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Literature review

2 LITERATURE REVIEW

In this chapter, I review the relevant literature. Section 2.1 covers how context may affect the meaning of a word to give rise to various readings. In 2.2, I address the problem that has been posed by the complexity of context. Section 2.3 is devoted to how the previous studies deal with *up*, and Section 2.4 to how the previous studies approach *shàng*. Section 2.5 reviews Principled Polysemy (Evans 2004; Tyler and Evans 2003), a theoretical model that has high potential for accommodating relevant contextual elements. Section 2.6 introduces a notion in Cognitive Grammar that was not employed by Lindner (1983) but may be useful in the discussion of polysemy: semantic valence.

2.1 Polysemy as contextualized patterns of meaning

Taylor (2003a: 653), from a usage-based perspective of language, regards meanings as "contextualization patterns". However, a gap still exists in the literature regarding how meaning is patterned with regard to context, given the highly protean and hardly manageable nature of context.

In many sub-fields of linguistics, the phenomena of contextual influence on the reading of a lexical item have been extensively reported. Two oft-cited instances are Pustejovsky's (1991) "type coercion" from the computational paradigm and Cruse's (1986, 2000) "contextual modulation" in lexical semantics. Pustejovsky proposes the term "qualia structure" to illustrate how a verb can combine with a noun by focusing on one of the qualia types of the noun: constitutive, formal, telic, and agentive. The verb *begin*, for instance, singles out the telic role of *novel* in the phrase to *begin a novel*. The interpretation of *novel* hence depends heavily

on the verb that appears next to it. Cruse's contextual modulation distinguishes two meaning facets of *car*: first in *to wash a car*, where the lexeme refers to the exterior part of the automobile, and then in *to service a car*, where the word represents the internal movable components of an automobile. In these two examples, the readings of the nouns, *novel* and *car*, are under the influence of the verbs that accommodate them. It must however be noted that the essence of type coercion and contextual modulation lies not only in the textual contribution to the target lexeme, i.e. *novel* and *car*, but in the entire knowledge base that lies beneath the idealized cognitive model[6] of NOVEL and CAR, and most important of all, the human experience of interaction with these artifacts.

The concept of context is still used as a monolith in Cruse's and Pustejovsky's studies. This is because the studies approached meaning from a lexical semantics perspective, and therefore naturally were not able to focus on whether a modeling of context can lead to a more satisfying analytical result. Another point to note is that Pustejovsky's and Cruse's illustrations of how context affects the meaning of the target word address the interaction between a verb and a noun, which are both content words but not functional words like a preposition.

Concerning prepositions, Tyler and Evans (2001, 2003), in their discussion of the spatial sense of *over*, give a classic example of how meaning is under contextual influences. The authors (2003: 69ff) argue that spatial particles carry schematic conceptualizations which are interpreted within the particular contexts in which they occur. The "ABC trajectory" sense of *over* as in *The cat jumped over the wall* is inferred from the integration of linguistic prompts at the conceptual level and the real-world knowledge invoked by the prompts. The trajectory is not prompted by the linguistic form *over* per se, but instead arises from the integration of *over*, *wall, cat,* and what we know about how a cat's jumping relates to a wall.

In addition to nearby lexical items and encyclopedic knowledge, another possible candidate of contextual influence on prepositional meaning is the grammatical construction in which a preposition appears. In Tyler and Evans' (2003:61) study of *over*, the "conceptual significance of syntax" is touched upon:

> Given that syntax is meaningful, in principle in the same way as lexical items, it follows that differences in syntactic form reflect a distinction in meaning.

However, the influence of syntax played only a secondary role in their discussion and was not discussed systematically. It was not until Evans (2004) developed a more refined version of Principled Polysemy that the component of

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6   For a clear definition of "idealized cognitive model", see Lakoff (1987).

syntax was included and addressed in detail. A review of Principled Polysemy (henceforth PP) and a comparison between its two versions will be given in Section 2.5.

Up to this point, I have demonstrated that the multiple readings of a word should be considered the patterns in which a lexical item interacts with relevant contextual factors. Below, I will give a clear definition of context as the groundwork for a detailed context-based semantic analysis.

2.2 Context

In linguistics, context can be roughly divided into linguistic and extra-linguistic contexts. In 2.2.1, I cover the influence of linguistic context, referred to as "co-text" by Sinclair (1991), on lexical meaning, and in 2.2.2, I introduce a type of extralinguistic context called knowledge patterns and what it means in previous literature.[7]

2.2.1 Co-text

From the perspective of lexical semantics, a word's meaning is dependent on its nearby linguistic items (Cruse 1986; Pustejovsky 1995). Cruse (1986) and Geeraerts (1993), among others, propose many methods to decide whether a word is ambiguous or general between two meanings. Their methods are based on comparisons between single constructed instances. The credibility of these methods was later challenged by corpus linguists such as Kilgarriff (1997), based on the fact that such tests only present cases that are clearly distinguished, but for usages that our intuition considers to be unclear, the tests would not work. Kilgarriff also points out that when two native speakers' opinions are in conflict, such simple qualitative, intuition-based approach would fail to reach a convincing conclusion.

The problem of natural language processing and "word sense disambiguation" (henceforth WSD) has also been addressed in corpus linguistics. In 1957, Firth published this famous line, which has been adopted as an axiom in corpus linguistics: "A word is known by the company it keeps." The main concern for experts in WSD is to pick out the right meaning by observing the possible behavioral patterns of a lexical item. Kilgarriff (1997: 91), for instance, writes:

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7   Another type of extra-linguistic context, the physical situation, was also mentioned in Croft and Cruse (2004) and Wilson (2003). However, given the written nature of the linguistic data adopted in the present study, it is beyond my scope to study the influence of this contextual element on the meanings of *up* and *shàng*.

> Many words have more than one meaning. When a person understands a sentence
> with an ambiguous word in it, that understanding is built on the basis of just one of
> the meanings. So, as some part of the human language understanding process, the
> appropriate meaning has been chosen from the range of possibilities.

The lexico-computational approach, represented by Atkins (1993), Kilgarriff (1997), and many others, tries to understand the flexibility of word meaning from a corpus-generated approach. The merit of this approach is that they extend the operational definition of word meaning from a subjective into a more objective domain. The study of meaning has thus undergone a switch from introspection to extracting information of a word along with its co-texts. In his study of the word *handbag*, Kilgarriff (1997) argues that the concept of "word senses" cannot be defined in a workable way as a basic unit of meaning. Instead, word senses arise from clusters of tokens, and if a group of usage is large enough in number and is distinct from the others, it can be recognized as a sense.

It is not until recently that the field of cognitive semantics has also relied on corpus evidence for sense distinctions. For instance, Fillmore and Atkins (2000) base their analysis of *crawl* on a complete concordance, and suggest that the many meanings of *crawl* are experientially motivated and that an explanation needs to rely on frame semantics. Gries (2006), further following Atkin's (1987) ID tags and Hanks' (1996) notion of "behavioral profile", generates and analyzes the meaning patterns of *run* from corpora, arguing that corpus-linguistic methods can provide objective empirical evidence to WSD. The above two studies investigate content; as for grammatical constructions and functional components, Stefanowitsch (2003) approaches the alternation of the *s*-genitive and *of*-genitive in English. It was traditionally held that these two grammatical constructions were semantically equivalent, but Stefanowitsch overturns that assumption by looking into the properties of the NPs in the constructions. He finds that the *s*-genitive encodes a possessor-possessee relation while the *of*-genitive a part-whole relation. Evans (2004, 2006), in keeping with the gist of Atkins (1987), Gries (2006) and Stefanowitsch (2003), argues that each lexical concept has its distinct lexical profile, which exhibits a cluster of selectional tendencies. In Chinese Linguistics, corpus methods have been applied to the study of various linguistic phenomena such as the semantics of numerical classifiers (Dosedlová and Lu 2019; Dosedlová and Lu, 2021), among others.

Albeit with different methods and theoretical concerns, all these studies have made one point clear: A proper description of word meaning requires a detailed description of its co-text. The notion of co-text in the present study will be strictly defined in line with Croft and Cruse (2004: 102) to mean the immediate linguistic environment of a word that constrains its construal.

2.2.2 Encyclopedic knowledge and experiential domain

In pragmatics, it has been well-established that understanding a sentence in context requires much more than knowledge of what is coded by the sentence *per se* (Grice 1975, 1978; Reddy 1979). It has been argued that language understanding is based on rational inferences not simply about what is uttered, but also about the immediate context, knowledge of the speaker's beliefs and intentions, and background knowledge about the workings of the world.

In Cognitive Linguistics, it has also been generally accepted that meaning is embodied and situated (e.g. Grady 1997; Johnson 1987; Lakoff and Johnson 1980, 1999; Langacker 1987; Sweetser 1990; Tyler and Evans 2001, 2003; Evans 2004, 2006). Based on this assumption, encyclopedic knowledge, or patterns of information that help in understanding language, is deemed necessary for language comprehension (Fillmore 1976; Langacker 1987; Evans 2006). Fillmore (1976), for instance, proposes that an understanding of a word would involve the entire knowledge structure in which the word is relativized. Such knowledge structures are modeled as "semantic frames". The stock example would be Fillmore's COMMERCIAL TRANSACTION frame, which is necessary in the understanding of the verbs *buy* and *sell*, among others. The author claimed that the meaning of transaction verbs is understood with reference to our recurrent knowledge of the commercial domain as a conceptual prerequisite for interpreting the meaning of the verbs. Langacker (1987) similarly points out that the scope of predication of a word involves its base and profile in an experiential domain, where the profile refers to a part of substructure within a larger conceptual unit, i.e. the base. For instance, the word *hypotenuse* 'the longest line of a right-angled triangle', profiles a subpart of, and is designated within, a larger conceptual unit of a right-angled triangle in the domain of SPACE, which is the base of the construal.

The importance of encyclopedic knowledge similarly holds in the study of prepositional meanings. Herskovits's (1986, 1988) studies on the relation between prepositions and spatial cognition suggested that geometric-spatial relations do not suffice to explain the range of usages of spatial particles. Herskovits recognized that the way humans interact with spatial configurations is a critical component of the meanings exhibited by spatial particles. Vandeloise (1991, 1994) holds a consonant opinion, and argues that function constitutes the relevant factor that decides how we conceptualize and linguistically realize a spatial scene. He contrasts the following instances:

(2–1) *The bulb is in the socket*.
(2–2) **The bottle is in the cap*.[8]

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8   Following the tradition in linguistics, an asterisk marks the unacceptability of an example.

This pair depicts the same geometric-spatial relations, only with different pairs of tr's and lm's.[9] In (2–1), the entity that is spatially higher is *the socket*, and is chosen as the secondary figure, the lm, in the spatial scene. In contrast, the spatially higher entity in (22) is *the cap*, but the acceptability of that entity chosen as the lm is dubious. Vandeloise indicates that although the spatial relation between the tr and the lm remains consistent for (2–1) and (2–2), human understanding of the tr's and the lm's (the way the entities function and interact) also plays a crucial role in our use of spatial components. Sinha and Jensen de Lopez (2000) is in line with the above in proposing that the concept of CONTAINMENT has not only its logical property but also its functional property, and the functional aspect exerts great influence on how we use and understand spatial concepts. In Tyler and Evans' (2001, 2003) discussion on the ABC trajectory use of *over* (mentioned previously in 2.1), the authors also emphasize the importance of encyclopedic knowledge by detailing how such knowledge facilitates the online meaning construction of *The cat jumped over the wall*. Based on this premise, PP tries to embody the role of world knowledge with an addition of the Functional Element, which refers to patterns of human embodied experiences associated with the abstracted and idealized prototypical meaning of a preposition. In Tyler and Evans' discussion of *over*, for instance, the Functional Element of *over* is understood as the tr and the lm being in each other's range of influence, suggesting potential contact between them, which poses some constraint on what may count as *over* and so can be understood to constrain the meaning extension and usages.

From the above review, the significance of encyclopedic knowledge and its influence on lexical meaning is evident. In the present study, world knowledge will be broadly defined as a remembered realm of experiences against which an expression is processed, and such knowledge is often arbitrarily organized as a domain, depending on the comprehension task at hand.

Now that I have delineated the notion of context, which includes linguistic cotext and encyclopedic knowledge organized in the form of conceptual domains, I will move on to a review of the previous studies on *up* and *shàng* and discuss the role of context therein.

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9   A tr (trajector) refers to the most prominent figure in a conceptual scene, where as a lm (landmark) represents the secondary figure. In Langacker's (1991) earlier publication on CG, the notation of trajector and landmark is inconsistent, sometimes in upper case (TR/LM) and sometimes in lower case (tr/lm). However, in later publications (1999, 2008), the author consistently uses the lower case. Here, I follow the more recent practice by also putting tr and lm in lower case.

2.3 Previous studies on *up*

The semantics of prepositions has been a topic of central importance within Cognitive Linguistics since the 1980s. The meaning of *up* has been extensively studied (Boers 1994; Cappelle 2005; Lindner 1983; Lindstromberg 1997; Rudzka-Ostyn 2003; Tyler and Evans 2003). Cappelle (2005) deals only with the telicizing function of *up* as a particle and does not go into a discussion on the semantics of *up*. Rudzka-Ostyn (2003) is a pedagogical textbook organized in terms of cognitive principles, with relatively little explanation, albeit a wide variety of exercise. Therefore, although Cappelle (2005) and Rudzka-Ostyn (2003) do provide useful examples and explanations, these works will not be reviewed in detail and will be cited in my analysis only when necessary.

Below, I review three major approaches to the various meanings of *up*. Section 2.3.1 addresses the Cognitive Grammar approach (Lindner 1983). 2.3.2 is devoted to the Conceptual Metaphor Theory approach (Boers 1994; Lindstromberg 1997), and in 2.3.3, I discuss the Principled Polysemy approach (Tyler and Evans 2003).

2.3.1 A Cognitive Grammar approach to *up*

Lindner (1983) used Cognitive Grammar (henceforth CG)[10] to analyze the meanings of *up* in English verb particle constructions (henceforth VPCs). She argued that *up* invariably contributed to the meanings of VPCs and that the diverse meanings of *up* were related so that these usages of *up* formed a unified concept.

One of the major contributions of Lindner's work is the proposal of Interactive Focus, which is "the realm of shared experience, existence, action, function, conscious interaction and awareness" (Lindner 1983: 132). With this concept, the author explained why *up* and *out* could have similar meanings, as in *100 people turned out/up for the picnic* and *John brought out/up some interesting facts* (Lindner 1983: 137). However, despite these important contributions, Lindner's heavy reliance on the tr-lm relation prevented her from addressing the role of co-text. Since the interaction between *up* and its co-text is not Lindner's major concern, the notion of "semantic valence" in CG, discussed later in Langacker (1987) and Croft (1993, 2001), was not included in her work. I believe that semantic valence will help describe how *up* interacts with its co-text, which I will turn to in a later section of review.

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10   What Lindner followed was Space Grammar (Langacker 1982). It is not until the version of Langacker (1987) that the theoretical model is known by the name of CG.

2.3.2 A Contemporary Theory of Metaphor approach to *up*

Boers (1994) and Lindsrtomberg (1997) are semantic analyses of *up* based on the Contemporary Theory of Metaphor (Lakoff and Johnson 1980). Based on authentic data, Boers (1994) discussed several prepositions along the UP-DOWN and the FRONT-BACK dimensions in English. The basic structure of Boers' analysis is similar to that of Lindner (1983) in that they both rely on the tr-lm relation as a major criterion for the classification of senses. In Boers's work, conceptual metaphor and metonymy are important motivations that derive abstract meanings. The author's explanations for figurative uses are sometimes slightly different from those in Lindner (1983) and are useful. With a sufficiently large corpus, the work is also capable of providing authentic instances and of giving statistics for the distribution of the meanings. However, Boers's approach similarly paid little attention to the role of co-text, with the tr-lm relation and metaphorical derivation as the major concerns in his analysis. The second attempt based on the Contemporary Theory of Metaphor is Lindstromberg (1997), which claimed that only a minority of prepositions are thoroughly idiomatic. Although the author's explanations are useful and easy to understand, the work lacks a systematic and in-depth analysis of theoretical interest. The role played by co-text is not the concern of Lindstromberg's work either.

2.3.3 A Principled Polysemy approach to *up*

Tyler and Evans' (2003) analysis on *up* is based on their model of PP, which claims to accommodate the role of world knowledge and linguistic co-text. However, the authors' analysis on *up* is only partial. In addition, although the authors mentioned the importance of linguistic co-text and syntax, the issue is not well addressed in their analysis of *up*. That said, PP remains a model that exhibits great potential to accommodate relevant contextual factors in the process of meaning derivation. It therefore deserves an in-depth discussion in a later section.

2.4 Previous studies on *shàng*

Given its conceptual significance and its versatile semantic functions, studies on the Mandarin *shàng* are as abundant as those on *up*. Related studies include Chou (1999), Soon and Chung (2012), Hsu (2001), Kim (2005), Li (1999), Su (1997) and

Su (1998). Among the studies, Chou (1999), Soon and Chung (2012), Kim (2005) and Su (1998) are related to the immediate scope of the present study, which is the schema of [V] – [SHÀNG][11] as the counterpart for [V] – [UP], which will be reviewed below.

2.4.1 A Conceptual Structure approach to *shàng*

In a study by Chou (1999) founded on Jackendoff's (1983, 1990) conceptual structure approach, the author characterized conceptual elements that motivated meanings of the Chinese verbal complements *shàng* and *xià*. In particular, Chou adopted parameters such as THEME, SOURCE, GOAL and DIRECTION in analyzing the usage of a verbal complement in a motion event. However, the scope of the work is largely confined to concrete meanings. In addition to a focus on meanings in the domain of SPACE, the concentration on the interaction between conceptual structure and semantics naturally directs the author's attention away from the role played by the co-text of *shàng*.

2.4.2 A Contemporary Theory of Metaphor approach to *shàng*

Su (1998) worked with the Contemporary Theory of Metaphor and proposed the up-down orientation as the basic meaning of the spatial term, with three metaphorical senses derived through GOOD IS UP, MORE IS UP, and POWERFUL IS UP. One of the contributions of the work is to look at the meanings of *shàng* within one single part of speech. For instance, Su (1998: 67) looked at the semantic change of *shàng* as a verb, observing how the semantics of the verb gradually shifted away from the concrete conceptual domain. However, given the author's focus on the connections between metaphor, metonymy and lexical meaning, the role of co-text is also absent in the work.

2.4.3 A Principled Polysemy approach to *shàng*

Kim (2005) made another attempt to investigate the semantics of *shàng* from a Cognitive Linguistic perspective. Working with PP, the author distinguished the prototypical sense of 'on' from the other non-prototypical senses, based on the image-schematic structure. Kim proposes four conceptual metaphors to explain

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11   A related experimental work on *shàng* is Liang and Sullivan (2019), which however deals with the construction [SHÀNG] – [N].

the figurative meanings of *shàng*: SUPERIOR IS SHANG; EMPEROR IS SHANG; SKY IS SHANG; GOD IS SHANG. However, since the study followed PP, the role of co-text and syntax was similarly not addressed in Kim's analysis.

2.4.4 A Corpus linguistic approach to *shàng* as a locative particle

The above reviews show that the issue of co-text has been rarely dealt with by the previous studies on *shàng*. In view of this gap, Soon and Chung (2012) attack the problem from a corpus linguistics perspective. The authors investigate the following four near-synonymous constructions of *zài... shàng*, *zài... shàngmiàn*, *zài... shàngtóu*, and *zài... shàngbiān* in the corpus of Chinese GigaWord. The study nicely captures the functional division among the four constructions that all contain *shàng* as a locative particle, but is not relevant to the semantics of *shàng* in the [V] – [SHÀNG] construction.

2.5 PP: A semantics-based model of polysemy

With the above reviews, I hope to have shown that the patterning of context with respect to the various readings of *up* and *shàng* has not been fully explored, especially the way how *up* and *shàng* interact with their co-text to create multiple readings. Below, I return to a discussion of PP, which I believe exhibits the highest potential to accommodate necessary contextual elements in the analysis of the meaning of a spatial particle.

2.5.1 Tyler and Evans' (2003) version of PP

This early version of PP is based on a two-fold methodology: First, for a meaning to count as a distinct sense, it should contain an additional meaning not found in any other senses. There must in addition be instances of the meaning that are context-independent. In this version, the authors only lay out a partial analysis of *up*, including "the More Sense," "the Improvement Sense," and "the Completion Sense" that form "the Quantity Cluster". Working within the cognitive-experientialist framework, PP addresses how the diverse meanings of English prepositions can be networked together. Tyler and Evans argue that the extension of prepositional meaning is systematic and principled, and accordingly propose a methodology to distinguish distinct senses from context-dependent implicatures. In addition to sense distinction, another major methodological contribution of PP is how to determine the primary sense in the semantic network, based on five

criteria: (1) earliest attested meaning; (2) predominance in the semantic network; (3) use in composite forms; (4) relations to other spatial particles; and (5) grammatical predictions. The criteria regarding sense establishment allow for a more objective classification of meanings and constitute the major contribution of the model.

However, there were some problems in PP which needed to be addressed. The methodology of PP is a double-edged sword that might bring the analysis under attack due to its vagueness. The first criterion regarding additional meaning was still not sufficiently objective and well-defined. The second criterion of looking for context-independent cases was flawed by the lack of authenticity of the linguistic examples used in the authors' discussion. As Tyler and Evans themselves confess in the conclusion to their study, the analysis would have been less speculative had it been based on a corpus analysis.

To address the first problem of the meaning criterion being subjective, Evans (2004) revised the model by proposing the Concept Elaboration Criterion and the Grammatical Criterion. The second problem of the data type anticipates recent criticism in cognitive semantics, whereby many researchers have reacted against the traditional intuition-based approach. I will return to this in Chapter 3.

2.5.2 Evans' (2004) revision of PP

Evans (2004) is a continuation of Tyler and Evans (2003) with methodological revisions. The theoretical backbone in the first version of PP, embodied cognition and principled semantic extension, is retained in the 2004 version. The major difference from the previous version is the clearer criteria of sense establishment. Evans's new version of PP contains three criteria instead of two. The first is the Meaning Criterion, which corresponds to the first criterion of "additional meaning" in Tyler and Evans (2003). In addition to the Meaning Criterion, Evans proposed two other criteria, the Concept Elaboration Criterion and the Grammatical Criterion, in order to more properly accommodate contextual elements into PP. The Concept Elaboration Criterion concerns the selectional or collocational patterns of a lexeme. For example, the Matrix Sense of *time* is elaborated in terms of motion, such as *Time flows/runs/goes on forever*, while the Moment Sense is elaborated in terms of deictic motion, as in *The time for a decision has come/ arrived/gone/passed*. The Grammatical Criterion states that each lexical concept of a lexeme will be structurally dependent. This criterion, when applied to the study of *time*, concerns the grammatical profile of the lexeme, specifically whether it is used as a count noun, a mass noun, or a proper noun. Evans argued that, for a sense (or a "lexical concept" in his revision) to stand alone, it must satisfy the

Meaning Criterion and at least one other criterion. The revision in this respect enabled the later version of PP to better accommodate the role of co-text.

Besides proposing new criteria for sense distinction, Evans (2004) proposes slightly different criteria for primary sense decision. His five criteria are: 1) earliest attested meaning; 2) predominance in the semantic network; 3) predictability regarding other senses; 4) a sense with a plausible cognitive antecedent; and 5) a sense related to lived, or phenomenological human experience. The addition of the fifth criterion shows that Evans paid more attention to the role of world knowledge and human experience in his 2004 revisions than in the previous version of PP. The change that Evans made also reflected his ambition to extend the applicability beyond spatial particles.

With its better defined methodology and its focus on co-text and human phenomenological experience, the 2004 version of PP is more descriptively effective and better suits the purpose of the present study than its precursor.

2.6 Semantic valence in CG

As has been pointed out in 2.3, semantic valence was an element of CG not present in Lindner's analysis. However, the idea of semantic valence has been argued to be crucial for a discussion on the interaction between the constituents in a symbolic combination (Croft 1993), so it is relevant to my analysis and will be reviewed below.

The idea of "semantic valence" was proposed by Langacker (1987), which Croft (1993) later used in a discussion on the role of domains in semantic extension. Langacker argued that what governed symbolic combinations was "conceptual autonomy" and "conceptual dependence". According to the author, most grammatical combinations are characterized by one predication[12] being identified as autonomous and the other as dependent, in this sense: "one structure D, is dependent on the other, A, to the extent that A constitutes an elaboration of a salient substructure within D" (Langacker 1987: 300). Consider (2–3) and (2–4) below (cited from Croft 1993, 2001).

(2–3) *Hana sings.*
(2–4) *Hana sings beautifully.*

In (2–3), Hana, as a noun, which is a non-relational predication, fills in one of the two slots of the relational predication of SING, specifying the role of SINGER

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12   Croft (1993: 338) explains that what Langacker calls a "predication" is equivalent to what he terms a "concept", which refers to "a semantic structure symbolized by a word," and these two are used interchangeably in his analysis. I follow Croft's practice and use the two terms interchangeably.

in the relational semantic structure. HANA, in other words, constitutes an elaboration of a salient semantic substructure of SING. Note that the reverse does not hold, since the concept of SING does not form a salient substructure within HANA, although it may arguably be a small part of the knowledge structure within HANA. Therefore, in this symbolic combination, HANA should be viewed as the autonomous predication and SING the dependent one. It also follows from Croft's explanation that the distinction between an autonomous and a dependent predication is not categorical but is simply a matter of degree. As for (2–4), in the symbolic combination of SING BEAUTIFULLY, the predication SING elaborates a salient substructure of BEAUTIFULLY by indicating what kind of process is done in a beautiful manner. In comparison, BEAUTIFULLY elaborates only a non-salient part of SING by specifying the manner of the process. Hence on balance, SING is the autonomous predication and BEAUTIFULLY the dependent one. Here, SING is in turn dependent on HANA, as discussed earlier in (2–3), but is autonomous relative to BEAUTIFULLY. Therefore, the distinction between autonomy and dependence is not simply a matter of degree, but also a matter of relativity.

Croft (1993) further claimed that in a grammatical combination of a dependent and an autonomous predication, the autonomous predication can cause domain mapping, i.e. metaphorical extension, in the dependent one, while the dependent predication may induce domain highlighting, i.e. metonymic extension, in the autonomous one. The assumption behind such conceptual operation is what Croft refers to as "the conceptual unity of domain." Consider further the following instance with the preposition *in* for illustration (Croft 1993: 360):

(2–5) *She's in a good mood.*

In (2–5), the predication IN is dependent relative to GOOD MOOD, since GOOD MOOD elaborates a salient substructure of IN but not vice versa. According to Croft's insight, the word *in* should be metaphorically understood, in that IN is conceptually dependent on GOOD MOOD. To maintain the conceptual unity of domain, the dependent predication IN must be interpreted in the same conceptual domain as the autonomous predication GOOD MOOD and is thus metaphorically interpreted in the target domain of EMOTION.

From the above review, we can see that the idea of semantic valence, combined with the principle of the conceptual unity of domains, can help describe and analyze a metaphor-based semantic extension in a symbolic combination. These principles will come in handy in our discussion of the metaphorical senses of *up* in Chapter 5.

In the next chapter, I turn to a description of the analytical framework and data collection of the present study.