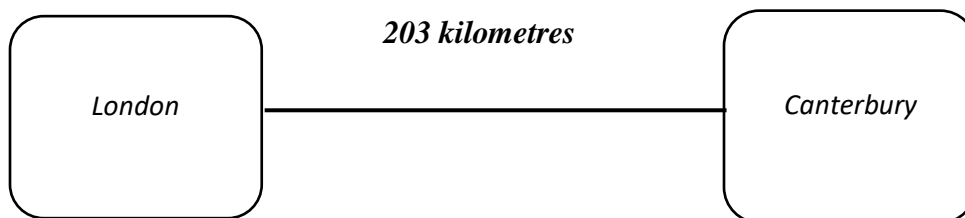


Figure 7.2. Distance between London and Canterbury in example (32) (chapter 4)

Metonymic patterns in conceptual activation or highlighting could be more mundane than usually thought (Langacker 2009): they drive the correct activation of specific attributes and values that are available in a profiled relation. Figure 7.1 depicts a more schematic relation between TR and LM due to the difficulty to exactly locate the man with respect to the crowd in (7). Figure 7.2, on the other hand, depicts a different active zone of *entre*, namely the distance (i.e., separation) that there is between the two English cities.

The Spanish preposition *entre* profiles a highly schematic relation between a TR and its LM, this in turn, is related to the polysemous behaviour of this prepositional vehicle. Note how the English language shows a difference in that it uses the prepositions *between*, *among*, and *amid*. These English prepositions might be better differentiated by careful examination of the conceptual nature of their prepositional-landmark elements. On the other hand, the Spanish language only uses the preposition *entre* no matter what the nature of the nominals that constitute its prepositional landmark is. This in turn, reflects both (i) the highly polysemous behaviour of *entre*, and (ii) the need of this preposition to be integrated with a count, plural mass or non-plural mass noun that elaborates its LM to eventually narrow down its scope and evoke a specific spatial arrangement (See Morras 2018; Morras and Barcelona 2019 for an overview of *entre* and its English equivalents.)

From this idea we can spot an important difference at the level of the lexical representation between the Spanish preposition *entre* and its English equivalents, and this is that the *spatio-conceptual structure availability* manifested by the Spanish preposition is more schematic (as in the case of the Spanish preposition *en* compared to its English equivalents *in*, *on*, and *at*) because of its dependency on its lexical integration with a nominal as its LM, to acquire a specific spatial use type. This situation is different with the English preposition *between*, since at the lexical representation level, it can somehow evoke or make people mentally simulate a spatial scene in which a non-specified attentional figure is in the middle of two or more surrounding entities that are clearly separate and hence identifiable. In this sense, spatio-conceptual structure availability should be understood as the amount of spatio-conceptual information existing at the level of the lexical representation of some closed-class items such as prepositions.

Distributed semantics in the sense of Sinha and Kuteva (1995) is another key notion to approach the protean nature of prepositions, as well as the closely related notion of *profile/active-zone discrepancy*. Take for example expressions (32) and (33) in chapter 4, which profile the same spatial arrangement involving an attentional figure that is in the middle of two things. Both examples are reproduced as (8) and (9) below for convenience:

(8) Robbie McEwen (Predictor Lotto) ganó al 'sprint' la segunda etapa del Tour, primera en línea y disputada sobre 203 kilómetros *entre* Londres y Canterbury. [TRAJECTORY]

(9) Chester (ubicado en el norte en la frontera *entre* Inglaterra y Gales) es la entrada a la región norte de Gales y se conecta con Londres, Manchester y Birmingham [LOCATION]

However, there is a discrepancy in the active zones that each construction highlights. In (8), the function of *entre* that partly contributes to select the correct “reading” is the distance or trajectory existing between point A (London) and point B (Canterbury). On the other hand, example (9) sanctions the [LOCATION] lexical concept because of the contribution that each word makes in the construction. What gets activated in example (9) is the *location* of Chester that is in the northern border between England and Wales, rather than its distance from a particular LM as in (8).

In a nutshell, profile/active-zone discrepancy is a conceptual phenomenon that should be understood in a distributive-like way: the correct activation of a semantic element of a preposition such as *entre* (or of any other symbolic unit or construction) is jointly achieved by all the elements that partially compose the given construction (in the sense of Goldberg 1995). As mentioned earlier, the conceptual bases proposed in this dissertation are an attempt to comprehend in a simpler and more clearly way the semantic foundations for elaboration and extension that these prepositions offer.

I finish this section with some remarks about the plausibility of metonymic constraints on polysemy. I think (following Langacker 2009; Barcelona, p.c.) that metonymy might be the answer for understanding the conceptual nature of profile/active-zone discrepancy. The reasons behind such a plausibility come from the idea of metonymy as *access* and *activation*. Metonymy occurs as frequently as metaphor or even more. This ubiquitous

cognitive operation can be further observed in non-linguistic communication – particularly at the level of what is known as *index* and *icon* (Burks, 1949). These notions were originally introduced by the philosopher Charles Peirce (1932). For instance, a walking sign is an *icon* since it shows a person who is walking. The image provides *mental access* to the *cognitive model* or *script* (Schank and Abelson 1977) of {PEDESTRIAN AREA}. On the other hand, the semantic quality of an *index* also manifests metonymic patterns of mental access and activation. For instance, when we see through our window a big black cloud that is coming toward our city or town, we might expect rain, a storm, lightning and thunders. That is an *indexical contingency* that is metonymically based.

These semantic levels are also present in the animal realm: if a squirrel hears the roar of a jaguar (or any other type of predator), it immediately reacts and goes away. In other words, just by hearing the jaguar’s roar the squirrel can expect a possible predator: a part in this case (the roar of the jaguar) provides mental access to the whole thing, here the feline predator. Such an animal behavior supports the idea that metonymy is more “*cognitively fundamental*” than metaphor. Thus, metonymy seems to be entrenched in more complex conceptual phenomena such as polysemy. This is not to say, however, that metaphor is not involved; it simply points to a more elemental or basic role of metonymy in language and cognition.

7.2 Contribution of the research

The contribution that the present research attempts to make is mainly focused on a psychologically real description of the spatial organization of the English and Spanish prepositional vehicles analyzed. Such a description allows linguists as well as Spanish and English learners (and teachers) to properly understand the “literal” roots of prepositions in terms of the spatio-topological relations they hold, as well as the functional elements that emerge from those relations. This understanding of their spatial organization may be approached by using constructs such as *proto-scenes* and *conceptual parameters* (in addition to others such as *trajector* and *landmark*). In this way, it provides an explanation and hence, motivation, of the non-spatial and temporal usages that prepositions often exhibit. The present account also provides a systematic set of criteria (the “parameters”) to tease apart the subtle semantic differences distinguishing neighboring English prepositions

like *between*, *amid*, *among* or *to* and *for*, and those distinguishing these English prepositions from semantically similar prepositions like *entre*, *a*, and *para*.

The research also shows how English and Spanish speakers conceptualize space differently, and this is reflected in the way the conceptual bases are structured. The Spanish language appears to have a more polysemous prepositional set than English since it often needs fewer prepositions to convey what the English language generally expresses by using more than one, as in the case of *entre*, *a*, and *para* shown in the analysis. Such a difference in spatio-conceptual structure is key to properly understanding how English and Spanish prepositions can be elaborated and extended. The analysis above might be the basis to carry out psycholinguistic experimentation in order to validate the psychological reality of the conceptual bases proposed. This is an issue that will be taken up in section 7.4 below.

The conceptual phenomenon of polysemy, even though is not the main purpose of this research, can be accounted for as the different semantically related activations (often metonymically) that a prepositional vehicle can receive under specific contexts. As seen above, words are contextual expressions so the semantics they acquire is tightly linked to the linguistic and non-linguistic context where they are embedded. Such a situated interpretation makes conceptual activation or highlighting never behave in the very same way.

Lastly, the conceptual bases proposed above not only deal with comprehension, but also production. Hence, they attempt to solve Harder's (2009) usage fundamentalism in that a conceptual basis is a mental representation of the meaning spectrum of a word that is stored in long-term semantic memory. This lexical representation is intended to deal with both input and output. It follows that this might help Spanish and English learners to acquire spatial language in a more *cognition-friendly* way (in the sense of Holme 2009) rather than by heart, as it has traditionally been the case. Sections 7.3, 7.3.1, 7.3.2, and 7.3.3 below are precisely devoted to this issue.

7.2.1 Limitations

One of the major limitations of the present research is the lack of solid psychological evidence of the parameters proposed. The parameters proposed here are based on

introspection and corpus analysis: language-in-use database and dictionaries were used to see how prepositions behave in context, as well as to pin down the parameters that might constitute each conceptual basis. To formally determine the existence of the parameters proposed, we might need corpus work that measures frequency in order to have empirical data about their usage, and statistical information about the elements that some prepositions generally co-occur with.

A further limitation is the notion of sense-extension units, that is, semantic extensions that seem to be more entrenched than others to the point they might get parameterized via bridging contexts and pragmatic strengthening. Corpus research on frequency could also help to clarify this point since that would allow us to appreciate a sort of level of conceptual prominence that a given parameter has with respect to the rest in their conceptual basis.

Even though the psychological validation of the parameters proposed lies beyond the scope of the present dissertation, it nevertheless suggests how to implement experimental methods to investigate the psychological reality of the conceptual bases proposed here. A sample for *entre* and its English equivalents is presented in section 7.4 below.

Lastly, the data collected for linguistic analysis is written corpus; this means we cannot have access to paralinguistic cues such as intonation, pitch, and gesture. Further research using audio-visual methods would be more appropriate for a thorough analysis of prepositional usages in (almost full) context to take into account as many factors as possible (i.e., joint attentional scenes [Tomasello 1999, 2003; see also Clark 1996]) within a situated linguistic event.

7.3 Pedagogical implications

The conceptual bases proposed for the English and Spanish prepositions analyzed in this study can have pedagogical implications and applications. The “conceptual basis” notion can be introduced to students when studying word meaning. A word’s conceptual basis then, helps us to understand how prepositions – in the present case – are semantically constituted and how they acquire their situated semantics. It also provides students with enough ground to practice and put the prepositions in novel contexts of use. However, before proceeding to introduce and explain how to teach the conceptual bases of

prepositions to English and Spanish students, the English and/or Spanish teacher must give them a hint of some essential notions in cognitive linguistics. I propose below some key concepts that language teachers should take into account to provide their students with a basic cognitive linguistic background. The reason is that, along with a growing group of applied cognitive linguists (e.g., Boers and Demecheleer 1998; Holme 2009; Littlemore 2009; Pütz 2007; Tyler 2012), I claim that a cognitive-linguistic perspective carries significant implications for language pedagogy.

Some of the benefits of establishing a comprehensive introduction to cognitive-linguistic concepts before studying prepositions will be briefly introduced below, followed in the next section by their applications to the teaching of prepositions, to student assessment, and to practical activities in the classroom.

Language awareness

The idea of language awareness is particularly important for the aims pursued by Applied Cognitive Linguistics. It has to do with the awareness not only of the target language structure, but also of the *equivalent structures* of the first language. As shown in the analysis, either L1 Spanish or English speakers can indeed appreciate the differences in terms of parameters and proto-scenes that each preposition exhibits. Language awareness, thus, allows learners to see the conceptual differences that exist between their mother tongue and the target language since they can compare the semantics of symbolic units (Pütz 2007). Such a principle has been specially emphasized in studies on figurative expressions and language teaching.

As pointed out by Taylor (1993), the Contrastive Analysis view (see Eckman 1977 for such a perspective) is compatible with cognitive linguistics as long as it is focused on conceptualization and semantic import rather than on formal entities. We must provide students with a simple explanation of how conceptual categories vary from language to language. For instance, English learners whose native tongue is Spanish, may find it difficult to understand the differences between the prepositions *between*, *among*, and *amid* (just like an English speaker might with respect to *entre*) since in Spanish all the parameters that separately constitute the three English prepositions make up the conceptual basis of their Spanish equivalent *entre*: the conceptual categories that are encountered all together in

entre such as *Separation*, *Occlusion* and *Inclusion*, among others, are found separately in its English equivalents. We can observe then, following Martin Pütz (2007), that there can be relatively high or relatively low degrees of *cognitive naturalness* (low degree in this case), which is dependent on the differences and similarities existing between the conceptual categories of the first and target language.¹¹²

Regarding non-spatial conceptions in the first and target language awareness, work on prepositional semantics by Boers and Demecheleer (1998), which provided a contrastive analysis between English and French, points to the importance of drawing the learner's attention to the links or experiential correlations that there are between a preposition's spatial sense and its figurative extensions. This amounts to evidence that exploring the literal roots of prepositions is key for teaching their extensions.

Figure/ground alignment

Figure/ground alignment is central to human cognition since it is the way we focus on things (i.e., foregrounding) that are perceived against their background. The foregrounded thing is, hence, the focus of attention (Talmy 1978).

Language teachers should briefly explain to their students what figure/ground alignment is, and how this not only is essential to perception, but also to audition and other senses. To do so, we can make students focus on a visual stimulus such as a drawing on the whiteboard and make them realize how the drawing is the attentional focus which is foregrounded against the board. Then, make them shift their attention and focus it on the board while backgrounding the drawing.¹¹³ In this way, we can introduce to them the notion of *figure/ground reversal* (Langacker 1987: 125).

By the same token, we can make students listen to their partners for one minute and ask them to focus on her partner's voice while noticing how the environmental acoustics

¹¹² Cognitive naturalness in this sense has to do with how close two or more languages (the mother tongue and the target language) are in terms of conceptual categories. The higher the cognitive naturalness is between the two languages, the easier the acquisition of the target language is.

¹¹³ This implies more concentration because a drawing on the board tends to be more prominent for visual perception.

become the background. After that, make them shift their attention and focus on what other classmates are talking so their partner's voice becomes backgrounded.

After students have the notion of figure/ground alignment, teachers may quickly introduce the closely related notions of *trajector* and *landmark* (Langacker 1987) to make them appreciate the similarities between figure/ground and TR/LM. It could also be appropriate to mention to students that the alignment that there is between TR and LM is the linguistic manifestation of the more primitive cognitive ability, here figure and ground, an idea that dates back to Gestalt psychology. By doing so, we can briefly show to students the continuum between embodied experience, mind patterns, and language use.

Force Dynamics and Image Schemas

Vital to any movement we make in space, force dynamic is at the heart of the autonomous system-environment coupling. Notions such as *agonist* and *antagonist* (Talmy 2000) might be introduced to students in order to show the tendency toward motion and rest that the agonist and antagonist exhibit, and how this relationship is manifested in language. For instance, we can show students a sentence such as *The ball kept rolling*, in which the agonist, here *the ball*, shows a tendency to motion which does not cease to occur since there is no antagonist to stop such a force. On the contrary, if we show students a sentence such as *The ball kept rolling until a car ran it over*, we can show students that the tendency to motion exhibited by the agonist is abruptly stopped by the antagonist force (exerted by the car).

Within force dynamics, teachers can introduce the construct of *image schemas* (Johnson 1987, 2005, 2007; Hampe 2005). These can be explained to students as spatial representations that emerge from different types of interactions in space. Some of them are {CONTACT}, {CONTAINMENT}, {CENTER/PERIPHERY}, {PRESSURE}, {SEPARATION}, among others, and they structure word meaning, especially prepositions (and particles) which represent the linguistic way that human beings have to refer to spatial relations. In this sense, we can appreciate the tight relation between image schemas and conceptual parameters (Morras in press). They could even be apprehended interchangeably in some cases.

Construals

The notion of construal is essential for students to understand how reality can be expressed in alternative ways. Following Langacker (2008), four classes of construal phenomena can be applied to any domain of experience. These are specificity, focusing, prominence, and perspective. *Specificity* relates to the degree of granularity or resolution that a construction can exhibit. For instance, when teaching the differences between the English prepositions *between* and *among*, we can show students how *between* manifests a higher degree of *specificity* since it generally encodes the *Separation* parameter as in a sentence such as *The flowerpot is between you and me*. In this sentence *the flowerpot* is the TR whereas the coordinate structure *between you and me* serves as LM. All the elements can be clearly distinguished in the visual field, so the precise location of the attentional figure is easily recognized. On the other hand, if we introduce students a sentence such as *She is among the crowd*, the degree of specificity decreases in that we do not precisely know the position of the attentional figure, here *She*, due to the activation of the Inclusion, and possibly Occlusion, parameters.

Focusing relates to the perceptual opposition between figure and ground and its special manifestation in language known as the trajector and landmark opposition. More generally, this feature of human cognition can be categorized as foreground and background as they all involve a departure from a base-line which is motivated by previous experience. We can speak, then, about foreground and background whenever one conception precedes and, in some way, facilitates the emergence of another.

The concept of *prominence*, though deeply related to focusing since it also involves conceptual selection relative to what is backgrounded, must be treated independently since it mainly has to do with two types of prominence: profiling and trajector/landmark alignment.¹¹⁴ Profiling relates to what an expression designates against its base – the selection of a certain body of conceptual content. We also have to point out to students that

¹¹⁴ TR and LM is an instance of both focusing and prominence. Focusing because it is relative to levels of organization; this also fits with prominence since “anything selected is rendered prominent relative to what is unselected, and a foreground is salient relative to its background” (Langacker 2008: 66). TR and LM involves the focusing of attention, so they are considered as a “strong kind of foregrounding” (*ibid.*66).

words profile either a *thing*, in the case of conceptually autonomous elements (simple nouns and nominals) or a *relation*, in the case of conceptually dependent elements such as prepositions and verbs, and all the rest of the grammatical categories.

The last class of construal phenomenon that might facilitate the students' apprehension of language use is *perspective* and it deals with what Langacker (2008: 72) calls "viewing arrangement". Perspective provides us with a vantage point which – broadly speaking – refers to the location of the speaker. We can actually construe the same scene from the perspective of different participants as in *I saw John walking in quickly with a smile on his face* (where the speaker is located in the room where John walked in), compared to *I saw John walking in quickly* (in this case the speaker is located outside the room where John walked in and probably could not see his smiley face).

Metaphor

Language teachers should foster figurative language acquisition. After all, the human conceptual system is structured metaphorically (Lakoff and Johnson 1980, 1999), so having a basic knowledge of how metaphor (along with metonymy) work in the first and target language would facilitate language acquisition as well as the understanding of the motivation behind non-spatial and temporal usages of prepositional vehicles. Metaphorical understanding allows students to conceive the mapping of the invariant image-schematic structure that is preserved from the source to the target domain.¹¹⁵ It is for that reason that teachers should provide a brief explanation about how metaphor works.

Metonymy

Metonymy is a vital cognitive process that might be even more ubiquitous than metaphor to the extent it sometimes (if not always) motivates metaphorical conceptions (see Barcelona 2000a for such an account). As seen in section 7.1.2, metonymy may drive lower-semantic levels such as *index* and *icon*, so it is crucial to our perception and apprehension of the world. It allows us to manipulate larger entities, interpreting a product by its process as in *the book is going on swimmingly*, where *the book* refers to the process of writing or

¹¹⁵ Language teachers should also briefly explain to students the notion of *domain of experience* (Langacker 1987).

publishing, or a product by a producer as in *She drinks Heineken*. The construal phenomena of focusing and prominence might be driven by metonymic patterns since metonymy allows us to select the most important aspects of a given construction. For instance, we can refer to a motorbike as a nice “pair of wheels”. By doing so, we single out that a pair of wheels is the most salient aspect of the motorbike since it is mainly the wheels that make motorbikes become a vehicle for transportation. Through cultural convention, we can treat one aspect of an entity as more important than another. Hence, metonymy might be responsible for the conceptual operation of selection, which is a process that enters into the grammar (See Langacker 2009 for an account on metonymic grammar.)

My own experience as an English teacher has proven metaphor and metonymy teaching fruitful. For instance, my students, native Spanish speakers learning English as a foreign language, found it difficult to understand the idiomatic expression *grab a bite to eat*, particularly because of the metonymy in *bite*, which rather than the action, refers to a thing (*food*). After explaining the metonymic relation existing between the act of biting and food consumption in the idiom, students understood its meaning, and most importantly, they understood the motivation lying behind that idiom. One of the reasons why this specific idiom was complicated for them is because (Chilean) Spanish does not have that idiomatic expression in its repertoire.

Geometry

The form of the objects that populate space is another relevant factor when it comes to teaching spatial language. The form of objects can change perception; hence, how objects and spatial relations are construed in linguistically mediated communication. For instance, to know whether an entity exhibits or requires the parameter of *Containment*, it is important to consider the object’s shape as in *the water is in the cup*. The noun *cup* is clearly a container object that can store water inside its concave shape. Water, on the other hand, is a substance that can be contained. Now if we say **there is dust in the cup*, it would sound semantically anomalous considering the geometric characteristics of *dust*. On the contrary, we should say *there is dust on the cup* since we want to highlight the *surface* of the cup rather than its capacity of containing things in its inside.

Embodiment and Encyclopedic knowledge

As stated at the outset of this chapter, embodiment and enactment are key to understanding how mind and language are structured.¹¹⁶ The enactive and embodied approach to language and cognition offers a view of how concepts are acquired, presented,¹¹⁷ and re-presented (when imagining), as well as provides the reasons why human beings have the concepts in the way they do. There are basic concepts such as {UP}, {DOWN}, {LEFT}, {RIGHT}, {GRAVITY}, that have universal status considering we are all members of the same species and move and interact in space similarly. It follows that a brief introduction to phenomenology in the classroom might be beneficial to help students not only understand spatial language more clearly, but word meaning in general.

Movement in space, along with the aesthetics of human experience (i.e. feelings and emotions) and social relationships are what mainly constitute the *encyclopedic knowledge*: coherent bodies of non-linguistic structure that emerge as consequence of human interactions in a social setting. These non-linguistic bodies are not fixed but constantly being complemented or even changed according to the experiences we encounter. The experience of the lived body is crucial to understand the affordances (i.e. possibilities for interaction) that space provides to us, as well as to understand the development of concrete and abstract concepts based on perceptive, event-like, and introspective structure.

At this point, however, a caveat is in order when it comes to teaching the notion of encyclopedic knowledge, and it has to do with the culturally driven nature of conceptual development and metaphor (Kövecses 2005). Concepts that are more “complex” than for example {GRAVITY}, have a considerable amount of cultural influence. For instance, the concept of {COW} that I and the rest of the Chilean population have (along with other Western civilizations) is that of farm animals from which milk can be extracted, and which are also used for meat production. In addition, some people practice rodeo with them. But in places like India, the concept of {COW} is something completely different since rather

¹¹⁶ I use the word *structured* in a looser way considering the flexible patterns that mind and language exhibit.

¹¹⁷ The term presentation is drawing from phenomenological research (e.g., Searle 1983; Thompson 2007) and it deals with the presentational nature of human experience. The objects we experience when dynamize in space are present in their very being. On the other hand, re-presentation has to do with imagination and memory since objects are not present in their very being; rather, they are phenomenologically absent. They are mentally evoked or called forth.

than being categorized as a rodeo animal or food, they are categorized as *sacred entities*, something that for a Chilean person is difficult to understand since they do not share the same *cultural scripts*.¹¹⁸ Hence, when teaching embodiment and encyclopedic knowledge, teachers have to point out the cultural aspects that lie behind these two concepts. Any linguistic theory that does not take into consideration the social and cultural aspects of mind and language, would miss the mark.

The constructs and ideas briefly discussed above are not the only ones that language teachers should take into consideration for their application in the classroom. They of course can select more from a wide array of concepts that cognitive linguistics and cognitive psychology offer that seem to be suitable for teaching purposes. Language teachers must adapt this knowledge to the students' needs. Concepts must be explained in a straightforward manner by considering the most important facts of a given construct or idea. The constructs selected, I think, are among the most relevant ones for students since they allow them to acquire a *linguistics foundation* not only in the target language but also in their mother tongue. Hence, they could constitute the basis for a pedagogical grammar.

Cognitive Linguistics has proven useful when it comes to applicability (e.g., Boers and Demecheleer 1998; Holme 2009; Lindstromberg 1996; Littlemore 2009; Tyler 2012). However, the traditional view of a static grammar is still the mainstream view in the classroom where prepositions are analyzed as fixed meaning-bearing units and learned by rote due to the many senses they can acquire depending on context. In addition, we still have to find a solution to Harder's (2009) usage fundamentalism since production is not given the same attention as comprehension. For that to happen, we need a more cognition-friendly approach in which students can reach conclusions on their own and figure out new meanings from unknown constructions. An important step within a most-desirable cognitive linguistics syllabus (see Holme 2009: Ch.9) would involve fostering usage through communicative goal-oriented classroom activities, as well as to engage students in the explicit analysis of form and meaning. Languages should be taught "inside-outwards" rather than the other way around.

7.3.1 Pedagogical Applications

¹¹⁸ However, the Indian and Chilean cultures do share the category of FARM ANIMAL and MILK PRODUCER.

The analysis presented in chapters 4, 5, and 6, not only is intended to show the differences in terms of spatio-conceptual structure that the Spanish prepositions *entre*, *a*, and *para*, and their English equivalents exhibit, but also to demonstrate the utility that a cognitive linguistic approach to prepositions has in the area of Language Teaching. The conceptual bases proposed in this research are an attempt to show L2 English and Spanish students the motivation behind language use. Of significance is the phenomenological structure that composes the semantic spectrum or conceptual basis – in current parlance – of prepositions, and how this space-motivated semantics partly allows us to conceive non-spatial and temporal conceptions. Moreover, the conceptual bases proposed are suitable for students to reason about the possible elaborations and figurative extensions that a given preposition may have, rather than establishing, in a dictionary-like fashion, all the possible senses (i.e., entries) that a preposition might sanction. This latter situation, as previously pointed out, would be an ill-conceived quest on word meaning if we take seriously the protean nature of words (Taylor 2006), as well as the significance of encyclopedic knowledge in language use. For instance, there are cases in which *between* establishes a complex atemporal relation rather than simplex. The difference goes on the notion of *trajectory*. Even though both types of relations are atemporal since the temporal factor (i.e., conceived time) is backgrounded, *entre* can at times convey trajectory as in an utterance such as *El corrió por entre los cerros hasta alcanzar el pueblo* (*He run through the hills until he reached the town*). It follows that this sequential scanning is not considered in the typical dictionary-view of word meaning since *entre* is primarily considered a preposition that denotes *place* rather than *path* (in the sense of Jackendoff 1983).

The conceptual bases proposed in this study for *between*, *among*, *amid*, *to*, *for*, *entre*, *a*, and *para*, clearly point to an encyclopedic rather than dictionary-like view of word meaning so students can work out the meaning of prepositions under different linguistic contexts and they can also produce language in novel contexts of use.

I think (following O' Dowd 1998) that grammar textbooks have never successfully provided an explanation of language that is usage-based and this is because grammar textbooks are based on a static view of grammar where prepositions are treated under the scope of the *simple relations model*, which as pointed out, states that prepositions encode

purely spatio-geometric relations.¹¹⁹ However, this view is descriptively inadequate since it provides no accurate explanation for how the prototypical or ideal sense-units associated with prepositions are actually used. To account for a functional-cognitive perspective, we need to take into consideration the parameters that are non-spatial as well. This idea is akin to what Johnson (2005) refers to as the *felt qualities* of image schematic structure in our experience, understanding, and thought.

The conceptual bases proposed for the English and Spanish prepositions are intended to be an alternative to the simple relations model in that they provide English and Spanish students with a psychologically and phenomenologically real account of the spatio-conceptual configuration of prepositions, as well as with an explanation of the motivation that underlies non-spatial and temporal usages. In the following sections (7.3.2, and 7.3.3), I present some suggestions on how to present this content and how to assess students to see whether this cognitive linguistic method works, followed by suggestions for activities in the L2 classroom.

7.3.2 Classroom content presentation and assessment

The constructs presented in section 7.3 can be introduced to students previously starting the English or Spanish (spatial language) lesson in order to provide them with the linguistic knowledge necessary to raise students' awareness of their mother tongue and target language. One or two lessons might be needed before the language content is presented. This will partly depend on the teacher's background regarding the constructs and ideas of cognitive linguistics and cognitive psychology, as well as on the students' needs.

Before start introducing the cognitive linguistic concepts proposed in section 7.3, teachers can set a *placement test* (see Appendixes A, B, and C for a sample). This will let teachers know about the students' current knowledge on prepositional usages of the target language. By doing so, teachers can have a record about how well they perform in the first assessment and whether it will be improved in the next assessment after students are introduced the constructs shown above followed by the conceptual bases and classroom activities to actively participate and use prepositions in the most natural way possible.

¹¹⁹ However, see Radden and Dirven (2007) for a cognitive linguistic approach to English grammar.

After the placement test, teachers can start to introduce the constructs given above, and they can also introduce more if necessary. After having presented the constructs and hence, provided students with a (cognitive) linguistics foundation, teachers can project on the board the conceptual bases (one by one) proposed for the English and Spanish prepositions. In this way, English and Spanish students can compare how spatio-conceptual structure is “packaged” differently in each language. Teachers might first start with the students’ mother tongue and then show the differences that exist in the target language.

When presenting the conceptual bases to the class, the first emphasis teachers should give is on the proto-scene from which abstractions and functionality emerge. In addition, explaining the relationship between TR and LM within the proto-scene might enormously help students to appreciate the conceptual nature of the relationship and know the reasons why parameters constitute the conceptual basis of each preposition in the way they do.

After having introduced the proto-scenes, teachers should analyze the parameters one by one with the class, always making clear to students the fundamental characters of perception, situated action, and introspection that lie at the heart of human experience. When explaining a conceptual parameter, it is suitable to provide a linguistic example in which that parameter plays a prominent role and then elicit more examples from students. This latter strategy may allow teachers to see whether students have a good first grasp of the content they are just being introduced, as well as to solve any doubt that may arise.

When all the parameters of a given conceptual basis are analyzed and discussed in the classroom, teachers can briefly explain to students how conceptual activation (i.e. highlighting) works, by giving emphasis on the situated character of word meaning. This can allow students to understand that prepositions are not stable and fixed, but prone to change their semantics according to context. In addition, it is important to remark that prepositions do consist of mental representations, characterized in the form of their conceptual bases, that are stored in long-term semantic memory. In other words, teachers should make clear to students that the conceptual basis is a mental lexical representation that allows speakers to comprehend and produce language, and when this lexical representation is put in context, a sort of conceptual narrowing occurs in the sense that just some parameters receive primary activation, some others receive secondary activation,

which reinforces the primary one, while others do not receive activation whatsoever. As seen throughout the analysis, words generally receive partial rather than full sanctioning.

After having presented and analyzed in detail the conceptual bases of the prepositional vehicles proposed for each language, teachers could either go for some classroom activities in which spatial lexical concepts are the communicative purpose, or, depending on the students' proficiency of the target language, can immediately explain to the class the motivation underlying non-spatial and temporal prepositional usages,¹²⁰ which crucially, are partly structured by the conceptual bases analyzed. Teachers must give emphasis on the invariant image-schematic structure that is mapped from the spatial to the non-spatial and temporal domains, pointing out the similarities between them. For instance, in an expression such as *She is next to my heart*, the speaker is clearly not positioning the woman “literally” next to his/her heart but conveys emotional closeness. Such an utterance, in turn, shares the image-schematic structure with more space-rooted conceptions as in *My bike is next to the apple tree*. Teachers can ask students for novel instances of non-spatial usages in order to collectively discuss them in the classroom and try to pin down the parameter(s) that get activated and extended in order to achieve that specific conception.

Now when it comes to Time, in addition to show the invariant mapping from the spatial onto the temporal domain, teachers should provide students with a brief introduction to temporal cognition and temporal concepts since time seems to be more basic than space.¹²¹ Despite the image-schematic structure that is provided by space, we do need temporal concepts such as {WEEK}, {HOUR}, {YEAR}, among many others. Temporal reference is also crucial to fully apprehend temporal conceptions such as *a quarter to midnight* in which *a quarter* and *midnight* are temporal concepts that are in a conceptual relation by virtue of

¹²⁰ It is important to mention in the classroom that the preposition *among* does not exhibit temporal behavior. And in the case of *amid*, its temporal behavior points to a vague temporal period such as in *amid the centuries*, in which there is a high degree of schematicity. In addition, teachers should mention that the temporal usages of *amid* are not frequent at all, just like this preposition is in general. Teachers could use corpus-driven data to show this point to the class.

¹²¹ This issue is indeed another possible topic that can be introduced before starting the spatial language lesson.

the preposition *to*. This relation in turn, corresponds to the temporal matrix for locating events in time in an absolute manner (extrinsic temporal frame of reference).

In the final assessment, which comes after having done all the procedures stated above (including classroom activities that are proposed in the next section), students can be additionally asked to give the reasons about their answers (i.e. justify). The final assessment might come in the same format as Appendixes A, B, and C, plus the justification for each answer. By doing so, teachers can see whether students really understood why prepositions are used in the way they are, as well as observe if there is improvement on the students' prepositional knowledge by comparing these latter results with the ones obtained in the placement test. The number of lessons to do all the procedures just shown (including the classroom activities proposed in the next section) may vary between 3 and 6, plus the individual work students should do at home.

7.3.3 Classroom activities

I now turn to propose some activities that can be carried out in the classroom in order to facilitate – through application – students' acquisition and/or improvement of the prepositional vehicles analyzed in this research. All the activities proposed below, however, are intended to practice the most prototypical usages of the prepositions analyzed since fully detailed classroom activities that involve more senses are out of the scope of the present research. Nevertheless, they intend to provide insight on how a cognitive linguistic theory can be applied to the classroom.

Between

In groups of three to four, students can be asked to locate things in the classroom that are in between two or more things. Teachers should advice students to focus on the parameter of *Separation* – a prominent parameter that partly compose the conceptual basis of *between*. Students can even locate each person in the group, depending on the geometric shape in which the groups are established (e.g., in line, circle). This activity helps to reinforce the idea that the parameter of *Separation* is key to understanding the semantics of *between*.

After carrying out this type of activity, which is focused on space, teachers could ask students to think of a temporal range of an activity they usually do. For example, how much

time it takes to read an eighty-page book, or do a workout in the gym, so the answer would be likely to be, for instance, *between 5 and 7 days* or *between 1 and 2 hours*.¹²²

If teachers want to elicit from the class expressions that involve *between* in abstract domains rather than temporal scenes, they could make students ask their partners about the last decision they had to make, particularly about the options that there were available for it. This group activity may trigger answers such as *I had to choose between X or Y last week*.

After the activities are done, teachers can reinforce the already seen theory behind spatial, non-spatial, and temporal usages of the preposition *between*. This way may facilitate the internalization of students' knowledge.

Among

For this preposition, teachers could bring a “toolkit” to the classroom and show some displays of different spatial organizations, particularly the ones that are sanctioned by *between* and *among* in order to make students differentiate. For instance, teachers can show students a blue marble that is in the middle of two or three red ones, and another blue marble that is surrounded by a big group of red ones. The question(s) teachers should ask to students is *where the blue marble is* or whether the blue marble is *between or among* the red ones in each spatial organization. After students provide a response, teachers can ask for the *reasons why* they think the blue marble is *between or among* the red ones. By doing so, teachers can make sure that students understand the motivation and therefore, the reasons, that underlie spatial constructions that involve the prepositions *among* and *between*.

For the non-spatial usages of *among*, teachers can project on the board an image of a person that is deciding. The person in the picture can be surrounded by interrogation signs, so teachers can draw the class's attention to that fact and say, “*Look! the person has to make a decision among several options available*”. After teachers show and work out the picture,

¹²² Teacher can also reinforce students the idea that *between* is often integrated with coordination structures of the *and*- and *or*- type.

they can make students work in pair and ask their partners whether they have ever had to decide among several options.

When the activity is over, teachers can remark the motivation underlying this non-spatial usage by pointing to the invariant image-schematic structure that is mapped from the spatial realm onto the non-spatial.

Amid

Considering that *amid* is integrated with prepositional-landmark elements that are conceptualized as a unitary mass, and that in the Spanish language its semantics is also equivalent to “*en medio de*” (in the middle of), is that teachers could project on the board a person who is lost in the desert, for instance, and say to the class “*Look! that poor guy is amid the desert*”. After drawing the class’s attention to the *amid the desert* construction, teachers can ask students about what they would do *if they were lost amid the desert* like the person in the picture. Teachers can make students work in pairs or trios and ask them to share their comments with the class after discussing what they would do in that hypothetical scenario.

A non-spatial sense of *amid* that could be fostered through practice in the classroom is the [IN-BETWEEN] lexical concept, considering that it is generally sanctioned by this preposition, as in *amid the gloom and doom* in (25) in chapter 4. To do so, teachers could start talking about feelings and emotions such as happiness and sadness and then ask the class (one by one if it is a small group) whether they have ever been amid happiness and sadness or other types of emotions, and under which situations.

Entre

In the case of the Spanish preposition *entre*, teachers can do all the activities that were proposed separately for its English equivalents, always pointing out the polysemous behavior of this preposition in that it acquires its semantics depending on the conceptual nature of the elements that elaborate its LM.

To

In groups of three to five, students can be given a map with some highlighted places such as a *museum, school, pharmacy, supermarket*, and the like. After having jointly analyzed the map, teachers can make students ask their partners about their plans for the evening. The question *what are you going to do this evening?* might be suitable to start a dialogue in which they can decide where to go using the map. Students should be encouraged to formulate that question in order to use the preposition *to* (even within the future modal construction *be going to*), so they can appreciate the directionality and future orientation that this preposition conveys. Another question that students can ask to their partners in the group is *where is located the place you are going to?* A possible answer, depending on how the map is structured, might be *the place I'm going to is next to the library*. This way, students can also practice the simplex atemporal behavior of *to* and convey location.

To practice some of the non-spatial usages of *to*, student can work in pairs and ask each other *what friend is the closest one to them* and the reasons why, so students can provide each other with a deeper answer and get more oral practice. Another question they can ask to each other is *whether they have feelings attached to inanimate things* such as a guitar or dance shoes, and the reasons why they have those feeling attached to a material thing. With these two sample questions, students could practice and internalize some figurative usages of *to*, particularly the [EMOTIONAL ATTACHMENT] lexical concept.

For the temporal domain, teachers could project an image on the board of a pretend upcoming event (i.e. flyer) such as a fair and tell students that it is just two weeks for that event to occur. In addition, teachers might say that the event will start at *a quarter to 4*. By doing so, we can reinforce the temporal behavior of *to*. Teachers can then make students ask their partners if they would like to go to the fair, and what they would do at that event. Afterwards, teachers can ask students the time at which the event will be held and how much time left there is for the event to happen.

A

To practice the semantics of the Spanish preposition *a*, teachers can do the activity of the map proposed for *to* above. Another activity might be to project on the board a picture of a person that is heading to a certain place and ask the class where the person is heading to. Possible answers to this question can be *“Ella va a(l)(la)*

supermercado/farmacia/museo/etc.” (She’s going to the supermarket/pharmacy/museum/etc.).

For more advanced Spanish students, an activity to understand the personal use of *a* can be to project an image of, for example, an animal, and say to the class “*Les presento a mi mascota*” (“*This is my pet*”) and then talk about it for a bit. Students can then be asked to bring an image of a person or animal they would like to introduce to the class and talk about it. In this way, Spanish learners could appreciate that the personal use of *a* is a function that has no equivalency in the English language (compare for instance *yesterday I saw John* with the Spanish equivalent *Ayer ví a Juan*).

An activity to practice one of the non-spatial usages of *a* is to work in pairs and make students ask each other about a person who has been always by their side (this activity is similar to the one proposed for *to* above). The Spanish instruction can be “*Cuéntame acerca de una persona que siempre ha estado a tu lado*” (*tell me about a person who has always been by your side*). Note that in this activity, students can get vividly involved – through subjective experience – in a linguistic event that involves the preposition *a* as main non-spatial relational unit. Students should be encouraged to use full answers, so they can start with “*La persona que siempre ha estado a mi lado es...*” (*the person who’s always been by my side is...*), and then they can tell their partner the reasons why.

Finally, an activity that focuses on the temporal aspect of *a* might be to talk about relevant activities that are done within a temporal range or period. Students can work in pairs and ask each other things like “*¿Qué haces usualmente el fin de semana al medio día?*” (*What do you usually do on weekends at midday?*), and the reasons why.

Another activity could be to project an image on the board of a person who regularly studies from 5 to 7 p.m. Teachers can then say to the class “*Ana estudia todos los días de 5 a 7*” (*Ann studies every day from 5 to 7*). Then teachers can make students work in pairs or trios and ask their partners about what they do during that time in weekdays and weekends. Teachers monitor the activity (and foster students’ participation) in the meantime.

For

To practice the preposition *for*, teachers can project on the board images of a person that is going to different places such as a pharmacy. Then students can be asked about what they think the person is going to the pharmacy for. This activity intends to reinforce the notion of obliqueness in the semantics of *for*. A possible answer to this question might be “*She’s going there for some medicine*” (to eventually consume it and get well).

A more figurative usage of *for* that can be practiced in pairs, is to make students ask their partner about what is one of the most important things in the world *for* her/him and the reasons why, so students can get involved in a longer conversation while the teacher monitors the interactions and participates in the exchange if needed. This activity is intended to practice the [IN RELATION TO] lexical concept that is generally sanctioned by *for*.

To practice the temporal domain of *for*, students can get into groups of three to four and ask their partners for how long they have been doing an activity that they like. They can also make further questions about that activity to extend the conversation.

Para

For this preposition, teachers could project some images of people going to different places such as to the beach or to a city for holidays. Then, they can say to the class (while pointing to one of the images) “*Ellos van para Madrid de vacaciones*” (*They go to Madrid for holidays*) or “*Ellos van para la playa a pasarlo bien*” (*They go to the beach to have fun*). After that, teachers can make students work in groups of three and ask each other *what they will do for their holidays* (Spanish *¿Qué harás para estas vacaciones?*)

Another activity, which deals with the [FUNCTIONALITY] lexical concept of *para*, is to project images of some artefacts such as a screwdriver (Spanish *atornillador*) and ask the class “*¿Para qué sirve ese objeto?*” (*What is that object for?*). The answer that teachers should look for is “*Ese objeto sirve para...*” (*That object is (used) for...*). In addition, before teachers ask the class for the function of the object(s) shown, they can ask students for the name of the object(s). This helps students to develop vocabulary.

Finally, to practice the temporal domain of *para*, teachers can get students work in pairs and make them talk about their upcoming birthday party. To do so, students can ask their

partner “¿Cuánto queda para tu cumpleaños?” (*How much time is there left for your birthday?*), followed by the question “¿Qué harás?” (*What will you do?*). Students must be encouraged to provide full answers such as “Quedan X días para mi cumpleaños” (*It’s X days left for my birthday*) and “Para mi cumpleaños me gustaría...” (*For my birthday I’d like...*). Teachers walk around the class monitoring and providing some help to the students when needed.

The classroom activities proposed above represent an attempt to show how to practice spatial, non-spatial, and temporal usages of the prepositions analyzed. They are intended to be carried out after a detailed analysis of each preposition in the L2 classroom (and the placement test taken at the beginning of the first session). The activities above are probably suitable for (upper) intermediate English/Spanish learners, but of course they can be adjusted to the students’ proficiency of the target language. In sum, we can indeed appreciate the benefits of a cognitive linguistic perspective on language teaching since it provides us not only with a psychologically plausible linguistic theory, but also with a much more grounded notion of how language is acquired through embodied experience.

The next and last section is intended to show a proposal about how to validate the psychological reality of some parameters that constitute the conceptual bases of *between*, *among*, *amid*, and their Spanish equivalent *entre*.

7.4 Psycholinguistic validation proposal for the English prepositions *between*, *among*, *amid*, and their Spanish equivalent *entre*.

I want to finish this chapter by suggesting how the conceptual bases of *between*, *among*, *amid*, and *entre* might be psychologically validated. The experiments proposed in this section are concerned with their spatial understanding.¹²³ I outline below some of the possible behavioral experiments that could be carried out to test the psychological reality of some of the conceptual parameters put forward above. This proposal intends to provide a hint of how to experimentally study language and space, as well as to provide experts in areas such as experimental cognitive psychology with a falsifiable hypothesis in order to

¹²³ If the spatio-conceptual structures proposed for these prepositions turn out to be correct, this would allow the design of further experiments aiming to investigate metaphorical extensions.

consider alternative explanations if the original hypothesis turns out to be incorrect. It is obviously scholars in those disciplines that are best equipped to test the hypotheses that emerge from the cognitive linguistic analysis presented in this research since this is something that lies beyond my ability as a cognitive linguist (see Gibbs 2007).

Let us start with the three English prepositions first. Recall that *between*, *among* and *amid*, can be distinguished by their trajector/landmark alignment. This, in turn, is (partly) reflected in the parameters of Separation, Inclusion, and Central position of *between*, *among*, and *amid*, respectively. The parameter of Separation seems to be critical for English speakers at the moment of sanctioning spatial scenes that involve the preposition *between*. On the other hand, Inclusion is pivotal to understanding spatial usages of *among*, as *she's among the crowd* compared to **She's between the crowd*. Finally, I suggest that Central position is key in the spatial semantics of *amid* as in *amid the desert*, compared to **among the desert* or to **between the desert*. In this case, *amid the desert* can be paraphrased as ***in the middle of the desert***. Psychological validation, I suggest, should be focused on the parameters of Separation for *between*, Inclusion for *among*, and Central position for *amid*. This is the issue we now turn to.

7.4.1 Separation

To test the psychological reality of the parameter of Separation in *between*, an acceptability rating method could be used. In this method, real objects or pictures are shown to participants. These objects or pictures must display a particular spatial configuration that is accompanied by a sentence about that display. Then the participants have to rate the acceptability of the sentence in relation to the picture using a Likert-type scale (e.g., from 1 (bad) to 10 (good)). An example of a stimulus for an acceptability rating experiment could be the figure depicted in 7.3 below:

Rate: X is between Y and Z

		Y		
		X		
		Z		

Figure 7.3. 5x5 rectangular grid illustrating the location of X with respect to its reference objects

One of the advantages of using the acceptability rating method is that it offers a fine-grained measure that provides more information than a simple “yes or no” decision task like in Verification tasks (See Carlson and Hill 2007 on experimental methods for studying language and space.) However, several weaknesses of this method can be spotted, among them the artificial measure applied in that it does not transparently map onto language use, as well as the lack of other entities that could be shown in the display apart from the target and the reference object(s). After all, we rarely find objects in the real world that are isolated from other objects.

Another method for testing the psychological reality of Separation in *between* could be Placements tasks. In these types of tasks participants are given real objects or pictures of objects and then they are asked to place the object in a specific relation with (an)other object(s). For instance, an instruction that participants could follow is “*Put the green marble between the blue and the red ones*”. Participants might arrange the objects given so that the utterance is true. The resulting arrangement might be of great interest to conclude for the pivotal and differentiating role of Separation in the conceptual basis of *between* – a conceptual feature that may distinguish it from the semantically related relational profiles evoked by *among* and *amid*.

The placement task has a considerable number of benefits, among them its more naturalistic approach and use of language to accomplish the task (compared to Acceptability Ratings, which involve matching). Placement tasks also offer valuable information about how participants map language onto space. However, some drawbacks have also been spotted when using this method. For instance, while the placement of an object can be achieved

through language instruction, the reverse is not necessarily true – that is, in the case that the participants are given a placement of the objects, other spatial terms may be used to describe that relation.

7.4.2 Inclusion

To test the inclusion parameter of *among*, one of the previous methods could be applied and is Placement tasks. Participants might be asked to follow an instruction such as “*Put the green marble among the red ones*”. This instruction, however, would yield a spatial organization that deals with more than the inclusive feature of *among*, since it may also involve proximity and central position. To focus more on Inclusion, a further experiment may have to be carried out. This could be done by a feature-listing task, in which participants are asked to write down, or choose from a list, properties that best capture the meaning of a given expression. In a sentence such as *the handkerchief is among the socks*, participants can be asked which properties are implied in it. A list of properties – mainly all the parameters that constitute the conceptual bases of *between*, *among*, and *amid*, can be listed for participants to select. The list of properties ultimately intends to find whether the parameter of Inclusion is picked up, while keeping in mind that more than one parameter can be selected for the sample utterance just given above. Some of them can be Proximity, Occlusion, and Surround.

In the final analysis, the rationale behind the feature-listing tasks is that if people can apprehend the meaning of a given sentence, then they can also explain what that expression means and what features are associated with that meaning. These types of experiments are easy to conduct, and they generally yield intriguing data to work with. However, one of the main weaknesses that can be spotted, points to the fact that these studies are based on the conscious impression that people have upon the meaning of an expression, which might not accurately reflect mental representation.

7.4.3 Central position

We now turn to Central position, a parameter that, I suggest, is key to differentiating *amid* from *between* and *among*. A method that might be suitable for validating its psychological reality, considering the large semantic overlap that *amid* has with respect to *among*, is the

listing-feature task considered for Inclusion above. By using this method, participants could be given a sentence such as *She's amid the desert*. The sentence in turn, could be accompanied by a picture of a man or woman who is alone in the middle of a desert. Participants are then asked for the properties that are most directly involved in the sentence and image shown. These properties can be either open-ended, or more controlled if participants select the parameters from a list (I am personally inclined to the latter option).

Even though the parameter of Central position is also shared by *between* and *among*, its conceptual nature seems to be different in each conceptual basis. In the case of *amid*, Central position is akin to [IN THE MIDDLE OF] lexical concept in that it is less flexible regarding the peripheral location of an attentional figure within the region established by its ground. If participants are shown a picture of a man/woman who is lost in the desert accompanied by a sentence such as *She's amid the desert*, the participants are likely to choose Central position as something synonymous to the locative concept evoked by *in the middle of*. Central position in this sense encodes a high degree of centrality in terms of the location of the attentional figure, to the extent that in some figurative conceptions as in *amid the gloom and doom* shown in (25) in chapter 4, it allows us to sanction the [IN-BETWEEN] lexical concept.

7.4.4 Spanish *entre*

We now turn to the Spanish preposition *entre*. As shown in the analysis, *entre* exhibits the semantic capacity of covering almost all the conceptual content of its English equivalents. This characteristic makes *entre* a highly polysemous preposition. This polysemous behavior in turn, might be psycholinguistically validated by focusing on different parameters that get activated under certain contexts. The parameters that should be studied (at the very least) are Separation, Inclusion and Central position. These parameters play a prominent role in expressions such as *El columpio está entre los dos árboles* (the swing is *between* the two trees), *Ella está entre la multitud* (She's *among* the crowd), and *Esa escena fue entre pena y gloria* (that scene was *amid* sadness and glory), respectively.

All the methods mentioned so far (Acceptability Ratings, Placement tasks, and listing-feature tasks) could in principle be applied to test the psychological reality of the conceptual basis of *entre*. By testing the three parameters of *entre* mentioned above, we

could support, with empirical evidence, at least two things: (i) the highly polysemous behavior of *entre*, and (ii) the idea that *entre* can cover the semantic region that *between*, *among* and *amid* do separately.

The methods suggested for analyzing the interface between language and space, and the mental representation of language in the case of listing-feature tasks, were briefly described to illustrate how possible psychological validations might be carried out. Each method is a valuable tool for addressing the language, cognition, and space interface. Due to the weaknesses and strengths that all methods present, it seems that significant benefits may be obtained by combining these methods (and others) in a programmatic line of research. This of course, is something that I leave for experts in experimental research.

7.5 Summary

This chapter has focused on putting to the front the main ideas that the cognitive linguistic analysis presented in chapters 4, 5, and 6 implies for language and cognition. We saw that proto-scenes are essential for encyclopedic knowledge and word meaning since they allow us to compress the complexity of phenomenology into lexical items. From this it follows that spatio-conceptual structure not only deals with pure spatial parameters but also with functionality. We also saw that words are contextual expressions in that their situated semantics arise from context, that is, lexical integration. This process allows us to determine the active zones of a word's conceptual basis. On the other hand, words in isolation are conceived as mental lexical representations that are stored in long-term semantic memory. The distinction between lexical representation and meaning determination is essential to apprehend this insight. By the same token, the distinction between open and closed-class items must be apprehended as a continuum where the degree of richness varies: while both classes offer access to conceptual structure, closed-class elements constitute the semantic scaffolding for richer conceptual content (i.e. they offer a *narrower* access to conceptual structure). Both types play a role in embodied simulation processes. The way in which the schematic content evoked by prepositions has been approached can be applied to the classroom for teaching not only English and Spanish as a foreign or second language, but also for undergraduate and postgraduate students undertaking linguistics and language teaching courses. Such a cognitive-functional view implies a new way to present the English/Spanish/linguistics lecture/lesson. Some constructs and ideas from cognitive linguistics and cognitive psychology, as well as classroom activities were also suggested. Finally, suggestions for validating the psychological reality of the conceptual bases for *between*, *among*, *amid*, and *entre*, were also provided, with an emphasis on the parameters of Separation, Inclusion, and Central position.

Chapter 8: Conclusions

This last chapter is focused on key ideas that have been promoted throughout this dissertation. Among these we can find (i) the importance of a thorough understanding of spatio-conceptual structure to account for non-spatial and temporal prepositional usages; (ii) the assumption that time exhibits its own structure, which is qualitatively different from spatial structure, (iii) the pedagogical implications and applications that the present account offers, and (iv) the psychological experimentation that might be carried out using this approach. The research also provides a systematic set of criteria (the “conceptual parameters”) to tease apart the subtle semantic differences distinguishing neighboring English prepositions like *between*, *amid*, *among* or *to* and *for*, and those distinguishing these English prepositions from semantically similar prepositions such as *entre*, *a*, and *para*.

We will go through the four points above one by one.

8.1 Spatio-conceptual structure as schematic non-linguistic knowledge

One of the main ideas that drives this research is that closed-class items such as prepositions offer a *narrow* access to conceptual structure. This, in turn, is the reason why the closed-class set is apprehended as being schematic. However, and as previously mentioned in chapters 1 and 2, some cognitive linguistic scholars (e.g., Evans 2009, 2013) claim that closed-class items do not offer access sites to conceptual structure. Rather, they are assumed to encode purely linguistic content. But how is it so? As seen in the analysis in chapters 4, 5, and 6, prepositions do exhibit a conceptual basis that contributes to embodied simulations with specific features such as relations (in the sense of Barsalou 1999). This conceptual basis is not static but highly flexible even though it is constituted by conceptual parameters, which are schematic bundles of information that are phenomenologically based. Conceptual parameters capture the schematic conceptual content that is precisely facilitated by closed-class items. Under this view, conceptual parameters are akin to image schemas in that both are schematic representations of spatial organizations. The difference between them is that conceptual parameters are also related to functionality and non-spatial aspects such as Primary goal in *to* and Oblique goal in *for*.

The notion of conceptual parameters (see Morras [in press] for an overview) allows us to appreciate the schematic conceptual import that closed-class items have within a cognitive representation. It also offers a point of comparison with respect to *cognitive models* and *frames*, which are rich bodies of non-linguistic knowledge that are interconnected in a sort of semantic network. According to Evans, cognitive models (and frames) are the only type of conceptual structure that is accessed by the linguistic system. Moreover, this structure is facilitated exclusively by open-class elements, mainly nouns, verbs, and adjectives. But why posit a sort of unique type of conceptual structure?

The present research takes a nuanced perspective on this issue by assuming that there is more than one type of conceptual structure. Among them spatio-conceptual (which possibly involves perceptual, event-like, and introspective structures), and temporal structures. Recall that according to Barsalou and Wiemer-Hastings (2005), all concepts are based on perception, situated action, and introspection. However, they vary in their focus: abstract concepts tend to be mainly organized by introspective and event-like structures, whereas concrete concepts are mainly constituted by perceptual and event-like structures. Then why is that a concept such as {FOR} may be exclusively encoded as linguistic content whereas a concept such as {TABLE} may be not? Why not assume a continuum between conceptual schematicity and conceptual richness? To assume such a continuum, however, we do not have to lose the notion of *linguistic structure*, which can be understood as the linguistic knowledge that is encoded in and externalized only via language. This point is important, because as it has been shown in the cognitive sciences (e.g., Alwood 2003; Clark 2003; Munnich and Landau 2003; Rice 1992; Slobin 2003), there is a tight link between the linguistic and the conceptual systems. This tight relationship makes the distinction between these two systems fuzzy.

To shed some light on the difference between the linguistic and conceptual systems, we can use the notion of *linguistic parameter* (Morras, in press). This can be understood as a highly schematic unit of linguistic knowledge that is conveyed in linguistic structure. Linguistic parameters emerge as a result of recurrent linguistic patterns and structures of usage events. Following Langacker (1987, 2008), words profile either a thing or a relation. Things are profiled by simple nouns and nominals, while relations are profiled by all the

rest of the grammatical categories. It follows that [THING] and [RELATION] are two “linguistic” parameters that are encoded at the most schematic level of linguistic organization. This sort of parametric knowledge might be unique to the linguistic system in the sense they are acquired through usage.

In the final analysis, we have a general picture of words as offering access to conceptual structure *of different types*. Lexical concepts, that is, units of mental grammar that constitute the semantic pole of a symbolic unit and sanction instances of language use, exhibit bipartite organization. On the one hand they encode purely linguistic content that can be apprehended as linguistic parameters. And on the other hand, they facilitate access to conceptual structure, which crucially (and opposite to Evans’s claims), *varies* in richness. The rich conceptual material is captured by cognitive models and frames. These non-linguistic bodies of knowledge constitute the conceptual basis of an open-class item. On the other hand, the schematic conceptual material can be understood in terms of conceptual parameters. These phenomenology-based semantic units, I suggest, structure the conceptual basis of a closed-class item.

Spatio-conceptual structure turns out to be a *type* of conceptual knowledge that is motivated by the spatial domain. This type of knowledge is further constituted by at least three situational contents: perceptual, event-like, and introspective. A further aspect to consider is the graded scale in terms of the schematicity and richness that is reflected in concepts, particularly on the “amount” or “focus” of each situational content with respect to each concept. For instance, the abstract concept of {CONFUSION} is likely to be more structured by introspective and event-like structures, than by perceptual structure. On the other hand, a concrete concept such as {TREE}, is likely to be more structured by perceptual and event-like structures, than by introspection. In sum, spatio-conceptual structure should be understood as consisting of more than one type of knowledge, and it underlies the semantics of open and closed-class items. In the present research, however, spatio-conceptual structure has been used to (i) understand the schematic import of conceptual structure, and (ii) to posit semantic units – that is, conceptual parameters – as notions that help us apprehend the form that this schematic conceptual knowledge takes for linguistically mediated communication.

Indeed, the conceptual bases proposed in this investigation seem to be useful to account for a motivation on figurative language that is psychologically plausible. Conceptual parameters emerge from phenomenological experience and structure the conceptual basis of closed-class items. It follows from this that they allow us to identify the part or portion of a word's conceptual basis that is recruited for metaphorical reasoning (in the sense of Lakoff 1990). As shown in the preceding analysis, spatio-conceptual structure is recruited for non-spatial and temporal conceptions. Interactions in space and the shape of our bodies turn out to be essential for such a figurative understanding. Spatio-conceptual structure fully fleshes abstract and temporal concepts since they exhibit correspondences between their substructures. These correspondences might be established by virtue of *metaphor*. For instance, in a sentence such as *This secret is between you and me*, the topological schematic structure of *between* (see figure 4.2 in chapter 4) that, at the very least, should be recruited for metaphorical reasoning concerns the parameters of Separation and Central position. These two parameters facilitate the understanding of an abstract thing, here a secret, which is "located" in the middle of two (or more) people. The secret acquires a central position while the people are identifiable things that probably surround the abstract thing. Hence, separation is a prominent feature. Now the conceptual metaphor that may be at work in the example just given is SECRET INFORMATION IS A THING LOCATED BETWEEN TWO OR MORE ENTITIES. In this metaphor, we can appreciate how the parameter of Central position establishes correspondences with the secret information that is located between two or more LMs. On the other hand, the Separation parameter establishes correspondences with the entities that help to locate the TR in the middle.

We can then identify the topological structure that is preserved for metaphorical reasoning by using the conceptual bases proposed in this research. They can show us which aspects of a word's conceptual basis establish correspondences with substructures of conceptual metaphors. Under this view, spatio-conceptual structure and metaphor are seen as two *types* of knowledge that are needed, at the very least, for non-spatial conceptions. However, there might be more types of knowledge involved in non-spatial conceptions, among them non-metaphorical representations for abstract concepts.

8.1.1 Non-metaphorical representations for non-spatial conceptualizations

Following Barsalou et al. (1993) as well as Murphy (1996), I assume that non-metaphorical (i.e. direct) representations are essential for non-spatial understanding, and hence, represent another type of knowledge that is involved in this type of constructions. If we consider again the example given in the previous section, *This secret is between you and me*, we can observe that we do make use of an abstract, non-metaphorical concept of {SECRET}, which in turn, may primarily be structured by introspective (and event-like) content. Without the non-metaphorical representation of what a secret is, here the target domain of the metaphorical understanding, the projection from the source domain, here the location of an F between two or more things, would be impossible: there cannot be a metaphorical projection onto a contentless target.

A further point relates to the semantic tendencies that words exhibit. In *This secret is between you and me*, we can appreciate that *between* exhibits semantic tendencies toward prepositional-landmark elements that are conceptualized as identifiable things. This is what allows lexical integration in the first place. Semantic tendencies, then, can be understood as representing another type of knowledge that is involved in figuration.

From the ideas above it follows that the role of conceptual metaphor is crucial since it facilitates a coherent semantic assembly between spatio-conceptual structure and “abstract” structure (i.e. direct non-metaphorical representations). We can find a similar situation with respect to the temporal domain: there is also more knowledge involved than just metaphor in temporal conceptualizations. This is an issue we now turn.

8.2 Temporal structure as schematic scaffolding for temporal usages

The notion of conceptual basis introduced in this research can also be used to pin down the motivation that underlies temporal conceptions. For instance, in a temporal linguistic construction such as *It took me between five and six hours*, we can appreciate the semantic import of the preposition *between* by observing its conceptual basis proposed in figure 4.2 in chapter 4. There is activation of the Central position and Separation parameters. These parameters are further extended, via metaphors such as TIME IS SPACE and DURATION IS LENGTH, to conceive such a temporal scene. In sum, we can see the amount of spatio-conceptual structure that is preserved for temporal conceptualizations.

Despite the great utility that this notion might offer, we still need to account for purely temporal concepts. Like abstract concepts, temporal concepts have a direct non-metaphorical basis which is purely temporal at their most schematic level. We do need to apprehend basic temporal relations such as earlier/later and future/past, as well as to develop rudimentary systems to understand temporal cyclicity. That core rudimentary system is understood as cyclical time and constitutes one of the foundations of the extrinsic temporal frame of reference (or t-FoR for short). These temporal concepts, among others that were shown in the analysis as well as in chapter 2, can be apprehended as temporal scaffoldings for temporal linguistic constructions. These temporal scaffoldings, in turn, are manifestations of our *temporal cognition*.

Crucial for those scaffoldings is temporal reference. As seen throughout the analysis, there is indeed a schematic temporal structure that underlies temporal prepositional usages. The form that this temporal structure takes, mainly depends on the temporal frame of reference that is employed. Recall that there are three t-FoRs: deictic (ego-based), sequential (event-based), and extrinsic (periodicity-based). These temporal references represent schematic temporal scaffoldings that are purely temporal. Let us briefly show the import of these temporal strategies in linguistic constructions.

The deictic t-FoR is characterized as being ego-based and emerge from the phenomenologically real temporal relation of *future/past*. Expressions that use this type of temporal reference can be *Christmas is approaching*. Note that in this utterance, the perspective point (PP) comes from the target event (TE), here Christmas. The reference point (RP) takes its reference from the egocentric experience of *now* and helps to locate the TE. Now the origo (O) corresponds to the experience of now from the perspective of the TE. (Note also that the conceptual metaphor that is at work here is the MOVING TIME metaphor.) This type of perspective point (Evans 2013:85-87) is also understood as target-event perspective point. In sum, the schematic temporal structure that may work as temporal scaffolding could be glossed as [TE FIXED TO EGOCENTRIC EXPERIENCE OF NOW, FROM PERSPECTIVE OF THE EVENT].

On the other hand, we can also say *We are approaching Christmas*. In this way, we make use of a reference-point perspective point. Note that in this type of perspective point, the

RP (rather than the TE) receives focal prominence so it appears in subject position. The conceptual metaphor that is at work, which should be considered as one type of knowledge that is involved in this type of temporal conceptualization, is the MOVING EGO metaphor. There is a TE, here Christmas, which is located with respect to its RP, encoded by *We*. The O corresponds to the egocentric experience of *now* and determines the location of the speaker. In the final analysis, the purely temporal schematic structure that functions as temporal scaffolding in the utterance *We are approaching Christmas*, can be glossed as [TE FIXED TO EGOCENTRIC EXPERIENCE OF NOW, FROM PERSPECTIVE OF THE EGO].

The second type of temporal reference that provides temporal scaffoldings is termed sequential and emerges from the temporal relation of earlier/later. We can locate events as following or preceding another event. This is achieved through our understanding of the temporal relation earlier/later which comes from the phenomenologically real experience of succession – a type of transience.

As with the deictic t-FoR, the sequential t-FoR can be broadly divided into two because this t-FoR also offers two perspective points (PP). The first is known as *prospective* perspective point (Evans 2013: 118-121) and evokes a relation such that the TE is sequenced earlier than the RP. Importantly for this type of perspective point, is that the earlier relation is viewed from the perspective point of the earlier event. Instances of this temporal reference can be *Breakfast comes before dinner*, where the TE, here *breakfast* is located as preceding the second event that functions as an RP, here *dinner*. The schematic temporal structure that may function as temporal scaffolding for this type of temporal linguistic construction may be glossed as [EVENT X IS SEQUENCED EARLIER THAN EVENT Y USING THE PERSPECTIVE OF EVENT X].

On the other hand, we can evoke a lexical concept of [LATER IN SEQUENCE], rather than [EARLIER IN SEQUENCE], as in *Dinner comes after breakfast*. In this way, we make use of a *retrospective* perspective point (Evans 2013: 121-122) that encodes a temporal relation such that the TE (breakfast) is sequenced later than the RP (dinner), and that relation is viewed from the perspective of the later event. In sum, the purely temporal structure that should function as temporal scaffolding in the example just given could be glossed as [EVENT Y IS SEQUENCED LATER THAN EVENT X USING THE PERSPECTIVE OF EVENT Y]. This

temporal scaffolding is a manifestation of one of the (several) aspects of our temporal cognition.

The conceptual metaphor TIME IS OBJECTS IN A SEQUENCE (Moore 2006, 2014) is also involved in this type of temporal reference as another type of knowledge that is required.

Figures 8.1 and 8.2 below summarize the two perspectival points of the sequential t-FoR.

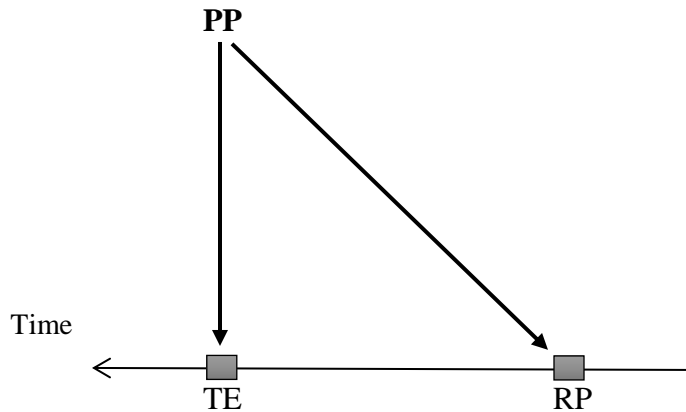


Fig. 8.1. Prospective perspective point (Adapted from Evans 2013: 117). “*Breakfast comes **before** dinner*”

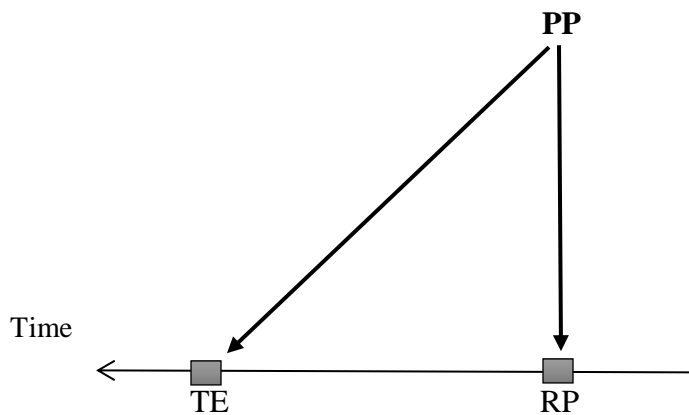


Fig. 8.2. Retrospective perspective point (Adapted from Evans 2013: 118). “*Dinner comes **after** breakfast*”

The last t-FoR is termed extrinsic and is the temporal reference that is generally used by the prepositions analyzed in this research, as shown in chapters 4, 5, and 6. This type of t-FoR does not make use of a perspective point since it provides a means for fixing events in time in an absolute manner – that is, without reference to an observer. As seen throughout this investigation, the extrinsic t-FoR can be broadly divided into event-reckoning and time-

reckoning systems. These systems are related to the use of calendars and clocks, respectively. And they are also further divided into repeatable, open-ended (e.g., a long count), and closed systems (e.g., countdowns).

From the idea above we can apprehend the extrinsic temporal reference as encoding at least two temporal structures. The first one is related to the use of calendars, and it can be understood as [TE FIXED TO AN RP IN AN EVENT-RECKONING SYSTEM]. The second schematic temporal structure has to do with clocks, and it can be conceived as [TE FIXED TO AN RP IN A TIME-RECKONING SYSTEM].

The three t-FoRs (see Evans 2013 for full details) present compelling evidence of the existence of a unique type of conceptual structure that is purely temporal. Despite time being embodied in the temporal relations of future/past, earlier/later, as well as in the metonymic use of clocks and calendar, the temporal domain exhibits its own conceptual structure that is qualitatively different from spatio-conceptual structure. Crucially for this distinction to be recognized, is the assumption of transience as the *hallmark* of time. Indeed, transience is the purely temporal experience that lies at the neurobiological and subjective levels. This temporal element is absent in the spatial domain.

The assumption of transience as the hallmark of the temporal domain leads us to think about time ‘as such’ (using the term of Sinha et al. 2016). Time is not an “abstract” domain, but a purely temporal one. Even though its different ways to be conceptualized are mainly facilitated via conceptual metaphor, this should not lead us to think of time as being an abstract domain that must be understood only through metaphor. It follows that whenever we deal with temporal reference, there is conceptual structure that is purely temporal. This temporal structure is reflected in the “temporal scaffoldings” that were briefly shown in this section.

We can now see differences between non-spatial and temporal instances. Consider the examples below:

- (1) a. The event was held *between* September and November
- b. There is a secret *between* John and Lucy

The most important aspect to consider in order to differentiate non-spatial from temporal scenes is temporal reference. Note that temporal reference is reflected in (1a) in the temporal lexical concepts of [SEPTEMBER], [NOVEMBER], and [EVENT], as well as in the relational profile evoked in *was held*. These elements establish correspondence links with the temporal schematic structure [TE FIXED TO AN RP IN A (REPEATABLE) EVENT-RECKONING SYSTEM]. The resulting assembly yields a TE, here the event in (1a) that is fixed to an RP, encoded by the prepositional phrase *between September and November*. In addition, we also need an origo (O) to anchor the relationship between TE and RP to the transience type of duration and start the count in a repeatable event-reckoning system. The O in this case is fixed as *January, the 1st* since it is when our cyclical temporal concept of {YEAR} begins.

Now the conceptual import that we can extract using the conceptual basis of *between* in figure 4.2 (chapter 4), concerns the parameters of Separation and Central position. These parameters share substructures with the schematic temporal profile of the extrinsic t-FoR. Separation is manifested in the conceptual nature of the RP, whereas Central position is a feature that characterizes the TE.

On the other hand, there is no temporal reference in (1b). However, the same parameters of *between*, here Separation and Central position, are metaphorically interpreted to conceive a secret that is located between two people. As mentioned throughout this research, metaphor is *one type* of knowledge that must be involved in non-spatial and temporal conceptualizations, among others such as non-metaphorical representations, temporal reference, spatio-conceptual structure, and semantic tendencies. It follows from this that the fact that the same parameters of *between* in (1) are extended for non-spatial and temporal understandings, does not amount to evidence that time is an abstract domain. This in turn, is due to temporal reference.

As seen above, time is a complex and essential domain for the human mind. Whenever there is temporal reference, we deal with purely temporal structure. The conceptual bases proposed in this investigation seem to be useful to account for the schematic topological structure that is preserved for temporal reasoning. However, temporal conceptualizations

are far more complex since there are different types of knowledge involved in these types of linguistic constructions.

8.3 Insights, implications and applications of the conceptual bases

The view of language and human cognition adopted in this research, leads us to a linguistic theory that is psychologically plausible. Indeed, the conceptual parameters seen are phenomenology-based abstractions of humanly relevant scenes that eventually constitute the conceptual basis of closed-class items such as prepositions. These parameters, I suggest, have a psychological reality that can be tested via experimental methods such as the ones suggested in chapter 7 (section 7.4).

The conceptual bases proposed allow us to appreciate the lexical representation level of words: the meaning spectrum that must be stored in long-term semantic memory as mental units. They also shed light on the meaning determination of words – that is, their contextual realization that makes some attributes (i.e., conceptual parameters and cognitive models) to get highlighted while others remain in the background. Conceptual parameters, on the other hand, provide a systematic set of criteria to tease apart the subtle semantic differences that there might be between prepositional sets.

We saw in chapter 7 the further implications that this view carries for language teaching, among them the meaningful character of syntax, the functionality existing behind spatial organizations, the notion of embodiment, and the rejection of a dictionary-like view of word meaning. Such implications might bring benefits to both teachers and students in terms of a linguistic theory that is based on the general and cognitive commitments (Lakoff 1990) since it sees language as being motivated and connected to general cognitive abilities such as figure and ground. Teachers and students may well be more “prepared to learn” once they grasp these fundamental tenets from cognitive linguistics and cognitive psychology.

The conceptual bases shown in this research can be used as a pedagogical tool to teach spatial, non-spatial, and temporal usages of prepositions. As seen in the previous chapter, the conceptual bases are organized in such a way that they facilitate students and teachers’ understanding of the semantics of words at the lexical representation level (i.e. in isolation).

They also allow students to work out the different senses that a preposition, in this case, may sanction under different contexts. Students can work on production and comprehension once they internalize the parameters that constitute a given conceptual basis. In this regard, a conceptual basis is a cognition-friendly notion since it allows a deep understanding of the target structure and also makes students reflect upon their own mother tongue by spotting differences with respect to the target language.

The conceptual bases not only offer teachers and students a view of the motivation that underlies spatial language, but also non-spatial and temporal language. The conceptual bases can be used to appreciate the part or portion of spatio-conceptual structure that is recruited for non-spatial and temporal conceptions.

The conceptual bases can be further tested for psychological reality. As shown in the previous chapter. Space-rooted conceptual parameters could be tested by experimenting on their spatial semantics to see whether speakers actually use these semantic features to understand space. If the semantic parameters of a word such as *between* (as shown in section 7.4 in chapter 7) turned out to be correct, this would allow us first to corroborate the psychological reality of the conceptual parameters proposed, and second, to design further experiments to study the metaphorical extensions of the space-rooted parameters with respect to non-spatial and temporal conceptualizations.

8.4 Suggestions for further research

Further research is desirable in terms of a more complete semantic study of more English and Spanish prepositions in order to cover both prepositional sets. This analysis is intended as a contribution to a cognitive linguistic syllabus of English and Spanish as a second/foreign language.

Another aspect for further research concerns the pedagogical applications that this view offers. This issue will be definitely explored in depth in future investigations. All the recommendations given in section 7.3 in chapter 7 will be applied at that later stage.

Finally, the last issue that the present research sheds light on, but which unfortunately I could not develop further, has to do with the psychological validations of the conceptual bases proposed. As seen in the previous chapter in section 7.4, an illustrative set of possible

experiments was introduced, suggesting to apply some experimental methods to validate the psychological reality of some of the conceptual parameters of the prepositions *between*, *among*, *amid*, and *entre*. At a later stage, I plan to carry out that set of experiments with the help of an expert in experimental methods, as well as to work out how to validate the rest of the conceptual bases proposed.

In the final analysis, the conceptual bases presented in this research intend to shed light on the spatio-conceptual structuring of prepositions and their role in non-spatial and temporal scenes. The conceptual bases analyzed are based on a linguistic theory that is psychologically plausible. This might bring benefits for teachers, students, and scholars in related areas that look for motivation, rather than mere arbitrariness, behind linguistic structure.

8.5 Summary

This last chapter has briefly presented the main concluding remarks that can be extracted from this research. We argued for the importance of a thorough understanding of spatio-conceptual structure. Such an in-depth apprehension would allow us to approach a more solid theory of spatial semantics where functionality and non-spatial conceptual parameters are as important as spatio-geometric information. This in turn, sheds light on the spatial structure that is recruited for non-spatial and temporal conceptions. The second issue concerned the role of temporal structure as temporal scaffolding for temporal linguistic constructions. Even though the conceptual bases proposed allow us to see the part or portion of spatio-conceptual structure that is mapped, we still need to account for purely temporal structure since temporal (and non-spatial) conceptualizations involve more knowledge than just metaphor. Finally, the chapter finishes with some comments on the benefits in terms of pedagogical applications and study material that the present account offers. It also carries implications for the classroom that need the cooperation of both teachers and students upon a new perspective on how language may work. The chapter concludes with recommendations for further research. These recommendations are indeed future steps of the present dissertation.

Appendix A

Instructions: Fill in the blanks with *between*, *among*, or *amid*.

1. She's _____ the desert. She might need some help.
2. You are sitting _____ Mr and Mrs Johnson
3. There is a gap _____ the blue and red car where we can park.
4. The keys were hidden _____ the weeds for two weeks.
5. _____ other things, she knows how to play the harp.
6. _____ you and me, I think that Joey likes Chloe.
7. _____ sadness and furiousness. She had to make a decision.
8. There is a link _____ good nutrition and people's wellbeing.
9. The bill will be paid _____ us.
10. That University is _____ the top 100 in Medicine.

Appendix B

Instructions: Fill in the gaps with *to* or *for*.

1. They went _____ the pub _____ some good fun yesterday.
2. This present is _____ you. Hope you like it.
3. She's been practicing karate _____ more than 6 years.
4. The reunion was held at a quarter _____ 2 p.m.
5. _____ me, happiness is about good moments.
6. I'll start _____ design new types of chairs from now on.
7. In the picture, my sister is next _____ mi dad.
8. I might go _____ the party tonight and relax. I've been too busy lately.
9. He prefers wine _____ beer.
10. The garage was built _____ the car's safety.

Appendix C

Instrucciones: Complete con *entre, a, o para*.

1. _____ tu y yo, parece que _____ Francisco tú le gustas.
2. _____ la izquierda de la fotografía estoy yo _____ los diez años.
3. Vi _____ Jaime ayer, se veía muy saludable _____ su avanzada edad.
4. Este alicate es _____ cortar el cable.
5. Corrió por _____ los matorrales hasta encontrar _____ su mascota.
6. Busco _____ una persona que sepa de administración.
7. Este dinero es _____ ti _____ que te vaya de vacaciones.
8. El móvil quedó oculto _____ las sábanas toda la mañana y yo sin poder hallarlo.
9. ¿ _____ qué sirve esto?
10. _____ llantos y alegría, Violeta vio _____ su hijo marcharse a los E.E.U.U.

References

- Achard, M. (2007). Complementation. In D. Geeraerts, & C. Cuyckens (Eds.), *The Oxford handbook of Cognitive Linguistics* (pp. 782-802). New York/ Oxford: Oxford University Press.
- Aitchison, J. (1996). *Words in the mind*. Oxford: Blackwell.
- Allwood, J. (2003). Meaning potentials and context: Some consequences for the analysis of variation in meaning. In H. Cuyckens, R. Dirven, & J. Taylor (Eds.), *Cognitive approaches to lexical semantics* (pp. 29-66). Berlin: Mouton de Gruyter.
- Barcelona, A. (2000a). On the plausibility of claiming a metonymic motivation for conceptual metaphor. In A. Barcelona (Ed.), *Metaphor and metonymy at the crossroads: A cognitive perspective* (pp. 31-58). Berlin: Walter de Gruyter.
- Barcelona, A. (Ed.) (2000b). *Metaphor and metonymy at the crossroads*. Berlin: Mouton de Gruyter.
- Barcelona, A. (2003). The case for a metonymic basis of pragmatic inferencing: Evidence from jokes and funny anecdotes. In K.U. Panther, & L. Thornburg (Eds.), *Metonymy and pragmatic inferencing* (pp. 81-102). Amsterdam/Philadelphia: John Benjamins Publishing.
- Barcelona, A. (2007). The role of metonymy in meaning at discourse level: A case study. In G. Radden, K.M. Köpcke, T. Berg, & P. Siemund (Eds.), *Aspects of Meaning Construction* (pp. 51–75). Amsterdam: John Benjamins.
- Barcelona, A. (2009). Motivation of construction meaning and form: The roles of metonymy and inference. In K.U. Panther, L.L. Thornburg, & A. Barcelona (Eds.), *Metonymy and metaphor in grammar* (pp. 363-402). Amsterdam/ Philadelphia: John Benjamins.
- Barcelona, A. (2011). Reviewing the properties and prototype structure of metonymy. In R. Benczes, A. Barcelona, & F.J. Ruiz de Mendoza (Eds.), *Defining metonymy in cognitive linguistics: Towards a consensus view* (pp. 7-57). Amsterdam: John Benjamins.

- Barcelona, A. (2015). Metonymy. In E. Dabrowska, & D. Divjak (Eds.), *Handbook of Cognitive Linguistics* (Vol. 39) (pp. 143-167). Berlin: Walter de Gruyter.
- Barcelona, A. (2019). The tripartite typology and the Córdoba Metonymy Database. In M. Bolognesi, M. Brdar, & K. Despot (Eds.), *Metaphor and Metonymy in the Digital Age* (pp. 49-73). Amsterdam / Philadelphia: John Benjamins.
- Barcelona, A. (n.d.). Metonymy-guided discourse inferencing. A qualitative study. A paper presented at the *15th International Cognitive Linguistics Conference*. August 6-11, Kwansai Gakuin University, Nishinomiya, Japan.
- Barsalou, L. (1992). Frames, concepts, and conceptual fields. In A. Lehrer, & E. F. Kettay (Eds.), *Frames, fields, and contrasts: New essays in lexical and semantic organization* (pp.21-74). Hillsdale, NJ: Lawrence Erlbaum.
- Barsalou, L. (1999). Perceptual symbol systems. *Behavioral and Brain Sciences*, 22, 577-660.
- Barsalou, L. (2003). Situated simulation in the human conceptual system. *Language and Cognitive Processes*, 18, 513-562.
- Barsalou, L. W. (2008). Grounded cognition. *Annu. Rev. Psychol.*, 59, 617-645.
- Barsalou, L. W., & Wiemer-Hastings, K. (2005). Situating abstract concepts. In D. Pecher, & R. Zwaan (Eds.), *Grounding cognition: The role of perception and action in memory, language, and thought* (pp.129-163). Cambridge: Cambridge University Press.
- Barsalou L.W., Yeh, W., Luka, B.J., Olseth, K.L., Mix, K.S., & Wu, L. (1993). Concepts and meaning. In K. Beals, G, Cooke, D. Kathman. K.E. McCullough, S. Kita, & D. Testen (Eds.), *Chicago Linguistics Society 9: Papers from the parasession on Conceptual Representations*, vol. 2 (pp. 23-61). Chicago Linguistics Society.
- Bennet, D. (1975). *Spatial and temporal uses of English prepositions*. London: Longman.
- Bergen, B. K. (2012). *Louder than words: The new science of how the mind makes meaning*. New York: Basic Books.

- Bergen, B., & Chang, N. (2005). Embodied construction grammar in simulation-based language understanding. In J.O. Ostman, & M. Fried (Eds.), *Construction grammars: Cognitive grounding and theoretical extensions* (pp. 147-190). Amsterdam: John Benjamins.
- Boers, F., & Demecheleer, M. (1998). A cognitive semantics approach to teaching prepositions. *ELT Journal*, 52, 197–203.
- Bolinger, D. (1968). Entailment and the meaning of structures. *Glossa*, 2(2), 119–127.
- Bottini, G., Corcoran, R., Sterzi, R., Paulesu, E., Schenone, P., Scarpa, P., & Frith, D. (1994). The role of the right hemisphere in the interpretation of figurative aspects of language A positron emission tomography activation study. *Brain*, 117(6), 1241-1253.
- Bowdle, B. F., & Gentner, D. (2005). The career of metaphor. *Psychological review*, 112(1), 193–216.
- Brugman, C. (1981). The story of over. M.A Thesis. Berkeley: University of California.
- Brugman, C., & Lakoff, G. (1988). Cognitive topology and lexical networks. In S. Small, G. Cottrell, & M. Tannenhaus (Eds.), *Lexical ambiguity resolution* (pp. 477-507). San Mateo, CA: Morgan Kaufman.
- Burks, A. W. (1949). Icon, index, and symbol. *Philosophy and phenomenological research*, 9(4), 673–689.
- Cambridge University Press. (2008). *Cambridge online dictionary*, Cambridge Dictionary online in <https://dictionary.cambridge.org>
- Carlson, L.A., & Kenny, R. (2006). Interpreting spatial terms involves simulating interaction. *Psychonomic Bulletin & Review*, 13, 682–688.
- Carlson, L.A., & Hill, P. (2007). Experimental studies for studying language and space. In M. Gonzales-Marquez, I. Mittelberg, S. Coulson and M.J. Spivey (Eds.), *Methods in Cognitive Linguistics* (pp. 250-276). Amsterdam/Philadelphia: John Benjamins Publishing.
- Carlson-Radvansky, L.A., Covey, E.S., & Lattanzi, K.L. (1999): “What” effects on “where”: Functional influences of spatial relations. *Psychological Science*, 10, 516-521.

- Chéliz, M. D. (2002). *Lo que la preposición esconde: estudio sobre la argumentalidad preposicional en el predicado verbal*. Zaragoza: Prensas Universitarias.
- Chomsky, N. (1965). *Aspects of the theory of syntax*. Cambridge, Massachusetts: MIT press.
- Chomsky, N. (1995). *The minimalist program*. Cambridge, MA: MIT Press.
- Clark, E. (2003). Languages and representations. In D. Gentner, & S. Goldin-Meadow (Eds.), *Language in mind: Advances in the study of language and thought* (pp. 17-24). Cambridge, MA: The MIT Press.
- Clark, H. H. (1996). *Using language*. Cambridge: Cambridge University Press.
- Corballis, M. C. (2011). *The recursive mind: The origins of human language, thought, and civilization*. Princeton, New Jersey: Princeton University Press.
- Coulson, S. (2000). *Semantic leaps*. Cambridge: Cambridge University Press.
- Croft, W. (2000). *Explaining language change: An evolutionary approach*. London: Longman.
- Croft, W., & Cruse, D.A. (2004). *Cognitive Linguistics*. Cambridge: Cambridge University Press.
- Damasio, A. R. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. New York: Harcourt Brace.
- Di Paolo, E., & Thompson, E. (2014). In L. Shapiro (Ed.), *The Routledge handbook of embodied cognition* (pp. 68-78). New York and London: Routledge.
- Eckman, F. R. (1977). Markedness and the contrastive analysis hypothesis. *Language learning*, 27(2), 315-330.
- Eddington, A. (1928). *The Nature of the Physical World*. London: Macmillan.
- Evans, N., & Wilkins, D. (2000). In the mind's ear: The semantic extensions of perception verbs in Australian languages. *Language*, 76 (3): 546–592.

- Evans, V. (2004). *The structure of time: Language, meaning, and temporal cognition*. Amsterdam: John Benjamins.
- Evans, V. (2006). Lexical concepts, cognitive models and meaning-construction. In D. Divjak (Ed.), *Cognitive Linguistics* (pp. 491-534). Berlin: Mouton de Gruyter.
- Evans, V. (2009). *How words mean: Lexical concepts, cognitive models, and meaning construction*. Oxford: Oxford University Press.
- Evans, V. (2010a). From the spatial to the non-spatial: the 'state' lexical concepts of *in*, *on* and *at*. In V. Evans & P. Chilton (Eds.), *Language, cognition & space* (pp. 215-248). Equinox: London.
- Evans, V. (2010b). On the nature of lexical concepts. *Belgrade Journal of English Linguistics and Literature Studies (BELLS)*, 2, 11–46.
- Evans, V. (2010c). The perceptual basis of spatial representation. In V. Evans, & P. Chilton (Eds.), *Language, cognition and space: The state of the art and new directions* (pp. 21-48). London: Equinox Publishing.
- Evans, V. (2010d). Figurative language understanding in LCCM theory. *Cognitive Linguistics*, 21(4), 601-662.
- Evans, V. (2013). *Language and time: A cognitive linguistics approach*. Cambridge: Cambridge university Press.
- Evans, V. (2014). *The language myth: Why language is not an instinct*. Cambridge: Cambridge University Press.
- Evans, V. A unified account of polysemy within LCCM Theory. *Lingua* (2015a), <http://dx.doi.org/10.1016/j.lingua.2014.12.002>
- Evans, V. (2015b). *The crucible of language: How language and mind create meaning*. Cambridge: Cambridge University Press.
- Everett, D. L. (2009). *Don't sleep, there are snakes: Life and language in the Amazonian jungle*. London: Profile Books.
- Everett, D. L. (2012). *Language: The cultural tool*. New York: Pantheon Books.

Everett, D. L. (2016). *Dark matter of the mind: The culturally articulated unconscious*. Chicago and London: University of Chicago Press.

Fauconnier, G. (1994). *Mental spaces: Aspects of meaning construction in natural language*. Cambridge: Cambridge University Press.

Fauconnier, G., & Turner, M. (2002). *The way we think: Conceptual blending and the mind's hidden complexities*. New York: Basic Books.

Fillmore, C. (1975). An alternative to checklist theories of meaning. *Proceedings of the First Annual Meeting of the Berkeley Linguistics Society*, 123-131.

Fillmore, C. (1982). Frame semantics. In *Linguistic in the Morning Calm*, 111–37. Seoul: Hanshin Publishing Company.

Galton, A. (2011). Time flies but space doesn't: limits to the spatialization of time. *Journal of Pragmatics*, 43, 695-703.

Gibbs, R.W. (1994). *The poetics of mind*. Cambridge: Cambridge University Press.

Gibbs, R. (2007). Why cognitive linguists should care more about empirical methods. In M. Gonzalez-Marquez, I. Mittelberg, S. Coulson and M.J. Spivey (Eds.), *Methods in Cognitive Linguistics* (pp. 2-18). Amsterdam/Philadelphia: John Benjamins Publishing.

Gibson, J.J. (1979). *The ecological approach to visual perception*. Boston: Houghton Mifflin.

Giora, R. (2003). *On our mind: Salience, context, and figurative language*. New York: Oxford University Press.

Giora, R. (2008). Is metaphor unique? In R. Gibbs (Ed.), *The Cambridge handbook of metaphor and thought* (pp. 143-160). Cambridge: Cambridge University Press.

Givón, T. (1980). The binding hierarchy and the typology of complements. *Studies in Language*, 4, 333–477.

Givón, T. (1990). *Syntax: A functional-typological introduction* (Vol 2). Amsterdam: John Benjamins.

- Goldberg, A. (1995). *Constructions: A construction grammar approach to argument structure*. Chicago, IL: Chicago University Press.
- Goldvarg, Y., & Glucksberg, S. (1998). Conceptual combinations: The role of similarity. *Metaphor and Symbol*, 13(4), 243-255.
- Grice, P. (1989). *Studies in the way of words*. Cambridge, MA: Harvard University Press.
- Grondelaers, S. (2000). *De distributie van niet-anaforsch er buiten de eerste zinsplaats. Sociolectische, functionele en psycholinguïstische aspecten van er's status als presentatief signaal*. PhD Thesis, University of Leuven.
- Grondelaers, S., Geeraerts, D., & Speelman, D. (2007) A case for a Cognitive corpus linguistics. In M. Gonzalez-Marquez, I. Mittelberg, S. Coulson, & M.J. Spivey (Eds.), *Methods in Cognitive Linguistics* (pp. 149-170). Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Grady, J. (1997). *Foundations of meaning: Primary metaphors and primary scenes*. Unpublished doctoral thesis, linguistics dept, UC Berkeley.
- Hampe, B. (2005). Image schemas in cognitive linguistics: Introduction. In B. Hampe (Ed.), *From perception to meaning: Image schemas in cognitive linguistics* (pp. 1-12). Berlin: Mouton de Gruyter.
- Harder, P. (2009). Meaning as input: The instructional perspective. In V. Evans and S. Pourcel (Eds.), *New directions in Cognitive Linguistics* (pp. 15-26). Amsterdam: John Benjamins.
- Herskovits, A. (1985). Semantics and pragmatics of locative expressions. *Cognitive Science* 9, 341–378.
- Herskovits, A. (1986). *Language and spatial cognition*. Cambridge: Cambridge University Press.
- Herskovits, A. (1988). Spatial expressions and the plasticity of meaning. In B. Rudzka-Ostyn (Ed.), *Topics in Cognitive Linguistics* (pp. 271–98). Amsterdam: John Benjamins.

- Holme, R. (2009). *Cognitive linguistics and language teaching*. New York: Palgrave Macmillan.
- Hopper, P., & Traugott, E. (1993). *Grammaticalization*. Cambridge: Cambridge University Press.
- Husserl, E. (1980). *Phenomenology and the foundation of the Sciences: Ideas pertaining to a pure phenomenology and to a phenomenological philosophy. Third book*, trans. T.E. Klein and W.E. Pohl. The Hague: Martinus Nijhoff.
- Husserl, E. (1991). *On the phenomenology of the consciousness of internal time (1893-1917)*, trans. J.B. Brough. Dordrecht: Kluwer Academic Publishers.
- Jackendoff, R. (1983). *Semantics and cognition*. Cambridge, MA: The MIT Press.
- James, W. ([1890]/1950). *The principles of Psychology*. New York: Dover.
- Johnson, M. (1987). *The body in the mind: The bodily basis of meaning, imagination, and reason*. Chicago and London: University of Chicago Press.
- Johnson, M. (2005). The philosophical significance of image schemas. In B. Hampe (Ed.), *From perception to meaning: Image schemas in cognitive linguistics* (pp. 15-33). Berlin: Mouton de Gruyter.
- Johnson, M. (2007). *The meaning of the body: Aesthetics of human understanding*. Chicago: University of Chicago Press.
- Kemmerer, D. (2005). The spatial and temporal meanings of English prepositions can be independently impaired. *Neuropsychologia*, 43, 797–806.
- Kövecses, Z. (1986). *Metaphors of anger, pride, and love: A lexical approach to the structure of concepts*. Amsterdam: John Benjamins.
- Kövecses, Z. (2005). *Metaphor in culture: Universality and variation*. Cambridge University Press.
- Lakoff, G. (1987). *Woman fire and dangerous Things: What categories reveal about the mind*. Chicago: Chicago University Press.

- Lakoff, G. (1990). The invariance hypothesis: Is abstract reason based on image-schemas? *Cognitive Linguistics*, 1(1), 39-74.
- Lakoff, G. (1993). The contemporary theory of metaphor. In A. Ortony (Ed.), *Metaphor and thought*, 2nd edition (pp. 202-251). Cambridge: Cambridge University Press.
- Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago and London: University of Chicago press.
- Lakoff, G., & Johnson, M. (1999). *Philosophy in the flesh* (Vol. 4). New York: Basic books.
- Langacker, R. W. (1987). *Foundations of cognitive grammar* (Vol I): *Theoretical prerequisites*. Stanford: Stanford University Press.
- Langacker, R.W. (1991). *Foundations of cognitive grammar*. Vol. II: *Descriptive applications*. Stanford: Stanford University Press.
- Langacker, R.W. (1993). Reference-point constructions. *Cognitive Linguistics*, 4, 1–38.
- Langacker, R.W. (2000). *Grammar and conceptualization* [Cognitive Linguistics Research 14]. Berlin and New York: Mouton de Gruyter.
- Langacker, R.W. (2008). *Cognitive grammar: A basic introduction*. Oxford: Oxford University Press.
- Langacker R.W. (2009). Metonymic grammar. In K.U. Panther, L.L. Thornburg, & A. Barcelona (Eds.), *Metonymy and metaphor in grammar* (pp. 45-74). Amsterdam: John Benjamins Publishing.
- Langacker, R. W. (2012a). Linguistic manifestations of the space-time (dis) analogy. In L. Filipović, & M. Jaszczolt (Eds.), *Space and time in languages and cultures: Language, culture and cognition* (pp. 191-216). Amsterdam: John Benjamins.
- Langacker, R. W. (2012b). Interactive cognition: Toward a unified account of structure, processing, and discourse. *International Journal of Cognitive Linguistics*, 3(2), 95.
- Levinson, S. C. (2003). *Space in language and cognition: Explorations in cognitive diversity*. Cambridge: Cambridge University Press.

- Lindstromberg, S. (1996). Prepositions: Meaning and method. *ELT Journal*, 50, 225-236.
- Littlemore, J. (2009). *Applying cognitive linguistics to second language learning and teaching*. New York: Palgrave Macmillan.
- Mandler, G. (1975). *Mind and body: Psychology of emotion and stress*. New York: WW Norton.
- Mandler, J.M. (1992). How to build a baby: II Conceptual primitives. *Psychological review*, 99 (4), 587–604.
- Mandler, J. M. (2004). *The foundations of mind: Origins of conceptual thought*. New York: Oxford University Press.
- Maiese, M. (2014). Body and emotion. In L. Shapiro (Ed.), *The Routledge handbook of embodied cognition* (pp. 231-239). New York and London: Routledge.
- Merleau-Ponty, M. (1962). *Phenomenology of perception*, trans. Colin Smith. London: Routledge Press.
- Moore, K. E. (2006). Space-to-time mappings and temporal concepts. *Cognitive Linguistics*, 17(2), 199-244.
- Moore, K.E. (2014). *The spatial language of time: Metaphor, metonymy, and frames of reference*. Amsterdam/ Philadelphia: John Benjamins
- Morras, J. (2018). Base conceptual de la preposición entre y sus equivalentes de la lengua inglesa between, among, y amid: una perspectiva en lingüística cognitiva [Conceptual basis of entre and its English equivalents between, among and amid: A cognitive linguistics perspective]. *RILEX. Revista sobre Investigaciones Léxicas*, 1(2), 52–84.
- Morras, J. (in press). Parametric knowledge in linguistic structure. *International Journal of Business, Human and Social Sciences*.
- Morras, J. (to appear). Unweaving the embodied nature of English temporal prepositions: The case of at. *Cognitive Linguistic Studies*.
- Morras, J., & Barcelona, A. (2019) Conceptual structuring of the English prepositions between, among, and amid, and their Spanish equivalent entre: A cognitive linguistic

approach to spatial, non-spatial and temporal prepositions. *Cognitive Linguistic Studies*, 6(1), 103–129.

Munnich, E., & Landau, B. (2003). The effects of spatial language on spatial representation: Setting some boundaries. In D. Gentner, & S. Goldin-Meadow (Eds.), *Language in mind: Advances in the study of language and thought* (pp. 113-156). Cambridge, MA: The MIT Press.

Murphy, G. (1996). On metaphoric representation. *Cognition*, 60, 173–204.

Núñez, R., & Sweetser, E. (2006). With the future behind them: Convergent evidence from Aymara language and gesture in the crosslinguistic comparison of spatial construals of time. *Cognitive Science*, 30, 401–450.

O' Dowd, E. (1998). *Prepositions and particles in English: A discourse-functional account*. New York/Oxford: Oxford University Press.

Panther, K. U. (2006). Metonymy as a usage event. In G. Kristiansen, M. Achard, R. Dirven, & F. Ruiz de Mendoza (Eds.), *Cognitive Linguistics: Current applications and future perspectives* (pp.147-185). Berlin: Mouton de Gruyter.

Panther, K. U., & Thornburg, L. L. (2007). Metonymy. In D. Geeraerts, & H. Cuyckens (Eds.), *The Oxford handbook of cognitive linguistics* (pp. 236 – 263). Oxford/New York: Oxford University Press.

Pierce, C. S. (1932). The icon, index, and symbol. *Collected papers of Charles Sanders Pierce*, 2, 156–173.

Pöppel, E. (2004). Lost in time: a historical frame, elementary processing units and the 3-second window. *Acta Neurobiologiae Experimentalis (Wars)*, 64, 295-301.

Pöppel, E. (2009). Pre-semantically defined temporal windows for cognitive processing. *Philosophical Transactions of the Royal Society B*, 364, 1887-1896.

Pustejovsky, J. (1995). *The generative lexicon*. Cambridge, MA: MIT Press.

- Pütz, M. (2007). Cognitive linguistics and applied linguistics. In D. Geeraerts, & C. Cuyckens (Eds.), *The Oxford handbook of Cognitive Linguistics* (pp. 1139-1159) New York/ Oxford: Oxford University Press.
- Radden, G., & Dirven, R. (2007). *Cognitive English grammar*. Amsterdam/Philadelphia: John Benjamins Publishing.
- Real Academia Española. (2015). *Diccionario de la lengua española* ((23.aed.)). Consultado en <http://dle.rae.es>
- Recanati, F. (2004). *Literal meaning*. Cambridge: Cambridge University Press.
- Rice, S. A. (1992). Polysemy and lexical representation: The case of three English prepositions. In *Proceedings of the fourteenth annual conference of the Cognitive Science Society*, 89-94.
- Rosch, E. (1978). Principles of categorization. In B. Lloyd, & E. Rosch (Eds.), *Cognition and categorization* (pp. 27-48). Hillsdale, New Jersey: Lawrence Erlbaum.
- Ruhl, C. (1989). *On monosemy: A study in linguistic semantics*. New York, NY: State University of New York Press.
- Ruiz de Mendoza, F. J. (2017). Metaphor and other cognitive operations in interaction: From basicity to complexity. In B. Hampe (Ed.), *Metaphor: Embodied cognition, and discourse* (pp.138-159). Cambridge: Cambridge University Press.
- Sandra, D. (1998). What linguists can and can't tell about the human mind: A reply to Croft. *Cognitive Linguistics*, 9, 361-378.
- Saussure, F. (1916). *Cours de linguistique générale*. Paris: Payot
- Schank, R. C., & Abelson, R. (1977). *Plans, scripts, goals and understanding: an inquiry into human knowledge structures*. Hillsdale, NJ: Lawrence Erlbaum.
- Searle, J. ([1979]/1993). Metaphor. In A. Ortony (Ed.), *Metaphor and thought*, 2nd edition (pp. 83-111). Cambridge: Cambridge University Press.
- Searle, J. (1983). *Intentionality: An essay in the philosophy of mind*. Cambridge: Cambridge University Press.

Sfard, A. (1994). Reification as the birth of metaphor. *For the Learning of Mathematics*, 14(1), 44-55.

Sinha, C., & Kuteva, T. (1995). Distributed spatial semantics. *Nordic Journal of Linguistics*, 18, 167-199.

Sinha, C., Da Silva, V., Zinken, J., & Sampaio, W. (2016). When time is not Space: The social and linguistic construction of time intervals and temporal event relations in an Amazonian culture. In B. Lewandowska -Tomaszczyk (Ed.), *Conceptualizations of Time* (pp. 151-186). Amsterdam/Philadelphia: John Benjamins Publishing Company.

Slobin, D. (2003). Language and thought online: Cognitive consequences of linguistic relativity. In D. Gentner, & S. Goldin-Meadow (Eds.), *Language in mind: Advances in the study of language and thought* (pp. 157-192). Cambridge, MA: The MIT Press.

Stefanonowich, A. (2003). Constructional semantics as a limit to grammatical alternation: The two genitives of English. In G. Rohdenburg & B. Mondorf (Eds.), *Determinants of grammatical variation* (pp. 413-444). Berlin: Mouton de Gruyter.

Svorou, S. (1994). *The grammar of space*. Amsterdam/Philadelphia: John Benjamins Publishing Company.

Talmy, L. (1978). Figure and ground in complex sentences. In J. H. Greenberg (Ed.), *Universals of human language*. Volume 4: Syntax. Stanford: Stanford University Press.

Talmy, L. (1983). How language structures space. In L. Herbert, & L. Acredolo (Eds.), *Spatial orientation: theory, research, and application* (pp. 225-282). New York and London: Plenum Press.

Talmy, L. (2000). *Toward a cognitive semantics* (2 volumes). Cambridge, MA: MIT Press.

Talmy, L. (2007). Foreword. In M. Gonzalez-Marquez, I. Mittelberg, S. Coulson, & M.J. Spivey (Eds.) *Methods in Cognitive Linguistics* (pp. xi-xxi). Amsterdam/Philadelphia: John Benjamins Publishing Company.

Taylor, J. (1993). Some pedagogical implications of cognitive linguistics. In R.A. Geiger, & B. Rudzka-Ostyn (Eds.), *Conceptualization and mental processing in language* (pp. 201-223). Berlin: Mouton de Gruyter.

Taylor, J. (2006). Polysemy and the lexicon. In: G. Kristiansen, M. Achard, R. Dirven, & F.J. Ruiz de Mendoza (Eds.), *Cognitive Linguistics: Current applications and future perspectives* (pp. 51-80). Berlin/New York: Mouton de Gruyter.

Thompson, E. (2005). Sensorimotor subjectivity and the enactive approach to experience. *Phenomenology and the Cognitive Sciences*, 4(4), 407-427.

Thompson, E. (2007). *Mind in life: Biology, phenomenology, and the sciences of mind*. Cambridge, Massachusetts: Harvard University Press.

Tomasello, M. (1999). *The cultural origins of human cognition*. Cambridge, MA: Harvard University Press.

Tomasello, M. (2003). *Constructing a language: A usage-based theory of language acquisition*. Cambridge, Massachusetts, and London: Harvard University Press.

Traugott, E., & Dasher, R. (2004). *Regularity and semantic change*. Cambridge: Cambridge University Press.

Trujillo, R. (1971). Notas para un estudio de las preposiciones españolas. *Thesaurus*, 26, 234–279.

Tversky, B. (2008). Spatial Cognition: Embodied and Situated. In M. Aydede, & P. Robbins (Eds.), *The Cambridge handbook of situated cognition* (pp. 201-217). Cambridge: Cambridge University Press.

Tyler, A. (2012). *Cognitive Linguistics and second language learning*. New York and London: Routledge.

Tyler, A., & Evans, V. (2001). The relation between experience, conceptual structure and meaning: Non-temporal uses of tense and language teaching. In M. Pütz, S. Niemeier, & R. Dirven (Eds.), *Applied cognitive linguistics I: Theory and language acquisition* (pp. 63-105). Berlin/New York: Mouton de Gruyter.

- Tyler, A., & Evans, V. (2003a). *The semantics of English prepositions: Spatial scenes, embodied meaning and cognition*. Cambridge: Cambridge University Press.
- Tyler, A. & Evans, V. (2003b). Reconsidering prepositional polysemy networks: The case of *over*. In B. Nerlich, Z. Todd, V. Herman, & D. Clarke (Eds.), *Polysemy: Flexible patterns of meaning in mind and language* (pp. 95-160). Berlin: Mouton de Gruyter.
- Vandeloise, C. (1991). *Spatial prepositions: A case study from French* (trans. Anna R.K. Bosch). Chicago: Chicago university Press.
- Vandeloise, C. (1994). Methodology and analysis of the preposition in. *Cognitive Linguistics*, 5(2), 157–184.
- Vandeloise, C. (2003). Containment, support, and linguistic relativity. In H. Cuyckens, R. Dirven, & J.R Taylor (Eds.), *Cognitive approaches to lexical semantics* (pp. 393-426). Berlin: Mouton de Gruyter.
- Varela, F. J., Thompson, E., & Rosch, E. (1991). *The embodied mind: Cognitive science and human experience*. Cambridge, MA: MIT Press.
- Walsh, V. (2003). A theory of magnitude: common cortical metrics of time, space and quantity. *Trends in Cognitive Sciences*, 7(11), 483-488.
- Wierzbicka, A. (1988). *The semantics of grammar* (Vol. 18). Amsterdam/ Philadelphia: John Benjamins Publishing.
- Zlatev, J. (2003). Polysemy or generality? Mu. In H. Cuyckens, R. Dirven, & J. Taylor (Eds.), *Cognitive approaches to lexical semantics* (pp. 447-494). Berlin: Mouton de Gruyter.
- Zwaan, R. (2004). The immersed experiencer: toward an embodied theory of language comprehension. In B. H. Ross (Ed.), *The psychology of learning and motivation* (pp. 35-62). New York, NY: Academic Press.