دانشگاه پیام نور

دانشکده علوم انسانی

گروه علمی زبانشناسی و زبانهای خارجی

پایان نامه

برای دریافت درجه کارشناسی ارشد

در رشته آموزش زبان انگلیسی

عنوان پایان نامه:

مقایسه استفاده از سه نوع مختلف نشانه ها: شفاف سازی متن، قالبهای معنایی و زنجیره معنایی، در ابهامزدایی افعال چند معنایی
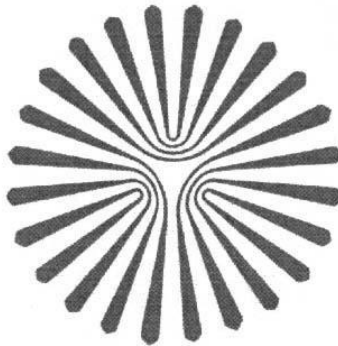
استاد راهنما:

دکتر حسن ایروانی

استاد مشاور:

دکتر فاطمه همتی

نگارش:

معصومه دلدار قاسمی

آذر ۹۱

I

Payame Noor University

Department of Linguistics and Foreign Languages

Title

A Comparison of Using Three Different Types of Cues: Elaborated Context, Semantic Frames and Meaning Chains, in Disambiguating Polysemous Verbs

Submitted in Partial Fulfillment of the Requirements for the Degree of M.A In Teaching English as Foreign Language

Advisor:

Hassan Iravani Ph.D

Reader:

Fatemeh Hemmati Ph.D

By

Masoome Deldar Ghasemi

December 2012

ABSTRACT

As polysemy is encountered frequently in English as foreign language. FL learners' ability to disambiguate polysemous verbs becomes critical to their comprehension in the target language. This thesis, accordingly, investigated how Iranian EFL learners achieved comprehension of English polysemous verbs by using three different types of cues: (1) elaborated context, (2) semantic frames, and (3) meaning chains. Participants were 49 university students in Zahedan who were randomly assigned to four conditions, the three cue conditions and a control no-cue condition. After reading the cues, participants completed a translation and a multiple-choice task and rated their confidence in their answers. The Results indicated that when only accuracy was taken into account and when accuracy and confidence ratings were jointly examined, only the elaborated context cue elicited significantly better performance than the control condition as measured in the multiple-choice task. As for the translation task, none of the three experimental cues generated significantly better results than the no-cue condition

ACKNOWLEDGEMENTS

Many people have offered me considerable support and assistance in accomplishing this thesis. First, I would like to thank profusely all my committee members for their guidance and valuable advice on instrument development, experiment conduction, and dissertation writing. A special word of thanks is due to my advisor, Dr. Iravani, for his whole-hearted support that renders me confident and competent in becoming a future scholar. I also extend my deepest appreciation to the head of foreign language department, Dr. Hemmati (who kept me level headed and got me excited about Educational Psychology in the first place) and also Dr. Hessamy (who helped tremendously with so many, many things). Thank you so much for your time and useful comments.

Without my friends and family supporting me through this challenging time during my life, I doubt I would have been able to complete the thesis. I would also like to thank my mother, who expressed to me since I was young, the importance of working hard to get where you are and the joy of earning what you deserve. This thesis is dedicated to my daughter, whom I am expecting on 9.11. And finally, heartfelt thanks to the participants in this study, without them this study would not have been possible.

TABLE OF CONTENTS

LIST OF TABLES

Chapter One

Introduction

Ambiguity due to an identical word form with different meanings is extremely common in our everyday language use. Consider the following example. A children's book illustrates a group of animal detectives following a series of clues in order to find stolen pumpkins. At one point, they find a key in a bag and comment, "There must be a key to the key" (Tryon, 1998, p. 25). The different readings of *key* may cause a short pause in the processing of the meaning of the sentence for native speakers and likely an interruption or even obstruction of comprehension for second language speakers of English. Another example is the word *handsome* appearing in a more formal text in *a handsome target of a lawsuit.* For second language learners who are only familiar with the meaning of *handsome* as in *a handsome man* and use such a meaning to interpret the above phrase, ambiguity, even worse, misunderstanding, is likely to interfere with their processing of the text. These cases demonstrate how polysemy, a linguistic form associated with multiple related senses, may pose a challenge to language users, particularly to those who are learning the target language as a second language.

Indeed, polysemy is a common phenomenon in daily language use. As people attempt to use a finite set of word forms to express a theoretically infinite set of ideas, it is inevitable that some word forms may have to carry more than one meaning. Not only is polysemy prevalent in practically every natural language, there also exists a close correlation between polysemy and frequency. Moon (2000) reported that 455 headwords in *Collins Cobuild English Dictionary* with ten or more senses are generally of very high frequency. These highly frequent but polysemous words are thus words people encounter in a variety of contexts. Therefore, polysemy would seem to be an issue that both language users and language researchers have to face.

1.1 Importance of the Study

The most frequently used words tend to be the most polysemous (Miller, 1986). In the acquisition of L2 vocabulary, polysemy is thus an important feature of the language that L2 learners must master. Researchers generally agree that polysemy constitutes an essential aspect of word knowledge (Carter, 1998; Ooi & Kim-Seoh, 1996 as cited in Nation, 2001). Knowing a word in L2 should involve knowing the different meanings or senses associated with a word and

grasping the concept underlying its related uses. As an important dimension of depth of word knowledge, polysemy serves as a useful index for predicting EFL (English as a foreign language) learners' performance on academic reading (Qian, 2002). Knowledge of L2 polysemy is not only necessary for the sake of comprehension but also beneficial to language production. The acquisition of polysemy helps reduce the number of words an L2 speaker has to learn. To borrow from Nation's (2001) example, by learning the underlying concept of *fork* as a two-pronged shape, learners acquire a word form with a range of uses: the fork a person eats with, a fork in the road, forked lightning, and even the verbal use of *fork* as in *fork over the garden* or in *the road forks*. Murphy and Andrew (1993) also stressed that in order to use one's memory efficiently, it is not necessary to represent each sense of a polysemous adjective. Many of the senses of a polysemous adjective "may be constructed from a more general meaning as a function of context" (p. 310). In the same vein, L2 learners' mastery of polysemy in the target language may enable them not only to expand their word knowledge but also to make full use of the words learners have already acquired for a variety of expressions.

Nonetheless, polysemy has appeared to be a great challenge in L2 vocabulary acquisition. At the early stage of L2 vocabulary learning, learners tend to use one-to-one mapping between form and meaning. Because the meaning of a word represents conceptual information, as suggested by cognitive linguists, L2 learners often make use of their L1 conceptual system to acquire the meaning of L2 words (Jiang, 2000). However, cross-linguistic comparison in semantic structure has frequently shown that the same global concept may be represented by different lexical items across languages (Johnson, 1999). Even though a concept is lexicalized in both languages, the two word forms in the L1 and L2 may not share the same polysemous readings (Hatch & Brown, 1995; as cited in Schwarze & Schepping, 1995). As Nagy (2001) argued, some language-specific or irregular polysemous items contribute to the pervasive phenomenon of a lack of one-to-one mapping between words in two languages. Due to the fact that any two languages do not always make the same lexical distinctions, L2 polysemous words are likely to cause difficulties for L2 learners.

In fact, learning the meaning range of polysemous words is never an easy task for L2 learners across all proficiency levels. Concerning the automaticity or speed of retrieving an appropriate interpretation of a word, the richness of meaning of a polysemous word is likely to constrain the

accessibility of the appropriate sense (Coady, 1993). Laufer (1997) categorized words with multiple meanings as one type of deceptively transparent words that look as if they provide clues to their meaning but actually mislead learners from finding out the correct meaning. In a study on how L2 learners guessed word meanings from reading texts, Bensoussan and Laufer (1984) found that words with multiple meanings induced the largest number of errors in comprehension. Due to learners' mistaken assumptions that the familiar meaning of a polysemous word was the *only* meaning, they were reluctant to abandon this meaning even though it did not make sense in the context. Hence, L2 polysemy may create serious problems for learners who do not yet know the polysemous word's meaning range well enough to distinguish its multiple senses.

Researchers have indeed suggested that extended senses of a word are usually acquired at a later stage of L2 acquisition (Carter, 1998). In their case study, Grabe and Stoller (1997) explored reading and vocabulary development of an adult American learning Portuguese as a foreign language. The progressive development of the participant's vocabulary knowledge showed that he did not obtain sensitivity to the appropriate meaning of polysemous words until he had acquired a certain amount of vocabulary. Consequently, it is reasonable to say that polysemy may cause comprehension difficulty and thus inhibits language development even for advanced learners. Unfortunately, L2 learners' struggle with polysemous words has rarely been documented in the second language acquisition literature.

1.2 Significance of the Study

What would contribute to the understanding of the difficulty L2 learners face in dealing with polysemy? To provide a starting point for this inquiry, it is helpful to first look at research on L2 learners' processing of word meanings. Researchers examining bilingual memory have generally agreed that there exists a distinction between representation at the lexical level and representation at the semantic level. Bilinguals' two languages are likely to be conceptually mediated by a common semantic representation (Caramazza & Brones, 1980; Potter, So, Von Eckardt, & Feldman, 1984; as cited in Kroll & de Groot, 1997). Results from cross-language priming have revealed that facilitation for semantically related words in the two languages does occur, suggesting that conceptual mediation is at work (Kirsner, Smith, Lockhart, King, & Jain, 1984 as cited in Schwanenflugel & Rey, 1986). However, cross-language priming in bilinguals could be asymmetrical, with priming only occurring when the prime is in the dominant language

and the target in the L2 (Keatley, Spinks, & de Gelder, 1994). Therefore, Kroll and de Groot (1997) have proposed that the link between words and concepts is stronger for L1 than for L2. This would seem to be especially true for foreign language learners whose L1 is much more dominant than the target language.

The above review shows researchers' interest in how two languages are at work in bilinguals' semantic memory and in cross-language processing. While polysemy has emerged to be a central issue in semantic processing of the L1, very little research has touched the issue of how L2 learners process L2 polysemous words or how to facilitate their comprehension of L2 polysemy. Do learners have separate representations for different senses or do they represent the core sense only, with derived senses remaining underspecified? Do they process multiple senses with the aid of L1 translations or do they use a common conceptual network to access senses? In what ways can they become more efficient and effective in understanding L2 polysemy? Answering the above questions will certainly contribute to the understanding of learners' construction and retrieval of lexical meanings as well as shed light on how L2 learners organize multiple related senses in the mental lexicon.

Exploring L2 learners' mechanism in comprehending senses of polysemous words will also help resolve lexical ambiguity caused by polysemy. It is possible that learners, based on their knowledge of the core sense and contextual cues, may be able to obtain a rough understanding of an unfamiliar sense. However, as Lehrer (1990) contended, polysemy gaps and unpredictable senses are common in spite of regularity in the shift of senses. The cognitive principles behind these unpredictable senses are not always straightforward; rather, these principles may interact with other rules of different kinds and provide constraints on the generation of polysemous senses. Under such circumstances, disambiguating polysemous words may not seem so easy as simply computing from the core sense if a precise understanding of the encountered sense is aimed for.

Because polysemous words constitute a large part of L2 vocabulary, finding ways to accelerate learners' access of the correct meaning in context is helpful for their acquisition of L2 polysemy. Not only will learners improve their comprehension of an utterance in which a polysemous word is embedded, but they will also be better at using the acquired polysemous senses in language production. In fact, many of the senses of these highly frequent but

polysemous lexical items are very useful in expressing ideas that are common in daily communication. For example, a more frequent word, *break,* can replace a less frequent word, *interrupt,* in expressing the idea of discontinuing a sequence as in *His concentration was broken by a sound.* In this way, learners can enhance their knowledge of the meaning range of vocabulary, which is an important dimension of lexical knowledge (Meara, 1993; as cited in Nation, 2001), and more importantly, expand their repertoire of productive vocabulary in the L2.

1.3 Purpose of the Study

To fill the gap of previous research and to contribute to the acquisition of L2 polysemy, the current project focused on L2 learners' comprehension of polysemous words in sentence processing. It examined how Iranian EFL learners processed English polysemous words by undertaking different types of tasks and how they achieved different degrees of comprehension under the influence of tasks. These tasks included different types of cues theorized to help disambiguate polysemous senses and tests for measuring learners' knowledge of unfamiliar senses. It was hoped that the results of this investigation would shed light on how EFL learners understand polysemy and provide insights on how the learning of polysemous senses may occur and may be improved.

The entire project was conducted in two phases. First, two pilot studies were carried out to test the effects of different types of cues on learners' comprehension of a set of unfamiliar senses. Three types of cues were examined: (1) elaborated context with richer contextual information, (2) semantic frames calling for the concept of the target word, and (3) meaning chains composed of related English senses. Two tasks, a translation task followed by a multiple-choice task, were used to measure learners' understanding of the tested unfamiliar senses. Participants' self-ratings on their confidence with the task performance were incorporated into the task design. A detailed description of the methods and results of the pilot studies is presented in Chapter Three.

Based on the results of the pilot studies, the project proceeded to the second phase: the main study. The main study included more participants and examined more thoroughly how different types of cues and different orders of tasks affected learners' processing and comprehension of unfamiliar senses. Because the first two types of cues were shown to be helpful to a certain

extent in the pilot studies, they were also used in the main study. A new variable, the order of tasks, was added to check if learners' processing would undergo significant changes while taking the tasks in different orders and if the changes would influence their performance. More new items were added to the main study, whereas some of the old items used in the pilot studies were revised to increase their distinguishing power. Hence, the focus of the main study switched to the effects of cue type and task order on Iranian EFL learners' processes in disambiguating English polysemy. Detailed descriptions of the methods and results are provided respectively in Chapters Four and Five. The last chapter presents an in-depth discussion of the results, with an attempt to illuminate research in related fields. Limitations and implications of the study are included in the last section.

1.4 Research Questions

1. How is Iranian EFL learners understanding of English polysemous verbs that are embedded in a sentential context affected by different types of cues, (elaborated context, semantic frames, meaning chains and no cues as a control), as measured by the accuracy of answers to the tasks and self-ratings of confidence?

2. How do the learners perform differently in the two tasks of translation and multiple-choice questions?

1.4 Research Hypotheses

1. There is no significant difference between different types of cues, (elaborated context, semantic frames, meaning chains and no cues as a control) in Iranian EFL learners' disambiguation of unfamiliar senses of English polysemous verbs, as measured by the accuracy of answers to the tasks and self-ratings of confidence.

2. There isn't any significant difference between the two tasks of translation and multiple-choice questions.

1.5 Definition of Important Terms

   Polysemy. *Polysemy* refers to a single word form associated with two or more related senses (Taylor, 1995).

Elaborated context. *Elaborated Context* helps language users select the appropriate meaning even when multiple meanings are initially accessed (Swinney, 1979; Tabossi, 1988; Williams, 1992; as cited in Nation, 2001). Applying the above arguments to the processing of polysemy, it seems that an appropriate context is sufficient to resolve word sense ambiguity of polysemous words.

Semantic frame. According to Fillmore, (1982) in Frame semantics, a *semantic frame* is defined as a coherent structure of concepts that are related such that without knowledge of all of them, one does not have complete knowledge of one of the either, and are in that sense types of gestalt. Frames are based on recurring experiences. Frames are evoked, among other things, by words as the semantic conceptual content of the word activates the frame of encyclopaedic meaning that is needed for the understanding of that word.

Meaning chain. *meaning chain* model indicats that learners' understanding of unknown senses could be obtained by drawing analogies from the senses they previously knew. Regarding the representations of multiple senses of a polysemous word, a group of researchers advocated a single-sense view by treating polysemy as coming from small extensions of existing meanings (Nunberg, 1979; Ruhl, 1989; Clark, 1993; Murphy, 1997; as cited in Nation, 2001).

Examples of the three conditions. Target verb: *bring.*Condition A (elaborated context):My conversation with Jane came to a surprising end. I asked her about her life as a young kid. Condition B (semantic frame): The gunman forced us into the room. Condition C (meaning chain): (a) Remember to bring me a book. (b) What brings you here? What causes you to come here?

Chapter Two

Literature Review

In this chapter, I begin with defining the term "polysemy" as used in the current dissertation project. Two theories on how senses of a polysemous word are related are presented: family resemblance and frame semantics. The review of literature then proceeds to the representation and categorization of various senses of polysemy in language users' mind, with the purpose of setting the stage for discussing the processing issue. What follows is L1 research on the processing of words with multiple meanings, including polysemy and homonomy. Then, the focus switches to L2 research on the representation and access of word meanings. The acquisition of L2 vocabulary from context is also reviewed to provide a rationale for using an elaborated context as a cue for understanding polysemy. The last section of this chapter covers measures of depth of word knowledge to provide an empirical basis for the selection of the tasks used in the current study.

2.1 Literature of Polysemy

Prior to tackling a discussion of L2 learners' processing of polysemy, it is essential to define polysemy so as to clarify its meaning as used in the current study. As a rough but easy-to-understand definition, polysemy refers to a single word form associated with two or more related senses (Taylor, 1995). Such a definition, nonetheless, remains fuzzy in terms of what can be counted as separate senses and how two senses may be judged as related. One common solution is to consult dictionaries to see if two meanings of a single linguistic form are listed under separate lexical entries; if so, the lexical item is generally treated as having unrelated meanings and often referred to as homonymy. On the contrary, if all the senses are encompassed under one lexical entry, they are considered as related. Such a lexical item is described as polysemous. Unfortunately, the above solution does not take us too far due to the fact that lexicographers still have difficulty making clear distinctions between related or unrelated senses, not to mention the considerable inconsistency in sense listing among dictionaries (Fillmore & Atkins, 1994 as cited in Carter, 1998). Because it seems difficult to define polysemy within a fixed boundary,

researchers tend to treat meaning variations as falling on a continuum (Brisard, Van Rillaer, & Sandra, 1997; Croft, 1998; Cruse, 1986; Tuggy, 1993; as cited in Laufer, 2001).

On one end of the continuum are vague words with a single general meaning that can be modulated in different contexts (Cruse, 1986; Goddard, 1998). For example, *hand* in the sentence *I held the coin in the palm of my hand* is vague because it does not differentiate between the right hand and the left hand. Theoretically, a single sense can be modified in an unlimited number of ways by different contexts, with each context highlighting certain semantic features of the lexical item. In the case in which a general meaning is sufficient to encompass such a meaning variation, it is considered a vague word. Tuggy (1993) defined vagueness as the individual readings derived from a common schema with only a small amount of elaboration. By contrast, if there exists no subsuming schema for the separate and well-entrenched readings of a lexical item, the identical linguistic form with unrelated meanings belongs to the case of homonymy, which stands at the other end of the continuum (Dunbar, 2001). A typical example is the word *bank* with its two meanings as a financial institution and as the land along the side of a river.

Polysemy, then, stands in between vague words and homonymy. Based on Tuggy's (1993) analysis, polysemy represents elaborative readings that are more distant from the underlying schema than vague words, but its multiple senses are related and belong to the same schema. An example is given by the polysemous readings of *school* as an institution (*Helen's school is a good school*), a building where the institution is housed (*They are painting the walls of the school*), and the participants in the institution (*The school is celebrating the holiday*) (Cuyckens & Zawada, 1997). Adopting Croft's (1998) view on mental representations of grammatical and lexical knowledge to explaining such a continuum of meaning variation, Tuggy (1999) defined polysemy as "storage of both usages plus stored knowledge of their connection" whereas homonymy refers to "separate storage of the two usages with no connection between them" (p. 346). Such definitions clearly distinguish polysemy and homonymy based on the principle of whether senses are related. However, it should be cautioned that the distinction between vagueness, polysemy, and homonymy are neither absolute nor stable. The continuum model is dynamic in that a polysemous item may become homonymous if its related senses have drifted

far apart, and a vague item may become polysemous if its sense extends so much as to become distinctive in divergent contexts (Brisard et al., 1997; Taylor, 1995; as cited in Nation, 2001).

2.2 Theories on How Senses are Related

As relatedness of word senses seems an important index for identifying polysemy, this section discusses how senses are related, with an aim to provide a clear picture of what counts as polysemy. Two theories are covered here: family resemblance, which focuses on the similarities among senses, and frame semantics, which emphasizes the cognitive principles underlying lexical meanings. These two theories are selected because they form the theoretical basis for the design of cues in the current study. In addition, they represent two major cognitive linguistics camps that attempt to explain the internal structure of polysemy.

2.2.1 Family Resemblance. The idea of family resemblance originated from an analysis of the word *game* by Wittgenstein (1978). According to the analysis, all kinds of games form a category whose members resemble one another in various ways, yet no single, well-defined collection of properties are shared by all members (Lakoff, 1987). Applying such a concept to polysemy, the theory of family resemblance holds that related meanings of a word form a category and the meanings resemble one another just like members in a family. In such a category, all senses may center around or form a chain with a central sense. For example, if Sense 1 serves as the primary nuclear sense, Sense 2 extends from it because of likeness between the two. Then, Sense 3 extends from Sense 2 due to family resemblance, and Sense 4 extends from Sense 3 in a similar way. Ultimately, Sense 4 does not necessarily resemble Sense 1, the central member, but the extension from Sense 1 to Sense 4 forms a meaning chain that connects all the related senses. It is the intervening links, i.e., Senses 2 and 3, that justify the connection of the central sense and the far-off end sense in a chain (Austin, 1961; Taylor, 1995 as cited in Nation, 2001).

To illustrate the chaining process of senses of the polysemous word *over*, the following example sentences and explanations were adopted from Taylor (1995), which in turn were based on Brugman's study on *over* (1981, cited in Lakoff, 1987) and Lakoff's (1987) re-presentation of Burgman's data. Two notions, a trajectory (TR) and a landmark (LM) are considered basic to the understanding of senses of *over*. The central sense consists of both *above* and *across* elements

(Lakoff, 1987). As shown in the sentence *The plane flew over the city* (Taylor, 1995, p. 110), the TR is above the LM and the path of the TR goes across the boundary of the LM. The same image schema is represented in *He walked over the street* (Taylor, 1995, p. 110), with one difference from the central sense: There is contact between the TR and the LM. Such a sense is further extended to the sense of *over* in *He walked over the hill* (Taylor, 1995, p. 111), which contains a new element, namely, the shape of the path. The chaining process proceeds to the senses of *over* in *He jumped over the wall* and *He fell over the stone* (Taylor, 1995, p. 111), which express different shapes of the path and imply the LM as an obstacle for the TR. So far, the end point of the meaning chain (i.e., *over* in *He fell over the stone*) is deviant from the central sense (i.e., *over* in *The plane flow over the city*). The intervening senses serve to justify the transition from the central sense to the last sense in the meaning chain.

However, not all senses of *over* are chained in a linear way as described above. Some senses, particularly metaphorical ones, may extend from one specific schema that is in turn derived from the central schema (see Lakoff, 1987 for a thorough discussion). Such sense extension suggests that meaning chains may also take the form of tree ramifications, e.g., Senses 3a and 3b extended from Sense 3. This type of structure is indeed observed in Lakoff's (1987) illustration of the relations among schemas for various senses of *over*.

Generalizing from the family resemblance model, Rosch and her colleagues (Rosch, 1975; as cited in Rosch & Mervis, 1975) proposed prototype theory to explicate the organization of human thought. In a category of word senses, the central sense or the core sense functions as the prototypical example of the category. It is likely to share a maximum number of attributes with other members in the same category. Polysemy, accordingly, may arise from small extensions of the core sense from which other meanings are computed in a variety of contexts (Clark, 1993). For example, Baker (1999) conducted a thorough semantic analysis of the polysemous word *see* and concluded that the core sense of *see* as EYE and RECOGNIZE served as sources for new extensions. In his experiments on how L1 speakers understood novel extensions of word meanings, Murphy (1997) found that people tended to interpret a new sense based on their knowledge of the existing senses of a word. When no similar use of a word was available and the new sense was too remote from the core meaning, speakers were likely to reject the meaning extension. Hence, Murphy commented that a distant sense of a polysemous word had to follow a

historical progression in which the core sense was extended little by little until the meaning chain reached the far-off sense.

However, criticisms of the theory of family resemblance have been raised. Taylor (1995) has pointed out that membership in the category of the polysemous senses of *over* is formed by the chaining process, rather than by the similarity with the central member. The main reason is that *over* has so many members that none can be said to bear maximal attributes to which other members relate. Therefore, the legitimacy of the central status of certain polysemous senses is questioned. Another concern is the constraint of meaning chains. It seems that any entity can be assimilated to a category as long as a similarity, no matter how idiosyncratic it is, can be perceived between the entity and the prototypical member (Langacker, 1987). Then, what is the boundary of the meaning chain? What will constitute the principles for meaning extensions if practically all senses can be chained in some way? Taylor (1995) thus concluded that if it is impossible to set absolute constraints on family resemblance categories, then some kinds of meaning extension may be more typical and more natural than others.

2.2.2 Frame Semantics. Another widely accepted proposal on how polysemous senses are related states that senses are linked by related cognitive structures, or "semantic frames," as indicated in frame semantics (Fillmore, 1985). Frames are knowledge schemata that represent "a structured background of experience, beliefs, or practices" that constitutes a conceptual prerequisite for understanding word meanings (Fillmore & Atkins, 1992, p. 76-77). Words or word senses are not related to each other directly but through their links to common background frames, with each sense highlighting specific frame elements. Frame elements refer to the various participants or conceptual roles involved in the schematic representations of situations, i.e., semantic frames (Johnson et al., 2002). For example, to understand the meanings of verbs in the commercial transaction frame such as *buy, sell,* and *pay,* it is necessary to have the background knowledge that a commercial transaction situation typically involves a buyer and a seller exchanging money and goods. These four participant concepts, Buyer, Seller, Money, and Goods, constitute the primary frame elements of the commercial transaction frame (Petruck, 1996).

Frame semantics not only illustrates the means of associating a group of words or word senses with particular semantic frames but also describes the syntactic realizations of frame elements.