



Federal Republic of Iraq
Kurdistan Regional Government
Ministry of Higher Education and
Scientific Research
Koya University

**A Cognitive Semantic Approach to Lexical (Sense) Relations
in English**

**A Dissertation Submitted to the Faculty of Humanities and Social
Sciences at Koya University as a Partial Fulfilment of the
Requirements for the Degree of Doctor of Philosophy in English
Language and Linguistics**

BY

Marewan Dhahir Taher

BA in English Language and Literature 2011 University of Koya

MA in English Language and Linguistics 2016 University of Sulaimani

SUPERVISED BY

Asst. Prof. Salah Mohammed Salih (PhD)

1445 (AH)

2023 (AD)

2723 (K)



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Dedication

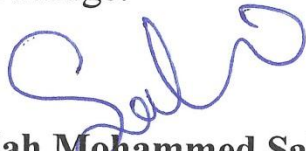
This dissertation is dedicated to:

- My parents
- My wife
- My kids (Yadan, Lewan, and Lehat)

Supervisor's Approval

Hereby I, **Asst. Prof. Dr. Salah Mohammed Salih**, state that this PhD dissertation as entitled **A Cognitive Semantic Approach to Lexical (Sense) Relations in English** was prepared under my supervision at the department of English Language, Faculty of Humanities and Social Sciences at Koya University by **Marewan Dhahir Taher** as a partial fulfillment for the degree of Doctor of Philosophy (PhD) in English Language and Linguistics.

I have read and reviewed this work and I confirm that it is an original work to the best of my knowledge.



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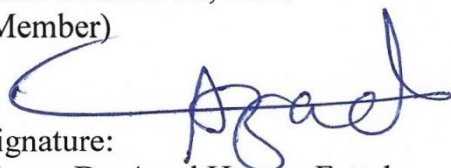
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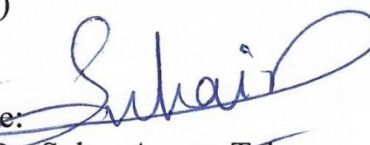
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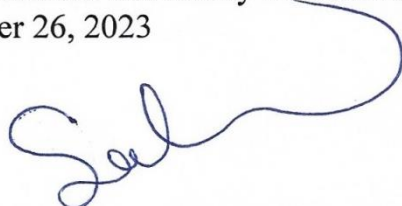
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Abstract

This study investigates the mental representations and conceptualizations of lexical (sense) relations by adopting cognitive semantic theories. The problem addressed in this study is that it is unclear how these relations are mentally correlated, embodied, constructed, and construed in the mental structure. This study aims at adopting cognitive semantic merits in analysing the lexical (sense) relations, and establishing connections and mappings between two or more lexical (sense) relations in the mind.

This study seeks to answer the following research questions: To what extent can cognitive semantic theories be employed in studying the classical lexical (sense) relations? Can Image Schema, Mental Space, and Construal theories be utilised in investigating lexical (sense) relations? Do Image Schema, Mental Space, and Construal theories cognitively conceive of the selected data in the same ways? Do pairs of sentences, composed of two similar lexical (sense) relations but different lexical items (such as synonyms, antonyms or others), undergo cognitive analysis employing Image Schema, Mental Space, and Construal theories in the same manner? And, are the lexical items alone enough to be cognitively analysed, or are the speaker and context needed as well?

Based on the research questions, the study hypothesizes that cognitive semantics can be employed in analysing the Lexical (sense) relations between two or more lexical items; all lexical (sense) relations undergo cognitive semantic analysis, but each relation involves various cognitive mechanisms; the meanings of lexical (sense) relations are constructed in the form of spaces in the mental structure through ongoing discourse on the basis of generalised linguistic and pragmatic strategies; lexical (sense) relations are embodied cognitively through sensory and perceptual experiences in the form of schematic patterns in the

conceptual structure; and that lexical (sense) relations are construed through distinct and different aspects of visual ability. Speaker and context are required in analysing the adopted lexical (sense) relations cognitively.

The present study employs a qualitative descriptive method of analysis, adopting an eclectic model consisting of three cognitive semantic theories: Image Schema, Mental Space, and Construal. Seven lexical (sense) relations are adopted for the analysis of (Synonymy, Hyponymy, Meronymy, Antonymy, Polysemy, Homonymy, and Metonymy). Each relation holds five examples, resulting in a total of thirty-five analyzed examples in each of the three cognitive semantic theories.

The present study concludes that the adopted cognitive semantic theories can all be effectively employed in studying the lexical (sense) relations. These theories offer distinct perspectives on the selected data. While Image Schema Theory offers schematic patterns of lexical (sense) relations, Mental Space Theory focuses solely on partitioning lexical (sense) relations without invoking mental images. In contrast, Construal Theory employs attentional concepts to conceptualize lexical (sense) relations, involving judgements and comparisons based on prior experiences, accounting for the speaker's perspective or the situation, and constructing a conceptual structure for these relations.

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List of Abbreviations

LM	Landmark
TR	Trajector
NP	Noun Phrase

CHAPTER ONE

INTRODUCTION

1.1 The Statement of the Problem

Lexical (sense) relations have been studied in lexical semantics to investigate the relations of sameness, inclusion, or oppositeness between two or more lexical items. The focus was more on the relations of lexical items in a context, i.e., how two lexical items are synonyms or hyponyms, etc. However, the problem addressed in this study is that it is unclear how these relations are correlated in the mind, i.e. the cognitive mechanisms involved in conceptualising the lexical items are unidentified. Another problem is that studies on lexical (sense) relations have emphasised mainly on lexical items without any sort of consideration for the speaker. Thus, it is hard to perceive how these relations are embodied, constructed, and construed in the mental structure.

1.2 The Research Questions

This study tries to answer the following questions:

1. To what extent can cognitive semantic theories be employed in studying the classical lexical (sense) relations?
2. Can image schema, mental space, and construal theories be utilised in investigating lexical (sense) relations?
3. Do the conceptualizers using image schema, mental space, and construal theories cognitively conceive of the selected data in the same ways?

4. Do pairs of sentences, composed of two similar lexical (sense) relations but different lexical items (such as synonyms, antonyms or others), undergo cognitive analysis employing image schema, mental space, and construal theories in the same manner?
5. Are the lexical items alone enough to be cognitively analysed, or are the speaker and context needed as well?

1.3 The Aims

This study aims at:

1. Finding out how the lexical (sense) relations are embodied and represented as schematic abstract images in the mind using different image schematic patterns.
2. Figuring out how meanings and conceptual structures of the lexical (sense) relations are constructed and represented in the mind, adopting the mental space theory.
3. Investigating the cognitive mechanisms adopted in construing the lexical (sense) relations and how two or more lexical items are conceptualized and conceived by the perceiver in the mind.

1.4 The Hypotheses

This study hypothesizes that:

1. Cognitive semantic approach can be employed in analysing the lexical (sense) relations between two or more lexical items.
2. All lexical (sense) relations undergo cognitive semantic analysis, but each relation involves various cognitive mechanisms.

3. The meanings of lexical (sense) relations are constructed in the form of spaces in the mental structure through ongoing discourse on the basis of generalised linguistic and pragmatic strategies.
4. Lexical (sense) relations are embodied cognitively through sensory and perceptual experiences in the form of schematic patterns in the conceptual structure.
5. Lexical (sense) relations are construed through distinct cognitive and psychological processes. Thus, the construal of these relations is represented by different aspects of visual ability.
6. Speaker and context are two essential elements in analysing the lexical (sense) relations cognitively.

1.5 The Procedures

The following procedures are followed to answer the above research questions and meet the aims of the study and the hypotheses:

1. Presenting a background information on semantics and lexical semantics along with a comprehensive account of lexical (sense) relations from different perspectives.
2. A detailed account of cognitive semantics and the sub-theories involved in this study is presented as well.
3. Selecting data for the analysis in some sources on lexical (sense) relations.
4. A qualitative descriptive method is adopted in analysing the selected data based on the three cognitive semantic theories, namely Mental Space Theory, Image Schema Theory, and Construal Theory.
5. Based on the analysis of the collected data, the main conclusions are drawn and suggestions for further studies are presented as well.

1.6 The Scope

The researcher has considered the following issues as the limitations of the study:

1. As the number of lexical (sense) relations varies from one source to another, this study includes only seven relations: Synonymy, Hyponymy, Meronymy, Antonymy, Polysemy, Homonymy, and Metonymy.
2. As this study deals generally with lexical (sense) relations, no specific part of speech is employed to be analysed using the above cognitive semantic theories.
3. As there are different theories of cognitive semantics, this study tackles only three influential theories: (Mental Space Theory, Image Schema Theory, and Construal Theory).
4. The data employed in analysing these relations are sentences. For each relation, five examples are extracted from the sources cited in the theoretical part.

1.7 The Value

It is hoped that this study will be helpful for scholars who are interested in cognitive semantics, as it presents this field and applies its theories to the adopted lexical (sense) relations. The study is also hoped to be valuable for scholars who are interested in lexical semantics, as it presents a comprehensive account of lexical (sense) relations. The values of this study lie in its being the first attempt to investigate all these lexical (sense) relations, adopting various cognitive semantic theories.

CHAPTER TWO

LEXICAL (SENSE) RELATIONS

2.1 Introduction

This chapter presents a comprehensive account of the term lexical (sense) relation from a semantic perspective. Thus, semantics is explained from different disciplines, and a brief account of each type of semantics is presented. Typically, lexical (sense) relations are studied within the field of lexical semantics, so different approaches to the study of lexical semantics are explained in detail as well. The notion of lexical (sense) relations and their types are distinctly mentioned with clear examples. As this study focuses on the lexical sense relation, two main classes of lexical relations are covered in this chapter. Synonymy, hyponymy, and meronymy are studied within the class of identity and inclusion, whereas antonymy is studied within the class of opposition and exclusion. Besides, three other subsequent sense relations are covered, namely polysemy, homonymy, and metonymy. Polysemy and homonymy establish relations between senses, whereas metonymy is investigated as a subtype of polysemy. These three sense relations investigate the varieties of senses or meanings in one lexical item.

2.2 Semantics and its Subdisciplines

Semantics is the study of linguistic meaning. Meaning can be studied on different levels. Lexical semantics studies meaning of lexical items in isolation, whereas sentence semantics studies the semantic relationships of

lexical items in a sentence (Brinton and Brinton, 2010). Al-Sulaimaan (2011) defines and mentions the subdisciplines of semantics. Semantics studies simple and complex linguistic expressions. It also studies utterance meaning; meaning of an expression used in a context. Also, semantics is considered to be a branch of semiotics that studies the relations between signs and objects. Some related subdisciplines of semantics are mentioned below.

Formal Semantics is the study of meaning of linguistic expressions in terms of their logical systems of analysis. This type uses formal or logical equations to study meaning. Thus, different theories of meaning fall under the name of formal semantics, such as: Truth-Conditional Semantics, Possible-Worlds Semantics, and Logical Semantics.

Generative semantics was an approach to the study of meaning within generative grammar in the late 1960s and early 1970s. This approach was developed by the works of George Lakoff, James McCawley, Paul Postal and John R. Ross. The basic notion in this approach is that there is no obvious difference between syntactic and semantic processes. This approach hypothesizes that the notion of deep structure does not exist in this approach, and universal-base is hypothesized that the initial representations of derivations are logical representations which are identical from language to language (Malmkjaer, 2002).

Lexical semantics is an approach to study word meanings; the focus here is on 'content' words like *tiger*, *daffodil*, *inconsiderate*, and *woo*, rather than 'form'/'grammatical' words like *the*, *of*, *than*, and so on. This approach studies the relationship between the word and idea of the word that link them together (Cruse, 2000). This approach is originated in the early nineteenth century, but that does not mean that matters of word meaning had not been

discussed earlier. There are three relevant traditions: the teaching of rhetoric, the tradition of speculative etymology, and the compilation of dictionaries (Geeraerts, 2010). The most principled aims of lexical semantics have been: (a) to represent the meaning of each word in the language; and (b) to present how words and their meanings are interrelated in a language. These aims are closely related because the meaning of a word is defined in part by its relations with other words in the language (Saeed, 2009).

2.3 Approaches to Lexical Semantics

The study of lexical (sense) relation is considered to be a landmark in the field of lexical semantics. Therefore, there are different approaches to the study of lexical semantics. These approaches are proposed by different scholars. However, this study presents a comprehensive view on this issue employing the classifications of (Taylor, 2017) and (Cruse, 2000). Their works, approaches, are explained in this section.

2.3.1 Words and the World

Words and the world approach deals with the relation of words to things and situation in the real world. This approach is also called referential or naming approach. It studies words and its referents from two perspectives. The first perspective addresses the relationship between words and the world, but the second perspective goes from the world to the word. The referential possibilities that words-to-world approach share cannot be analysed in terms of a set of features (Taylor, 2017). Words-to-world approach fails to account for referents of some words. Words like (soul, spirit, and mind) and (verbs, prepositions, and adjectives) are hard to find referent for them in the real world. Similarly, this approach fails to address

connotations and affective components. This approach is disregarded due to its failure to account for abstract nouns, actions, and deictic expressions (Al-Sulaiman, 2016).

2.3.2 Words and Other Words

The second approach deals with meanings of words and how these words are related; especially these are manifested in textual data. The emergence of this approach can be traced back to the works of De Saussure (1916). He highlights the importance of word relations rather than the conceptual content. He devised two word relations; syntagmatic and paradigmatic. Syntagmatic relations pertain to the relation of co-occurrence of words; words that occur within the same construction. The sequence of items belongs to different word classes. Paradigmatic relation is about the choice of words in a construction. The choice of words belongs to the same word class. More explanations are given to these two paradigms in the upcoming sections (Taylor, 2017).

2.3.3 One-level vs. Two-level Approaches

The issue of whether semantics and encyclopaedic knowledge can be distinguished as a fundamental demarcating line for semanticists. The world's huge deep knowledge is, according to the dual-level view, a property, not of language elements, but of concepts, which are strictly extralinguistic. The 'raw' meanings of words can be virtually infinite, but only a limited number of these are linguistic and interact systematically with other aspects of the linguistic system. The linguistic meaning elements are of

a much ‘leaner’ nature, and are usually regarded to be more formalizable (Cruse, 2000).

Briefly, in the two-level, there is a difference between linguistic meaning and other, non-linguistic (encyclopaedic) meaning; linguistic meaning is simpler and can be formalised more easily, e.g. in terms of semantic features, whereas in one-level there is *no* evidence that linguistic meaning is different in nature from encyclopaedic meaning; all meanings are conceptual, and grammar carries meaning too.

2.3.4 Monosemic vs. Polysemic Approaches

The main issue in studying the difference between monosemic and polysemic approach is the number of meanings attributed to a word. Polysemy generally refers to a group of semantically related senses. Riemer (2010) states that polysemy can thus be defined as the possession of many conceptually related meanings by a single phonological form. However, monosemy (Greek means “single meaning”) is the exact opposite of polysemy: a term is monosemous if it has just one meaning.

Cruse (2000) refers to the monosemic notion as the language’s (ideal) lexicon, as few senses as feasible should be given separate recognition, and as many as possible should be derived from these. The case usually goes like this: if one meaning of a word is a motivated extension of another, only one should be recorded, and the other should be left to the operation of lexical rules. A motivated extension of a word sense does not need to be recorded in the lexicon, according to the polysemic approach. Janssen (2009) contends that polysemous and monosemous analysis of word meanings is not mutually incompatible, but may successfully complement each other. The polysemous approach to word meanings, in particular, should be replaced as

far as possible with a monosemous approach based on conceptualization principles that account for the diversity of a word's usage.

2.3.5 The Componential (Atomistic) Approach

This approach is considered as one of the most widespread ways to study word meaning, as a word is being constructed out of small and invariant units of meaning. These units of meaning, 'semantic atoms', are diversely known as 'semantic features', 'semes', 'semantic markers', 'semantic primes', and 'semantic components'(Cruse, 2000). It views word's meaning as a more or less sophisticated structure made up of combinations of smaller, or more primitive, units of meaning; a basic example is the analysis of woman as [ADULT] [HUMAN] [FEMALE] Geeraerts (2017).

Hjelmslev (1961) is credited for establishing the first componential program for semantics in modern linguistics. He argues that the meaning side of a linguistic sign should follow the same structural rules as the sound side as a matter of principle. The concept of 'reduction' was extremely important to him. The meaning side of signs should be reducible to combinations selected from a much smaller inventory than the stock of signs being analysed.

Some (probably the majority) componential analyses aim to reduce the number of combinatorial elements. The basic elements must be highly reusable in order to achieve a reduction. In this sense, not all analysis is reductive. One version merely tries to separate a word's meaning from that of all other items in the vocabulary, thus each contrast may possibly add a new component. The analysis of a chair as [FURNITURE] [FOR SITTING] [FOR ONE PERSON] [WITH BACK] is an example (Geeraerts, 2017).

In brief, word meanings are constructed out of features, smaller units of meaning, much like molecules consist of atoms; these features are often quite abstract, can be combined in different ways to capture the meaning of words.

2.3.6 Holistic Approaches

The componential (atomistic) approach to word meaning is based on the premise that a word's meaning can be stated in principle without regard for the meanings of other terms in the language's vocabulary. Holistic approaches, on the other hand, argue that words have meaning only in connection to the rest of the vocabulary, not in isolation. There are several versions of holism, two of which will be discussed here (Geeraerts, 2017).

First, W. Haas (1962, 1964) is credited with an extremely unique interpretation of meaning that derives from an aspect of Wittgenstein's work, specifically, his 'use' theory of meaning, summarized in the dictum: "Don't look for the meaning—look for the use." In other words, the meaning of an expression can be determined by its use. Haas has been inspired by J. R. Firth's dictum, "Words shall be known by the company they keep." He claims that a word's meaning is a semantic field with two dimensions: a syntagmatic dimension in which all possible (grammatically well formed) contexts of the word are arranged in order of normality; and a paradigmatic dimension in which all possible paradigmatic substitutes for the word are arranged in order of normality for each context (Cruse, 2000).

Second, Lyons (1963, 1977, 1995) takes a holistic approach, developing Saussure's basic idea that any linguistic element's 'value', whether phonological, syntactic, or semantic, is essentially contrastive, that is, its identity is constituted by its difference from other elements with which

it potentially contrasts (Geeraerts, 2017). According to Lyons, the sense of a lexical item is made up of the set of sense relations that the item forms with other items in the same field. He argues that sense relations are not relations between independently established senses; rather, senses are made up of sense relations. So, for instance, the meaning of ‘horse’ should be portrayed along the lines shown in the below figure. (Cruse, 2000).

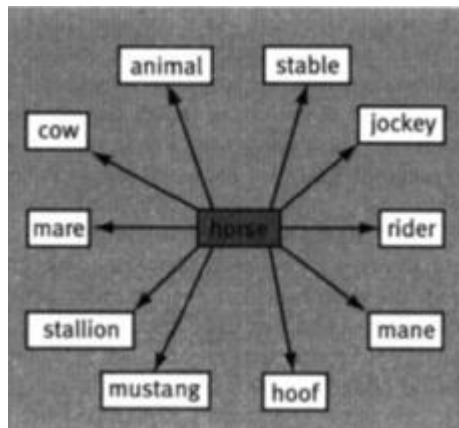


Figure (1) Network of Relations of the Word ‘Horse’

The connections in this system are of many types, such as “is a type of” (e.g. horse: animal), “is not a type of” (e.g. horse: cow), “is a part of” (e.g. mane-: horse), “is a distinctive noise made by” (e.g. neigh: horse), “is a dwelling place for” (e.g. stable: horse), and so. Because the words illustrated interact with other words besides horse, the full meaning of horse is a complex network of relations that might cover the whole lexicon (Ibid).

2.3.7 Conceptual Approaches (Words and Concepts)

At the end of the twentieth century, there was a reaction against the Structuralist perspective of language as a system of relations between words,

without any reference to language as a mental and psychological phenomenon, and without any reference to conceptual structure and thinking in general. Word meanings are thought to be psychological entities in people's minds rather than relations between words (Paradis, 2012).

Conceptual approaches are single-level approaches that associate the meaning of a word (or at least a major part of it) with the idea or concepts to which it provides access in the cognitive system. The prototype model of concept structure is popular among cognitive linguists. Cognitive psychologists took up and refined the notion of non-Aristotelian categories, establishing what is now known as prototype theory as an account of natural categories. Members of a category are not equal on this basis; they differ in terms of how good they are, or how representative they are of the category. The prototypical members are the best, and the category is essentially built around them: other instances are classified as assimilated or not assimilated to the category based on how closely they match the prototype (Cruse, 2000).

Langacker (1987) considers language as a 'structured inventory' of linguistic units such as (phonological, symbolic, and semantic), whereas Hudson (2007) perceives no qualitative difference between the network of words, the network of concepts, and the network of relations linking the two. The paradigmatic relation in this approach does not only involve relations between words, but also relations between concepts. Unquestionably, the relation between *butter* and *batter* is lexical, whereas the hyponymy relation between *dog* and *animal*, or the meronymy relation between *wheel* and *car* are conceptual relations. Langacker is not satisfied with intra-word relations, so he introduced a number of concepts for the manifestation of word meanings, such as the notions of 'profile', 'base', and 'domain'. For

example, the word ‘window’ is used to refer to an object (word-to-world relation), but this word can profile different components of the broader concept (Taylor, 2017).

Langacker (2008: 42) claims that words provide “paths of access to open-ended domains of knowledge”. Therefore, word meanings are encyclopedic, so it is constantly changing and subject to negotiation. It can be used to refer to anything from a person to an object or place, or even to a person's name. The different "background contexts" and "event sequences" that words evoke are a significant part of background knowledge. Event sequences are important not only for words that refer to physical objects, such as *window*, but also for abstract ideas like *freedom* and *truth*, as well as ‘logical’ terms like *or* and *not*. This issue is regarded particularly by verbs, adjectives, and other non-noun words. Normally, verbs refer to states and actions, and they refer to typical acts of usage. Therefore, these actions and states can only be understood against the background of the predicted scenarios and frames (Taylor, 2017).

2.3.8 Formal Approaches

Formal approaches to semantics attempts to express the facts of meaning using a strict formalism, preferably one of the standard logics. This approach adopts greater explicitness, testability of hypotheses, easier link-up with syntax, and machine implementability. Those who are skeptical of this approach point out that there are major parts of semantics that are always changing, and to the somewhat meagre descriptive results so far achieved. Formalist approaches will not be emphasized in this work, which aims for a particular level of descriptive richness. Shortly, Formal approaches try to

explain human language in terms of objectivist and formal logic (Cruse, 2000).

2.4 The Notion of Lexical (Sense) Relations

The terms ‘semantic relations’, ‘meaning relations’, ‘lexical relations’, and ‘paradigmatic/syntagmatic relations’ are all related to the concept of lexical (sense) relations. The traditional field of sense relations is concerned with paradigmatic relations such as synonymy, antonymy, and hyponymy, etc (Storjohann, 2016). One possible definition of *sense relations* is: “Any relation between lexical units within the semantic system of a language”, (Matthews 1997:337). This implies that the meanings of lexical elements in a language must be related. It makes no difference whether this relationship expresses identity or non-identity. One could also define *sense relations* as “a paradigmatic relation between words or predicates”. “Paradigmatic relations are those into which a linguistic unit enters through being contrasted or substitutable, in particular environment, with other similar units”, (Palmer 1997:67). To put it another way, a paradigmatic relation is one in which one lexical unit may be substituted by another (Geisler, 2011).

Crystal (2003: 164) takes a less scientific approach to sense relations: “We have a sense relation when we feel that lexemes relate to each other in meaning.” The most common relations in meaning between lexical units are *Synonymy* and *Antonymy*. Whereas the latter one belongs to a group of sense relations which express a non-identity, the first one is the most known type of identity-expressing sense relations. Together with *Hyponymy*, Crystal calls them the “chief types of lexical (sense) relations” (Geisler, 2011). Similarly, Kreidler (1998, p.303) defines sense relations as “the relations of meaning between words, as expressed in synonymy, hyponymy, and antonymy.” Thus, sense relations can be seen from the similarity of meaning

as in synonymy, the inclusion of meaning as in hyponymy, and the oppositeness of meaning as in antonymy. However Cruse (2004, p.148) classifies sense relations into two classes, i.e. those that express identity and inclusion between word meanings and those that express opposition and exclusion. The first class discusses the sense relations between words whose meanings are similar or included in other ones. The second class discusses the sense relations between words whose meaning are opposite or excluded from other words (Winiharti, 2010). Unlike the previous scholars, Yule (2006) gives a simple definition to sense relations and states that the relationships between two or more words are called lexical relation (Zakiyah, 2018).

Cruse (1986) defines a sense as the meaning aspect of a lexical unit. Lexical units are form-meaning complexes with (relatively) stable and distinct semantic properties that stand in meaning relations such as antonymy (e.g. long : short) and hyponymy (e.g. dog : animal) and interact syntagmatically with contexts in various ways to create anomalies. The sense of a word refers to its position within a system of relationships that it forms with other words in the vocabulary (Lyons, 1995). According to Lyons, these relationships between vocabulary items do not contain any presuppositions about the existence of objects and properties outside the vocabulary of the language in question. Therefore, sense-related must distinguished from denotation-related lexemes in order to refine sense-relation (Yousif, 2008).

Lyons enunciates the point by saying that the term 'sense' can be interpreted in a variety of ways, but it is generally used in opposition to the term "reference" (or, equivalently, denotation or extension). The latter reflects the idea that one aspect of word meaning is the relationship between

words and the objects that they can be used properly to talk about. Thus, the reference/denotation of *cat* is the set of all cats. Sense, on the other hand, abstracts away from things to the characteristic that allows us to distinguish them. The sense of *cat* is thus the property that allows us to identify on any occasion an object of which it can truthfully be said *that is a cat* – ‘catness’. Sense relations are essentially relationships between the properties that words express, rather than relationships between the objects that they might be used to discuss (Cann, 2011).

There is far more to meaning than denotation and connotation. Meanings of words partly depend on its associations with other words, the relational aspects. Lexemes do not only ‘have’ meanings; they also ‘contribute’ meanings to the utterances in which they occur, and the meanings they contribute are determined by the other lexemes with which they are associated with. The sense of a lexeme is the meaning that it has as a result of these relationships. Part of this relationship may be observed in the way words go together meaningfully, or do not. It makes sense to state ‘John walked’ and ‘an hour elapsed’. It’s incomprehensible to state something like ‘John elapsed’ or ‘an hour walked’. Part of the meaning of ‘elapse’ is that it goes with ‘hour’, ‘second’, ‘minute’, ‘day’ but not with ‘John’, and part of the meaning of ‘hour’, ‘second’ and so forth is that these words can co-occur with ‘elapse’. The way word meanings change with context is one indication of this relationship (Kreidler, 1998).

2.4.1 Historical Perspectives on Lexical (Sense) Relations

The study of sense relations has a long tradition in the western grammatical and philosophical traditions, extending back at least to Aristotle with studies of related phenomena occurring throughout the mediaeval and

subsequent literature. The systematisation and taxonomic classification of the system of sense relations, on the other hand, was only taken up in the twentieth century structuralist movements, notably in Europe, after de Saussure's rapid developments in structuralist linguistics. This movement toward systematic analysis of word sense was then taken up in formal modeling of sense relations and, in particular, the development of computational models of these for the purposes of natural language processing in the latter half of the twentieth century and the early part of the twenty-first century (Cann, 2011).

In the twentieth century, the treatment of sense relations was long associated with distinct traditions from Structuralist and post-Structuralist streams in the European context of linguistics. In the study of meaning and lexical paradigms, their approaches are often considered as the most important. The structuralist believed that lexical meaning is determined by the relationships that lexemes have with other lexemes within the same lexical-semantic paradigm. The structuralists believed that language is a unique self-contained, relativistic system, with clearly recognizable stable structures that show the inherent semantic features of lexical items that can be decomposed and described. Sense relations are characteristic of a vocabulary which was regarded as an integrated relational system. Words are positioned in the lexical network, and they present primitive and universal language structuring principles. Antonymy and synonymy were conceived as relationships that existed between lexemes or lexical units only on the basis of their meanings or senses (Storjohann, 2016).

Lyons (1968, 1977), Lutzeier (1981), Lehrer and Lehrer (1982), and Bierwisch (1989) conducted comprehensive lexical field studies and established definitions and classifications of paradigmatic relations based on

philosophical categories. Cruse (1986), who used a more contextualized approach, offered the most comprehensive taxonomy and stringent terminology of sense relations. The term "sense relation" implies commitment to structuralist methods and the idea that language is organized in a stable relational system. Cruse and Togia (1995) expanded on the traditional post-structuralist approach of sense relations by including a cognitive aspect in their theory of meaning. Croft and Cruse (2004) were the first to use a completely cognitive approach to shed new light on the phenomena of sense relations, and they made extensive use of the term "sense relation" in their new theoretical framework. Sense relations were viewed as flexible and dynamic "semantic relations not between words as such, but between particular contextual construals of words" (Croft and Cruse 2004: 141). The groundwork for a more dynamic explanation of contextually adaptable relations and a more compatible semantic model within lexical semantics was established, but not with enough empirical evidence to substantiate this complex theory (Storjohann, 2016).

2.4.2 Paradigmatic and Syntagmatic Relations

Traditional semanticists have referred to lexico-semantic relationships as paradigmatic vs. syntagmatic structures, implying strict distinctions between them. While Paradigmatic relations, which hold between words of the same general category or kind, are defined in terms of contrast and hierarchy, in contrast, a syntagmatic approach is concerned with the lexical elements around the lexeme in question in terms of collocation and co-occurrence to define the meaning of a word in a given context.

Typically, a paradigmatic relation occurs between words or word forms when there is choice between them. So, given the string *John bought*,

any noun that implies something that may be purchased can be substituted: *suit, T-shirt, cauliflower, vegetable, or house*. There is more to choose between some of these terms than just the fact that they are nouns that denote commodities. A lexeme's meaning is determined in part by its relationship to other lexemes in the language. Each lexeme is connected to a large number of other lexemes in the language (Kreidler, 1998).

A paradigmatic approach to sense relations implies focusing on the semantic properties that define such paradigmatic sets (or sometimes the entire lexical fields). Paradigmatic relationships are considered to be problematic from a conceptual and methodological standpoint. According to the preceding explanation, the words that might appear in the following slots have a paradigmatic relationship:

- (1) I saw a (n) ___ in the yard.
- (2) It was a (adj) ___ table.

The words that might fill the above slot (1) are count nouns, or more accurately, nouns indicating observable things that are likely to be found in yards. The set in (2), on the other hand, is made up of adjectives that may be used to describe tables. On this base, neither the semanticist nor the syntactician will find these categories very useful. Paradigmatic relations are mostly limited to synonymy, hyperonymy, antonymy, and a few more like meronymy. While many of these relationships are intuitively obvious (*large* is the opposite of *small*, *sofa* is a synonym for *settee*), several researchers have recognised the need for more objective criteria for determining the relationships (Taylor, 2017).

There are three primary sense relations that may be specified between lexemes among the paradigmatic sense relations: **sense inclusion**, **sense**

exclusion, and **sense identity**. A variety of distinct forms of relations may be found within these three groups, and other types of sense relations, such as part-whole.

There are two types of criteria that might be specified in dealing with paradigmatic relation. The first is based on the entailment relation, which states that sentence S1 entails sentence S2 if S1's truth ensures S2's truth. It is important to remember that entailment is a relationship between sentences, not words, for examples.

(3) This is a dog.

(4) This is an animal.

To state that *the dog* entails *animals* is simply a quick way to express that a sentence of the form *This is a dog* entails *This is an animal*. The entailment relation can be used to detect synonymy instances (whereby *This is an X* and *This is a Y* mutually entail each other), also in disentangling different kinds of opposites (complementary, reversive, converse, etc.; see Cruse 1986). The fact that entailment relations are ultimately a matter of judgement and are embedded in the "fabric" (Quine 1951: 39) of our (contingent) knowledge and beliefs further complicates the situation. Does *father* entail *male*? It certainly used to, but arguably no longer does. Indeed, once one leave textbook examples of *assassinate* and *kill*, *dog* and *animal*, intuitions tend to become rather unsure (Taylor, 2017).

The presence of words in sentence (or phrasal) frames, a method pioneered by Cruse (1986), is the second criteria for identifying paradigmatic relations. As a result, the normality of *dogs* and other animals might be used to support the idea that *dogs* are taxonomically subordinate to *animals*. Hearst (1992) recommended diagnostic frames as a method for automatically extracting lexical relations from text; to find examples of

hyponymy, one simply searches for occurrences of X(s) and other Ys. However, the findings are not always accurate. It would be a mistake to assume that *dog* is taxonomically subordinate to *pet* based on the normality of *dogs* and *other pets*; not *all dogs* are *pets*, and *This is a dog* does not entail *This is a pet*. (Taylor, 2017).

Syntagmatic relations hold between words based on their ability to co-occur in sentences meaningfully. Syntagmatic sense relations are typically found between words belonging to distinct syntactic categories or semantic types such as verbs and nouns, adverbs and prepositional phrases (Cann, 2011). Likewise, syntagmatic relationships exist between elements that appear in the same sentence, especially those that have an intimate syntactic relationship. For instance, it is by virtue of syntagmatic sense relations, in this case between adjective and head noun, that *I'd like a glass of dry sherry* is normal, whereas *I'd like a glass of striped sherry* is odd. For similar reasons, the first sentence is normal, but the second and the third are odd

(5) The girl ran across the field.

(6) The girl sat across the field.

(7) The smell ran across the field.

Notice that in (6) it is the combination of verb and prepositional phrase (i.e. *sat* and *across the field*) which causes the oddness, whereas in (7), it is the combination of subject and verb (i.e. *the smell* and *ran*). Any well-formed sentence in a natural language may be thought of as a string of components, each of which is selected from a range of options offered by the language (at least, each of which is not uniquely defined by the syntax, such as the *to of / want to leave now*).

In each example, the set of options from which the decision was taken is restricted by the other parts in the sentence, in the sense that a choice outside of a particular range will result in semantic incoherence.

The advantage of focusing on circumstances where elements from the same paradigm co-occur in a single syntagm has been highlighted by cognitive and corpus-linguistic models, adopting a critical viewpoint on the treatment of antonymy, in particular, as a paradigmatic opposition. Studies of English antonymy (cf. Justeson and Katz (1991); Mettinger (1994); Fellbaum (1995); Jones (2002)) and Swedish (Willners (2001)) as well as Japanese antonyms (Muehleisen and Isono (2009)) have established the view that antonymy is realised in co-text through specific contextual syntagmatic frames (Storjohann, 2016).

According to Firth (1957), syntagmatic relationships between words can be analysed in terms of collocation and colligation. The tendency for a word to co-occur with another word, either directly adjacent or within a more broadly defined frame is known as collocation: *an unmitigated disaster, the foreseeable future, a blinding light, blindingly obvious*. Colligation is the tendency for a word to appear alongside other words from the same syntactic category. For example, possessives, whether possessive pronouns (my son), genitives (the girl's mother), or phrases, are likely to co-occur with kinship words (the father of the bride). Colligation can also be thought of in terms of the syntactic frames that a given word prefers. *Put*, for example, is virtually restricted to occurring in the frame [___ NP PP], where [PP] designates a goal location: *put the book on the shelf, put the cat out*, etc. (Taylor, 2017).

Syntagmatic relations exist between components in the same bigger unit as limitations on choices rather than choice, and they regulate discourse cohesion.

2.4.3 Configurations of Lexical (Sense) Relations

The parts of paradigmatic lexical (sense) relations are still debatable. The number and names of parts vary from one author to another. Lyons (1995) establishes the structure of lexical sense relation as follows: synonymy, hyponymy, incompatibility, and antonymy. However, Palmer, (1997) introduces the paradigmatic lexical (sense) relations and classifies them into: synonymy, polysemy, homonymy, incompatibility, hyponymy, antonymy, and relational opposites. He examines the aforementioned parts in accordance to 'structural' framework.

Cruse (2000) takes a comprehensive account of lexical (sense) relations. Paradigmatic sense relations are divided into two broad categories: those that indicate identity and inclusion between word meanings, and those that express opposition and exclusion between word meanings. The class of identity and inclusion includes hyponymy, meronymy, and synonymy, whereas the class of opposition and exclusion consists of incompatibility and antonymy. In addition to paradigmatic classifications of lexical (sense) relations, he studies polysemy and homonymy as sources of ambiguity and establishments of senses. As a result, metonymy is studied as a subtype of polysemy.

Saeed (2009) presents a different classification of lexical (sense) relations, and he thinks of the lexicon as a network. Thus, an important organisational principle in the lexicon is the 'lexical field'. The mentioned relations are homonymy, polysemy, synonymy, antonymy, hyponymy, and meronymy. Riemer (2010) presents another classification of paradigmatic

lexical (sense) relations. What distinguishes this classification from the others is that taxonomy is regarded as a kind of lexical sense relation. The other relations are antonymy, meronymy, hyponymy, and synonymy.

Fellbaum (2015) addresses lexical relations from lexical and conceptual perspectives. Thus, the classification of paradigmatic lexical (sense) relations is a bit different. Metaphor is included in her classification. The other relations are synonymy, polysemy, hyponymy, meronymy, and antonymy.

Al-Sulaimaan (2016) presents a comprehensive classification of paradigmatic lexical (sense) relations. Unlike the previous authors, he presents nine kinds of paradigmatic relations. The relations are hyponymy, synonymy, antonymy, polysemy, homonymy, monosemy, heteronymy, and metonymy.

The current study includes the most recurrent relationships discussed in previous works and examines them individually in light of various sources. The most prevalent relation, which is mentioned in almost every source, is synonymy. Thus, the first relation to consider is synonymy.

2.4.3.1 Synonymy

The concept of synonymy is well-known and intuitively obvious; it denotes sameness in meaning, or sense, as with the words: (*unhappy- sad/ huge- enormous/ correct- right/ casual- informal/ prisoner- convict/ present-gift/ flourish- thrive/ donate- contribute*). Synonymy is context-dependent. Two words may have the same meaning in a particular context, but not necessarily in all contexts, as in the case of (*pale-light*) or (*peel-skin*). Examples:

(8a) The shirt is {*pale/light*} in color. (Synonymous)

(8b) The {*peel, skin*} of the orange is thick. (Synonymous)

(9a) The book is {*light, *pale*} in weight. (Not synonymous)

(9b) The girl's {*skin, *peel*} is sunburned. (Not synonymous)

Synonymy disregards a word's connotations in favour of its denotations. Indeed, many synonyms are distinguished solely by their connotations, as in *horse/steed/nag*. Additionally, synonyms may differ in terms of intensity or severity, as in *rain/showers/sprinkles/downpour*. Additionally, synonymy disregards stylistic aspects, the word's colloquial, familiar, or formal register, as well as its social or geographic dialect distribution (Brinton and Brinton, 2010).

Palmer (1997) defines synonymy as a term that refers to the “sameness of meaning”. It is self-evident that many sets of words have the same meaning for the dictionary maker; they are synonymous or synonyms. However, Kreidler (1998) introduces synonymy as mutual entailment; two or more entities which have the same referent or have the same quality. The below examples show how these words are synonymous.

(10a) Jack is a *seaman*.

(10b) Jack is a *sailor*.

Assuming that ‘Jack’ refers to the same person in the two sentences, then if (10a) is true, (10b) is true; if (10b) is true, (10a) is true; and if either is false, the other is false. This establishes that ‘seaman’ and ‘sailor’ are synonyms: when they are used in predications with the same reference phrase, the predications have the same truth value. Synonyms can be nouns, as in (10a) and (10b), or adjectives, adverbs, and verbs.

(11a) The rock is *large*.

(11b) The rock is *big*.

(12a) The train traveled *fast*.

(12b) The train traveled *rapidly*.

(13a) The bus *left* promptly at 10.

(13b) The bus *departed* promptly at 10.

Thus, synonymy is a form of mutual entailment, and synonyms are a form of mutual hyponymy. For instance, large is a hyponym of big, and big is a hyponym of large. If these two sentences are joined with ‘and’, tautology will be created:

(14a) The rock is *large* and (it is) big.

If two of them are combined but have them differ in polarity, the result is a contradiction.

(14b) The train traveled *fast* but (it did) not (travel) *rapidly*.

In the following examples 15a and 15b, *postman* and *mailman* are equivalent predications. This is considered as a dialect difference rather than an instance of synonymy.

(15a) Mr. Jenkins is our *postman*.

(15b) Mr. Jenkins is our *mailman*.

With the below example 16a–c, a slightly different kind of synonymy is found. The adjectives *skinny*, *thin*, *slender* mean ‘the same thing,’ but they differ in connotation, the values that people give to them: *thin* is neutral, *skinny* is somewhat pejorative, and *slender* is flattering.

(16a) Alice is *skinny*.

(16b) Alice is *thin*.

(16c) Alice is *slender*.

Consider the below examples 17a and b. The verbs *hide* and *conceal* (17a, b) also differ in pragmatic value: *hide* is more common than *conceal*. However, there is another difference, a subtle matter of potential co-occurrence: it is possible to say (*We hid in the attic*), as well as (*We hid the*

treasure in the attic), but we cannot say **We concealed in the attic*. **Hide** has a valency of 1 or 2, but *conceal* requires two arguments always.

(17a) We **hid** our valuables in the attic.

(17b) We **concealed** our valuables in the attic.

Sentences 18a and 18b illustrate a similar point. Two (or more) terms can be synonymous only if they are compatible with the same subjects. The terms *hard* and *difficult* are both compatible with *calculus* and with *subject*, but *difficult* is not a synonym of *hard* in *hard chair*, *hard knock* and the like. *Hard* and *difficult* have different ranges of compatibility; the ranges overlap but they are not co-extensive. Ranges and their overlap can be illustrated this way:

(18a) Integral calculus is a **hard** subject.

(18b) Integral calculus is a **difficult** subject.

One might argue, however, that there are no real synonyms and that no two words have the exact same meaning. Indeed, it would seem unlikely that two words with the exact same meaning would survive in the same language. Palmer (1997) introduces five ways in which synonyms can be seen to differ.

Firstly, some sets of synonyms are unique to certain dialects of the language. For example, the word ‘fall’ is used in the United States while certain western regions of the United Kingdom use ‘autumn’ instead. Other examples are ‘cowshed, cowhouse or byre’, ‘haystack, hayrick or haymow’.

Secondly, there is a similar issue, but more problematic, with words that are used in a variety of ‘styles’ or ‘registers’. In the proper context, a ‘nasty smell’ may refer to an obnoxious effluvium or an ‘orrible stink’. The former is extremely ‘posh’ jocularly, whereas the latter is colloquial. Similar

trios (though not identical stylistically, but rather in terms of formality) are (gentleman, man, and chap) (pass away, die and pop off). Dialects aren't usually switched within a single conversation, but the style may be altered and, more specifically, the vocabulary items used to create various effects.

Thirdly, some words may be argued to vary only in terms of their emotive or evaluative meanings. The rest of their meaning, their 'cognitive' meaning, stays unchanged. Examples were (statesman/politician), (hide/conceal); a further trio is (thrifty, economical, stingy), and there is the related problem of the meaning of words such as (fascist and liberal). Nonetheless, it is a mistake to try to disentangle such emotive or evaluative meanings from the basic cognitive meanings of words.

Fourthly, some words are collocational, so they only appear in combination with other words. Thus, (rancid) happens in the presence of (bacon or butter) (addled with eggs or brains). This does not seem to be a problem of their meaning, but of the company they keep. Perhaps one might argue that they are true synonyms, differing only that they occur in different environments.

Fifthly, it is obvious that many words have similar meanings or overlap in their meanings. There is a loose sense of synonymy. For example, potential synonyms for (mature) include (adult, ripe, perfect, due). Speakers can propose (direct, control, determine, require) for (govern), while (loose) will have a wider set — (inexact, free, relaxed, vague, lax, unbound, inattentive, slack, etc.)

According to Cruse (2000), there are three types of synonymy namely: **absolute**, **propositional**, and **near-synonymy**. Absolute synonymy refers to complete identity of meaning, and therefore in order for the concept to have any substance, people must define what constitutes meaning.

Absolute synonyms are items that are equinormal in all contexts: for two lexical items X and Y to be recognised as absolute synonyms, in any context in which X is fully normal, Y is, too; in any context in which X is slightly odd, Y is also slightly odd, and in any context in which X is totally anomalous, the same is true of Y. The following examples demonstrate the difficulties of identifying uncontroversial pairs of absolute synonyms ('+' indicates "relatively more normal" and '-' indicates "relatively less normal"):

(i) *brave: courageous*

(19a) Little Billy was so brave at the dentist's this morning. (+)

(19b) Little Billy was so courageous at the dentist's this morning. (-)

(ii) *calm: placid*

(20a) She was quite calm just a few minutes ago. (+)

(20b) She was quite placid just a few minutes ago. (-)

(iii) *big: large*

(21a) He's a big baby, isn't he? (+)

(21b) He's a large baby, isn't he? (-)

(iv) *almost: nearly*

(22a) She looks almost Chinese. (+)

(22b) She looks nearly Chinese. (-)

(v) *die: kick the bucket*

(23a) Apparently he died in considerable pain. (+)

(23b) Apparently he kicked the bucket in considerable pain. (-)

One thing is clear, absolute synonyms are extremely rare and do not represent a substantial part of natural vocabularies. Take note that, according to the definition given above, just one context is required to disqualify a pair of words from being absolute synonyms. However, a single such context

would be suspicious: without at least one class of such contexts, one would reasonably wonder that the effect was semantic in nature.

Propositional synonymy can be defined in terms of entailment. When two lexical items are propositional synonyms, they can be exchanged without affecting the truth-conditional properties of the statement. In other words, two statements that vary only in that one contains one of a pair of propositional synonyms and the other contains the other include mutual implication: “John bought a violin” involves and is entailed by “John bought a fiddle”; “I heard him tuning his fiddle” entails and is entailed by “I heard him tuning his violin”; “Sara may play a violin concerto” entails and is entailed by “Sara may play a fiddle concerto”.

Differences in the meanings of propositional synonyms inevitably involve one or more aspects of non-propositional meaning, the most significant of which are (i) differences in expressive meaning, (ii) stylistic level differences (on the colloquial-formal dimension), and (iii) presupposed field of discourse differences. Take the case of violin: fiddle. Here the difference depends on certain characteristics of the speaker. If the speaker is an ‘outsider’ to violinistic culture, fiddle is more colloquial. If, on the other hand, the speaker is a professional violinist speaking to another professional violinist, the term fiddle is neutral, whereas violin is reserved for non-professionals.

The distinction between propositional synonymy and near-synonymy is clear, whereas the difference between near-synonymy and non-synonymy, on the other hand, is considerably less clear, and the underlying concept is obscure. To begin, two points should be made. The first is that language users do have an intuitive sense of which pairs of words are synonyms. The second issue is that merely stating that there is a scale of semantic distance

and that synonyms are words with relatively close meanings is not adequate. This is not adequate since there is no straightforward correlation between semantic closeness and degree of synonymy. The items in the followings are close in meaning, but they do not become more synonymous: (*entity- process*), (*living thing- object*), (*animal- plant*), (*animal- bird*), (*dog- cat*), and (*spaniel- poodle*).

This list may theoretically go on indefinitely without ever producing synonyms. The idea is that these words serve mainly as a counterpoint to other words on the same hierarchical level. In other words, one of the dog's primary functions is to signal "not cat/mouse/camel/ (etc.)", that is, to convey a contrast. On the other hand, synonyms do not function simply to contrast with one another. They may, of course, contrast in some contexts, most notably with near-synonyms: (*John was **killed**, but I can assure you he was not **murdered**, madam*). It is not easy to characterise the types of difference that do not undermine synonymy. As a general guideline, although not particularly clear, acceptable distinctions between near-synonyms must be minor, backgrounded, or both. An example of a backgrounded major distinction would be *pretty* ('female' presupposed) vs. *handsome* ('male' presupposed), the propositional meaning of both of which may be glossed as 'good-looking'. When the gender difference is foregrounded, as it is the case with man:woman, the resultant words are not synonymous.

Types of synonyms can be categorized by how much denotative semantic overlap the two words have, so types of synonyms are distinguished by what sorts of semantic properties the words share, be they denotative, connotative affective, dialectal, and so on. It is necessary to investigate whether synonymy connects words or meanings. If synonymy is

a relation among words, then it can be described as words having the same (or a similar) sense, but if synonymy is treated as a relation among senses, then synonymy is a matter of being the same/similar sense. The latter encounters difficulties when used to define the relationship between absolute synonyms. There is no relation to observe if there is only one sense, as a relation by definition must exist between at least two elements of a set (Murphy, 2003). Hudson describes the situation as follows:

[A]t least one of the words must have a meaning whose name is *not* that word itself. Take our examples, *bicycle* and *cycle*. If they have the same meaning, there must be just one concept which doubles up as the meaning for both words, so it has just one name. If we call it 'bicycle' then we must say that the meaning of *cycle* is 'bicycle' (not 'cycle'); and if we call it 'cycle,' then *bicycle* means 'cycle.' (Hudson 1995: 3)

If the study of meaning is based on the mapping of lexical elements to concepts, there is no reason to assume that (bicycle and cycle) map to two distinct but same concepts. Thus, rather than a relationship between two meanings, the sense synonymy is a relationship between two words that map to the same meaning or concept. One reason that synonymy is often defined as a sense relation is that synonyms usually involve a match between some, but not all, of a word's senses. The sense relation description is convenient because it only considers one sense of a word at a time (Murphy, 2003).

Another reason for referring to synonymy as a sense relation is to emphasise that it concerns the identical of senses, not extensions. Frege's (1985 [1892]) discussion of the *morning and evening stars* is the most famous illustration of this argument. While both terms allude to Venus, they have distinct senses. Without addressing the issue of denotative vs non-denotative aspects of meaning, similarity in denotative meaning may be

plotted in two dimensions: the number of common senses shared by the words and the similarity of those shared senses.

2.4.3.2 Hyponymy

According to Richards and Schmidt (2002, p.243), hyponymy is “a relationship between two words, in which the meaning of one of the words includes the meaning of the other word.” It can be seen in the relation between *cat* and *animal*, *pigeon* and *bird*, *orchid* and *flower*. *Cat* is considered a hyponym of *animal*, *pigeon* is considered a hyponym of *bird*, and *orchid* is considered a hyponym of *flower*. On the other hand, *animal* is said to be the superordinate of *cat*, *bird* is said to be the superordinate of *pigeon*, and *flower* is said to be the superordinate of *orchid* (Brinton and Brinton, 2010). However, Cann (2011) refers to hyponymy as a particular instantiations of a more general concept. In each situation, one word conveys a more precise meaning than the other. The more particular word is hyponym, whereas the more general word is superordinate, which may alternatively be referred to as a hyperonym or hypernym, but the latter is avoided since it is homophonic with hyponym in non-rhotic dialects of English.

Cruse (2002b) describes this relation as a significant structural relationship in the vocabulary of a language. This is the relationship between an *apple* and a *fruit*, a *car* and a *vehicle*, and a *slap* and a *hit*, and so on. For example (The *oak* produces fruit every other year) and (The *tree* produces fruit every other year). *Oak* is a hyponym of *fruit*; but *fruit* is a superordinate of *oak*.

Unlike the previous linguists, Lyons (1995) describes hyponymy in terms of unilateral implication. (For instance, *X is scarlet* will be taken to

imply *X* is *red*; but the converse implication does not generally hold.) Typically, a sentence including a superordinate term implies either (i) the disjunction of sentences each having a distinct member of a set of co-hyponyms, or (ii) a sentence in which the co-hyponyms are semantically coordinated. Both of these options are exemplified by *I bought some flowers*. This sentence might indicate the disjunction of *I bought some tulips*, *I bought some roses*, *I bought some violets*, and so on. (In this case, 'disjunction' refers to the selection of one of many alternatives: if *p* implies the disjunction of *q*, *r*, and *s*, then *p* implies either *q* or *r* or *s*.) Additionally, it may imply a sentence such as *I bought some roses and tulips*, or *I bought some violets and tulips*, and so on. However, hyponymy relation does not include relations between nouns, but also between adjectives and verbs, for example: *The weary soldiers **trudged** forward* and *The weary soldiers **moved** forward* (Kreidler, 1998).

Hyponymy, strictly speaking, is definable only between words of the same (syntactic) category, but some groups of apparent co-hyponyms seem to be related to a word of some other category. This seems particularly true of predicate-denoting expressions like adjectives which often seem to relate to (abstract) nouns as superordinates rather than some other adjective. For example, *round*, *square*, *tetrahedral*, etc. all seem to be 'quasi-hyponyms' of the noun *shape* and *hot*, *warm*, *cool*, *cold* relate to *temperature*. Thus, the hierarchies induced by hyponymy may be cross-cutting. The *animal* field is related to fields concerned with maturity (*adult*, *youth*), sex (*male*, *female*), and maybe other domains. This entails that certain words may be hyponyms of many superordinates, depending on the degree of relatedness between them (Cann, 2011).

Cruse (2000) identifies hyponymy as a transitive relation as it's understood as a purely logical notion. If *A* is a hyponym of *B* and *B* is a hyponym of *C*, then *A* is a hyponym of *C* (consider *A* = *spaniel*, *B* = *dog*, and *C* = *animal*). However, numerous instances have been identified in which transitivity appears to fail:

(24a) A car-seat is a type of seat.

(24b) A seat is a type of furniture.

(24c) *A car-seat is a type of furniture.

Kreidler (1998) discusses the same issue with some examples as one is shown; 'There's a **Palomino** in that field', and 'There's a **horse** in that field.'

Hyponymy is frequently characterised in terms of entailment between sentences which differ only in respect of the lexical items being tested: *It's an apple* entails but is not entailed by *It's a fruit*, *Mary slapped John* entails but is not entailed by *Mary hit John*. There are two difficulties with this definition of hyponymy. The first difficulty is that a sentence containing a hyponym does not always entail corresponding sentence with the superordinate. For instance, although *It's a tulip* entails *It's a flower*, *It's not a tulip* does not entail *It's not a flower*, nor does *The fact that it was a tulip surprised Mary* entail *The fact that it was a flower surprised Mary*. Another example to clarify this relation is between car and vehicle 'If all **cars** are forbidden, I shan't go' and 'If all **vehicles** are forbidden, I shan't go.' Ideally, one should be able to describe the kind of sentences in which entailment holds true; nevertheless, this proves to be a difficult undertaking (Cruse, 1987, 2000).

The second difficulty is that these definitions are excessively restrictive. For example, many sources consider *dog:pet* and *knife:cutlery* to

be at least as strong instances of hyponymy as *stallion:horse*, despite the fact that the first two cases lack entailment. The issue is that entailment must be context-independent, but hyponymy judgments are context-dependent. While it's true that not all dogs are considered pets, for the majority of people, dogs are considered pets in the default context of ordinary urban life, and possibly the default context invoked by the lexical item *knife* out of context is the mealtime context (Cruse, 2002b).

Additionally, if X and Y are hyponyms of Z, they are referred to as co-hyponyms, where two terms are regarded as co-hyponyms if they share the same superordinate term but neither is a hyponym of the other. Generally, co-hyponyms are incompatible in senses, unless they are synonymous. For instance, *horse, cat, bird, and sheep* are all co-hyponyms for *mammal* and are mutually incompatible with each other: *This sheep is a horse (Ibid).

The basic feature of the superordinate-hyponym relationship is that the superordinate has to be an entity of a higher order that includes any number of members that can be referred to by the more general superordinate, for example, “*tree*”. Co-hyponyms are a set of hyponyms that are regularly viewed as an open-ended category. On the other hand, co-hyponyms, such as *apple tree* and *pear tree* can be conceived as examples that realise the superordinate “*tree*” more specifically. Thus, in the majority of circumstances, an entity will be classified as a co-hyponym if it has certain basic characteristics with other co-hyponyms, allowing it to be subsumed under the same superordinate (Carbone, 2018).

Fellbaum (2015) thinks that the superordinate relation is the one that connects the majority of the noun lexicon. It connects synsets referring to broader concepts such as *{furniture, piece of furniture}* to increasingly

specific ones like *{bed}* and *{bunkbed}*. Thus, a relational lexicon reflects the fact that the category *furniture* includes *bed*, which in turn includes *bunkbed*; conversely, concepts like *bed* and *bunkbed* make up the category *furniture*. Hyponymy generates hierarchies, or ‘trees’, in either direction, from general to specific or from specific to general concepts.

2.4.3.3 Meronymy

Meronymy (from the Greek *meros*, ‘part’) is the relationship between lexical items that is *part to whole* relation: *hand* is a meronym of *arm*, *seed* is a meronym of *fruit*, and *blade* is a meronym of *knife* (conversely, *arm* is the holonym of *hand*, *fruit* is the holonym of *seed*, etc.) (Riemer, 2010). According to Cann (2011), this relationship involves “part-of” or “meronymous relations”. Similarly, Cruse (1986) and (Lyons, 1977) claim that meronymy is another type of inclusion relation; it is the lexical reflex of the part-whole relation. Meronyms include the following: *hand:finger*, *teapot:spout*, *wheel:spoke*, *car:engine*, *telescope:lens*, and *tree:branch*. In the instance of *car:engine*, *engine* is referred to as the meronym (the term paronym is also occasionally used), while *car* is referred to as the holonym. Meronymy can also be defined in terms of normality in diagnostic frames, for example, *an X is a part of a Y*, *a Y has X/Xes*, and so on, but this relationship is not existed in all cases, for example.

(25) It’s a **university**, but it doesn’t have a **medical school**.

(26) The **sleeves** of this **jacket** have no **cuff**.

Croft and Cruse (2004) studied meronymy from a cognitive framework and define it as follows:

If A is a meronym of B in a particular context, then any member of the extension of A maps onto a specific member b of the extension of B of which it is construed as a part, or it potentially stands in an intrinsically construed relation of part to some actual or potential member of B. (Croft and Cruse 2004: 160)

A *finger* is an integral part of a *hand*, but a *lake* can be imposed as a part of a *park* but is not a necessary part of it. Cruse (1986) and Croft and Cruse (2004) have outlined the category PART, which includes classes such as *part*, *portion*, *piece*, *segment*, and *element*, all of which might be interpreted differently by speakers as parts of a whole. Croft and Cruse (2004: 155–156) demonstrate how speakers' judgments differ about whether a *battery* and a *bulb* are equally part of a *flashlight*, despite the fact that both are contained within its body. Traditionally, the *bulb* is included, but the *battery* is not, as it is expected to be bought separately. A clear definition of meronymy is difficult, as it remains open where the boundaries of a whole entity are (Storjohann, 2016).

Meronymy bears some interesting similarities to hyponymy. They must not be confused: *a dog* is not a part of *an animal*, and *a finger* is not a kind of *hand*. In both circumstances, inclusion occurs in a variety of directions depending on whether one takes an extensional or an intensional perspective. Physically, *a hand* includes *the fingers*, yet the meaning of *finger* involves the sense of *hand* in some way (Cruse, 2000).

Likewise, Cann (2011) states that meronymy and hyponymy share some similarities in that a (normal) *hand* contains fingers and a *finger* includes the concept of *hand*, but they are not the same thing and hence do

not necessarily participate in the same entailment relations as hyponyms and superordinates. So *Mary hurt her finger* (sort of) entails *Mary hurt her hand*, just as *Mary hurt her lamb* entails *Mary hurt an animal*, *Mary saw her finger* does not entail *Mary saw her hand*, unlike *Mary saw her lamb* does entail *Mary saw an animal*. Thus, while meronymy is similar to hyponymy in that the part-whole relations define hierarchical distinctions in the vocabulary, it is fundamentally different in that meronyms and holonyms define distinct types of object that may or may not share any semantic properties: *a finger* is not a type of *hand*, but it does share properties with hands such as being covered in skin and made of flesh and bone; however, a *wheel* shares very little with one of its holonyms *car*, beyond being a manufactured object.

Saeed (2009) draws a comparison between meronymy and hyponymy. Hyponymy is always transitive, but meronymy may or may not be. A transitive example is: *nail* as a meronym of *finger*, and *finger* of *hand*. It is obvious that *nail* is a meronym of *hand*, for one can say *A hand has nails*. A non-transitive example is: *pane* is a meronym of *window* (*A window has a pane*), and *window* of *room* (*A room has a window*); but *pane* is not a meronym of *room*, for one cannot say *A room has a pane*. Or *hole* is a meronym of *button*, and *button* of *shirt*, but one wouldn't want to say that *hole* is a meronym of *shirt* (*A shirt has holes!*)

Meronymy does not have a straightforward logical definition in terms of sentence entailment, as hyponymy does. However, the relation does possess logical features, which are particularly manifest in connection with locative predicates. For instance, if X is a meronym of Y, then for an entity A, *A is in X* entails but is not entailed by *A is in Y*. For instance, a *cockpit* is part of an *aeroplane*, hence *John is in the cockpit* entails *John is in the*

aeroplane. For similar reasons, *John has a boil on his elbow* unilaterally entails *John has a boil on his arm*. However, there are too many exceptions for it to be possible to frame a straightforward definition on this basis: for instance, *The wasp is on the steering-wheel* does not entail *The wasp is on the car*, but rather, *The wasp is IN the car* (Cruse, 2000).

Indeed, proper entailment relations between sentences containing meronyms and their corresponding holonyms are difficult to describe, and while the definition given above is a reasonable approximation, it is not unproblematic. Cruse (1986) attempts to restrict the meronymy relation just to those connections between words that allow both the 'X is part of Y' and 'Y has X' paraphrases. For example, "the table-leg was damaged" entails that "the table was damaged". He points out that the reverse may not hold, i.e., the second sentence 'The table was damaged' may not refer to the leg; another part may be broken.

Even if one admits that both paraphrases must be true for a meronymic pair, several issues remain. For instance, while the pair of sentences *a husband is a part of a marriage* and *a marriage has a husband* appears to be quite acceptable, it is not immediately clear that *marriage* is a precise holonym of *husband*. Thus, it may be necessary to limit the relation to words that signify the same basic category of thing: concrete or abstract, which will result in distinct 'part of' relations depending on how a term is construed. So, *a chapter is part of a book = Books have chapters* if book is taken to be the abstract construal of structure, but not if it is taken to be the concrete object. Furthermore, it might be necessary to invoke notions like 'discreteness' in order to constrain the relation (Ibid).

For instance, *flesh* is a part of a *hand*, and *hands* have *flesh*, but are these words meronymous? *Flesh* is a substance and so not individuated and

if meronymy requires parts and wholes to be discretely identifiable, then the relationship would not hold of these terms. Again the problem of world-knowledge appears here, which tells us that fingers are prototypically parts of hands, versus word-knowledge: is it the case that the meaning of ‘finger’ necessarily contains the information that it forms part of a hand and thus that some aspect of the meaning of ‘hand’ is contained in the meaning of ‘finger’? If that were the case, how do speakers account for the lack of any such inference in extensions of the word to cover (e.g.) emerging shoots of plants (cf. *finger of asparagus*)? (Cann, 2011).

2.4.3.4 Antonymy

The term ‘antonymy’ is used in semantics to refer to the study of oppositeness of meaning (Crystal, 2008). Antonymy is more concerned with exclusion than with inclusion. Yule (1996) proposes that two forms having mutually opposite meanings are referred to as antonyms, whereas Lobner (2002) considers two phrases to be antonyms if they represent two opposites within a range of possible values. According to Parker and Riley (2005), two words are antonyms if their meanings change primarily in terms of the value assigned to a single semantic feature, such as *dead* and *alive*, *hot* and *cold*, *above* and *below* (Mehdi, 2008).

Although the term ‘oppositeness’ appears to encompass a variety of various sorts of relation, in general, antonymy is defined as a relationship of incompatibility between two terms with regard to some particular dimension of contrast. Certain words appear to have several antonyms, depending on the contrast dimension (*girl* has both *boy* and *woman*, depending on whether the contrast dimension is sex or age; *sweet* has both *bitter* and *sour*). Not every word has a clear antonym: *library*, *of*, and *corresponding* are three

examples of words that lack an obvious significant dimension of contrast and hence have difficult-to-identify antonyms. And even when an apparent dimension of contrast exists, antonyms are not always available: *angry*, for example, lacks an obvious antonym in English, despite the fact that the scale of *arousal* and *calmness* to which it belongs is well conceived. Another indication of antonymy's importance is the fact that many languages can generate antonyms morphologically. English does this well through the use of the prefix *un-*. For instance, *free* against *unfree*, *like* versus *unlike*, and *even* versus *uneven* (Riemer, 2010).

Cruse (2000) and Lyons (1995) take a comprehensive account of oppositeness, and antonymy is studied within their opposite taxonomies. Antonymy, or oppositeness of meaning, has long been recognised as a crucial semantic relationship. However, it has caused some confusion, partly because it has traditionally been seen as supplementary to synonymy and partly because most semanticists have failed to pay adequate attention to various types of oppositeness. Synonymy and antonymy are two very distinct types of sense relations. Perhaps the only sense relation that receives direct lexical recognition in daily language is oppositeness. As a result, it is likely intellectually primitive in some respects. To keep things simple, the term oppositeness is used in this section to refer not only to antonymy, but also to other distinct sorts such as: complementarity, reversives, and converseness.

Lyons (1995) states that the relation that is referred to as antonymy is expressed in English by the terms *big* and *small*. Antonyms are often gradable. Grading is intrinsically tied to the comparison procedure. Alternatively, the comparison may be implicit or explicit. Explicitly comparable sentences can be classified into two categories. (1) Two items

may be compared in terms of a certain property, with the one possessing this feature to a higher extent than the other, e.g. *Our house is bigger than yours.*

(2) Two states of the same entity can be compared in terms of the property being discussed: e.g. *Our house is bigger than it used to be.* Actual statements (when taken out of context) may be confusing as to which of the two sorts of explicit comparison are being made: For example, *Our house is bigger*, which is probably derived from a sentence of either kind by omitting the phrase or clause introduced by *than*. However, they remain explicitly comparative and can be read only if the other term is recoverable from the context.

However, Cruse (2000) claims that the most extensively studied opposites are undoubtedly antonyms. Antonyms are classified into numerous distinct categories. One of these has a fair claim to be the central variety. The following points are the types of antonymy which has been classified by Cruse (2000):

A. Polar Antonyms

The followings are examples of polar antonyms:

long: short fast: slow wide: narrow heavy: light

strong: weak large: small thick: thin high: low deep: shallow

The main diagnostic features of polar antonyms are as follows:

- i. Both terms are fully gradable for example: *very/slightly/a bit/too dead.*
- ii. They occur normally in the comparative and superlative degrees: *long, longer, longest; light, lighter, lightest*
- iii. They are incompatibles, but not complementaries. Hence, *It's neither long nor short* is not a contradiction (it might be of average length), nor is *It's either long or short* a tautology.

iv. Comparative forms stand in a converse relationship: specifically, if X and Y are (polar) antonyms, and A and B are nouns, then *A is X-er than B* entails and is entailed by *B is Y-er than A*. (*A is heavier than B* entails and is entailed by *B is lighter than A*.)

B. Equipollent Antonyms

In the case of equipollent antonyms, neither term is impartial (i.e. both are committed); hence, hotter implies ‘hot’ whereas colder implies ‘cold’. As a result, both of the following are odd:

(27a) *This coffee is cold, but it's hotter than that one.

(27b) *This coffee is hot, but it's colder than that one.

Equipollent antonym pairs typically denote sensations (*hot: cold, bitter: sweet, painful: pleasurable*), or emotions (*happy: sad, proud of: ashamed of*).

C. Overlapping Antonyms

With overlapping antonyms, such as *good:bad*, one member produces an impartial comparative, while the other produces a committed comparative:

(28a) *John is an excellent tennis player, but he is worse than Tom.

(28b) John is a bad tennis player, but he is better than Tom.

In this example, *good* yields a neutral how-question (*How good was the film?*), but *bad* produces a committed how-question (*How bad were the test results?*). Each pair of overlapping antonyms has an evaluative polarity inherent in its meaning: *good:bad, kind:cruel, clever:dull, pretty:plain, polite:rude*.

Antonymy relation is termed as gradable opposites by Lyons (1977), and it is informally discussed in terms of contrast. Therefore, if *John is tall*,

then *he is not small*. The senses of words contrast in a variety of ways. Typically, the fundamental difference is formed between gradable and non-gradable opposites. Adjectives are used to convey this sort of distinction. On one hand, gradable antonyms are instances of contraries that implicitly or explicitly invoke a field for grading, i.e. a comparison standard. In this regard, *John is tall* as a person does not imply that *he is tall* in comparison to buildings. Notably, the implicit scale must be the same as the one invoked for any antonym: *John is tall*, contrasting with *John is not small* for a human being, not *John is not small for a building*. Other instances of gradable antonyms are *cold/hot*, *good/bad*, and *old/young* (Cann, 2011).

Complementarity relation exists between such pairs of terms as *single: married*, *male: female*, and so on. It is typical of these pairings of lexical elements that denial of one entails assertion of the other and assertion of one involves denial of the other: $* > y$ and $y > *$. Thus, the fact that '*John is not married*' indicates that '*John is single*', and the fact that '*John is married*' implies that '*John is not single*'. Only the second of these implications remains true for those pairs for which the word 'antonymy is reserved (e.g. *good: bad*, *high: low*). '*John is good*' implies the denial of '*John is bad*'; but '*John is not good*' does not imply the assertion of '*John is bad*' (Lyons, 1995).

Cruse (2000) asserts that complementarity exhibits inherent binarity in its purest form. The following pairs represent typical complementaries: *dead: alive*, *true: false*, *obey: disobey*, *inside: outside*, *continue (V.ing): stop (V.ing)*, *possible: impossible*, *stationary: moving*, *male: female*. The parameters of the opposition divide a specific conceptual area into two mutually exclusive compartments, with no possibility of 'sitting on the

fence'. If anything falls into one compartment, it cannot fall into the other, and if nothing falls into one compartment, it must fall into the other.

Cann (2011) claims that complementary relation is referred to as non-gradable opposites by some authors. Non-gradable antonyms, as their name implies, are absolutes that split the discourse domain into discrete classes. Thus, the affirmation of one antonym entails the negation of the other, and the negation of one necessitates the affirmation of the other. These non-gradable opposites include pairings such as *male/female*, *man/woman*, and *dead/alive*.

Different types of antonymous relationships exist. *On* and *off* are binary opposites: an electric light, radio, or television set is either *on* or *off*; there is no in-between. This type of binary opposite is called antonymy or non-gradable opposite by some scholars. Other binary pairs include *open/shut*, *dead/alive*, and *awake/asleep*. *Old* and *young* are non-binary antonyms, just as *wide* and *narrow* are. They are non-binary opposites on a scale that contains several intermediate terms: *Mr Adams may be neither old nor young*, and *the road may be somewhere in between wide and narrow*. Non-binary antonyms are also called polar antonyms and gradable antonym. Some semanticists use the term 'complementary antonyms' in place of 'binary antonyms' and 'contrary' instead of 'non-binary').

Non-binary antonyms can be easily modified: *very old*, *rather young*, *rather wide*, *extremely narrow*, and so on. Logically binary antonyms do not take modifiers—an organism is either *dead* or *alive*, a *door* is either *shut* or *open*, a *floor* is either *clean* or *dirty*, and a *person* is either *asleep* or *awake*. Adjectives that are not binary are also gradable. For example, one can say that *something is very long*, *rather short*, *quite strong*, and *somewhat weak*. Each such expression constitutes a measurement against some norm or

standard. The standard may or may not be explicit, as it is in the majority of common language use. Arguments about whether *something is really soft*, for example, are frequently the result of a failure to establish a standard. Of course, establishing a standard for descriptive adjectives such as *long*, *heavy*, and *expensive* is easier than for evaluative adjectives such as *pleasant*, *clever*, or *tiresome* (Kreidler, 1998).

Lyons (1977) proposes a new term, incompatibility, to refer to a non-binary relation. Certain contrastive gradable antonyms generate scales in which some characteristic quality increases (decreases) from one end of the scale to the other. In terms of the property of heat or temperature, the following scales are found: *freezing*, *cold*, *cool*, *lukewarm*, *warm*, *hot*, and *boiling*. There are even more forms of incompatible relations, such as those between ranks (e.g., *private (soldier)*, *corporal*, *sergeant*, *staff sergeant*, *warrant officer*, *lieutenant*, *major*, etc.) (Cann, 2011).

The fourth opposite relation that is commonly defined in terms of converse is the one that exists between *buy* and *sell*, or between *husband* and *wife*. The term *buy* is the antonym of *sell*, and *sell* is the antonym of *buy*. While it is necessary to distinguish between antonymy and converseness, there is a parallelism between the two relations. As NP1, bought NP3, from NP2, implies, and is implied by, NP2, sold NP3, to NP1, so NP1, is bigger than NP2, implies, and is implied by, NP2, is smaller than NP1. In both circumstances, the lexical replacement of one term for its antonym or converse results in a syntactic transformation that permutes the noun phrase pair, NP1, and NP2, as well as some additional 'automatic' changes in the selection of the suitable preposition. It should be noted that this 'permutational' property also applies to the relationship between corresponding passive and active sentences (Lyons, 1995).

Cruse (2000) refers to converse relation as a sort of directional opposites. Additionally, he believes that the converse relation is a form of synonymy. Both points of view have valid justifications. Consider the pair *above: below*, as well as three items arranged in the following manner:

A

B

C

The relationship between A and B might be represented in two ways: either A is above B or B is below than A. The logical equivalence of these two terms is what characterises the *above* and *below* as converses. However, because both are capable of describing the same arrangement, a unique case among opposites, there is some utility in considering them as synonyms constrained by the order of their arguments. Other converses pairings with a strong directional component include *precede: follow*, *in front of: behind*, and *lend: borrow* (the object borrowed moves away from or toward the subject of the verb), *bequeath: inherit*, *buy: sell*. Although the directionality of some contradictory pairings is difficult to distinguish (*husband: wife*, *parent: offspring*, *predator: prey*), it is not entirely absent. Converses may be described as **two-place** if the relational predicate they denote has two arguments (e.g. *above: below*) and **three-place** if it has three (e.g. *lend: borrow: A borrowed B from C/ C lent B to A*); *buy: sell* are arguable **four-place** converses: *John sold the car to Bill for £5,000/ Bill bought the car from John for £5,000*.

The conversed opposite words have a reciprocal relationship with one another. There are further instances in which two terms are opposite to each other, for example, reciprocal words. They include sets of words which are reciprocal with one another. The words "give" and "receive" have a

reciprocal relationship with one another. One might say "*John gave Mary a book*" or "*Mary received a book from John*" The meaning is the same since the two actions are reciprocal. Additionally, "*John taught Bill*" or "*Bill learned from John.*" can be used. Teaching and learning are reciprocal actions (Larson, 1984).

Cruse (2000) defines reversives as a subcategory of directional opposites that includes straightforward directions such as *up: down*, *forwards: backwards*, *into: out of*, *north: south*, and *top: bottom* (in Cruse (1986), this group is referred to as antipodals). Reversives are distinguished by the fact that they denote movement in the opposite direction, between two terminal states. All of them are verbs. The simplest exemplars imply literal movement in opposing directions: *rise: fall*, *advance: retreat*, *enter: leave*. The reversivity of more abstract instances is indicated by a change (transitive or intransitive) in the opposite direction of two states: *tie: untie*, *dress: undress*, *roll: unroll*, and *mount: dismount*.

2.4.3.5 Polysemy

Polysemy, also called polysemia, is a language feature in which a word has several meanings. The name comes from Greek poly ‘many’ and semy ‘meaning’. A word, also called a polyseme, which has more than one distinct but related meanings, is said to be polysemous or polysemic. For example, the word *head* displays a number of meanings. In *She nodded her head*, it refers to an object: part of the body above the neck. In *She sat at the head of the table*, it refers to location: the beginning or end of something. In *She is a good head taller than her sister*, it refers to a measure: using a person's head as a unit to measure size. In *The thought never entered my head*, it refers to an abstract entity: the mind. In *She resigned as head of*

department, it refers to rank: a person who is in charge of a group of people or an organization. In *Their head office is in New York*, it refers to importance: the main office of a company. As can be seen, the multiple senses which the word *head* has are related in some way: the first three are concrete while the last three are abstract (Hamawand, 2016).

Some lexicographers limit the term polysemy to words having several meanings belonging to the same lexical class; others use it to refer to terms with different readings belonging to various classes. The second type of polysemy is common and regular in English, where a large number of nouns can serve as verbs. *Bottle* is an example of a noun from which a verb meaning ‘to put into a bottle’ was derived. Polysemy requires the reader or listener to identify the word form's intended context-appropriate meaning (Fellbaum, 2015).

Geeraerts (2017) takes an alternative approach to polysemy, saying that the meanings of words are notoriously context-dependent: it is only a slight exaggeration to say that the semantic contribution a word makes is different for every distinct context in which it occurs. But the difference between two contextually-induced readings can range from relatively slight, as in *My cousin married a policeman* and *My cousin married an actress* (‘male cousin’ vs. ‘female cousin’), to rather major, as in *elastic band* and *wind band*, with perhaps *a coat of paint* and *a coat of many colours* as intermediate examples.

Cruse (2000) defines systematic polysemy as instances of polysemy that are systematic in the sense that the relationship between the readings recurs throughout a range of lexical items that is at least partially predictable semantically. Similarly, Fellbaum (2015) uses regular polysemy to refer to the same case of polysemy. Certain polysemy appears random, and is

frequently the result of unaware sound or meaning shifts by modern speakers. For instance, the two meanings of *bank* ('financial institution' and 'slope by a body of water') derive from the same Germanic root **banki-* ('height'); both *river banks* (and *sandbanks*, etc.) are defined by their elevation relative to their immediate surroundings. In other instances, various senses of a word form are strongly intertwined, as in the case of *book*, which refers to both the printed thing and its contents. This type of polysemy is frequently systematic and encompasses all or the majority of members of a class. Thus, several words pertaining to publications (*newspaper, magazine, journal*) have the same two meanings as the word *book*. Similarly, several nouns related to *fruit, vegetables, and animals* have distinct biological and food meanings (*apple, eggplant, chicken*). Verbs indicating a change of status or motion, such as *break, crack, and roll, drop*, exhibit regular causative-inchoative readings (*The heat broke/cracked the plate/The plate broke/cracked; He rolled/dropped the ball/The ball rolled/dropped*).

Metonymy is a special case of regular polysemy in which one reading of a polysemous word refers to the whole and the other to a part, as with the 'tree-wood' readings of *beech, maple, oak*, and so on, or where one reading refers to an institution and the other to the people associated with it (*The White House denied the rumor of the President's affair with an intern*). Regular polysemy is productive, and speakers, when encountering a new word, readily encode and decode all its related meanings. It shows how the different readings of polysemous words are conditioned by their contexts. For example, the adjective "fast" means different things in phrases like "fast road," "fast car," "fast food," and "fast typist." Speakers have no trouble

interpreting the meanings of the adjectives because they are constrained by the semantics of the nouns that they modify (Fellbaum 2015).

Cann (2011) asserts that polysemy may involve a number of different properties: *change of syntactic category* (29); *variation in valency* (30); and *subcategorisation properties* (31).

(29a) Rambo found the hammer (noun).

(29b) Rambo hammered (verb) the nail into the tree.

(30a) The candle melted.

(30b) The heat melted the candle.

(31a) Rambo forgot that he had buried the cat. (clausal complement – factive interpretation)

(31b) Rambo forgot to bury the cat. (infinitival complement - non-factive interpretation)

2.4.3.6 Homonymy

Homonymy refers to the relationship between two words that sound alike but have distinct meanings, or the relationship between two words that have the same spelling but distinct meanings. Thus, homonymy falls into two types: homophony and homography. Homophony is the relation between two or more words which are pronounced alike but have different spellings and meanings, as in *some/sum* /sʌm/, *meat/meet* /mi:t/, *pale/pail* /peil/, *right/write* /rait/, *sew/so* /səʊ/, *flour/ flower* /flaʊə/, and so on. In a dictionary, homophones are listed as separate entries. Homography is the relation between two or more words which are spelt alike but have different meanings and different pronunciations, as in *bow* (to move your head forwards and downwards) /bau/ vs. *bow* (a weapon used for shooting arrows) /bəʊ/. Other examples include *wind* (air blowing) /wind/ vs. *wind*

(make a clock work) /waind/ , bass (tone) /beis/ vs. bass (fish) /bas/, tear (rip) /tea/ vs. tear (liquid from the eye) /tiə/ , refuse (reject) /rifju:z/ vs. refuse (waste material) /reffu:s/, and so on. In a dictionary, homographs are listed as separate entries (Hamawand, 2016). More examples of homonymy of homophones are presented between two lexical pairs ‘blue and blew’, ‘censor and sensor’, and ‘right’ and ‘write’, as in ‘Rita's favorite color is **blue**.’ and ‘Samuel picked a tissue and **blew** his nose in the cafe.’ ‘The film got approval from the **censor** board.’ and ‘The employees found **sensor** water taps and sanitizer disposal in the office building.’ The last example is ‘There is no **right** way to **write** a great novel.’ (Hinders, 2023)

According to Cann (2011), homonymy involves the formal identity of words with different meanings (i.e., interpretations with divergent extensions and senses), a phenomenon Weinreich (1963) refers to as "contrastive ambiguity." Often, the term homonymy is reserved for words that are both homophones and homographs, but it is as frequently used for either relation. Homonymy can be complete or partial: complete means that all forms of the lexeme are identical in both senses, as is the case with the noun *punch* (the drink or the action); partial means that only some forms of the lexeme are identical in both senses, as is the case with the verb *punch* and its corresponding noun. Homonymy leads to the sort of ambiguity that is easily resolved in discourse context, whether locally through syntactic disambiguation (32a), the context provided within a sentence (32b) or from the topic of conversation (32c).

(32a) His illness isn't terminal.

(32b) My terminal keeps cutting out on me.

(32c) I've just been through Heathrow Airport. The new terminal is rubbish.

In general, there is very little to say about homonymy. It is random and generally only tolerated when the meanings of the homonyms are sufficiently semantically differentiated as to be easily disambiguated (Ibid).

Although homonymy and polysemy are not sense relations in the same way as those discussed previously in that they do not structure the lexicon in systematic ways, they play an important role in discussions of word meaning and have contributed significantly to the development of theories of lexical semantics over the last two decades of the twentieth century. (Cann, 2011)

When a term is ambiguous, it's possible that there's an intelligible relation between the interpretations, or it might appear to be random. For example, few people investigate the correlation between *bank* (money) and *bank* (river), although the connection between *bank* (money) and, say, *blood bank* is obvious (both are used to store something precious), as is the connection between *river bank* and *cloud bank*. In the example of *bank* (river) and *bank* (money), the word *bank* demonstrates homonymy, or that it is homonymous, and that the two interpretations are homonymous. It is natural to assert in such instances that two distinct words share the same formal features (phonological and graphic). Of course, the degree to which two readings are related is a continuous scale, and there is no clear dividing line between relatedness and unrelatedness; also, various speakers have varying degrees of relatedness judgments. However, this does not render the distinction between polysemy and homonymy useless, because there are many clear cases. It's worth noting that homonymy is only achievable with established readings. It's generally sensible to reserve the word polysemy for established senses as well (Cruse, 2000).

Hamawand (2016) claims that both polysemy and homonymy deal with numerous meanings of the same phonological form, but polysemy deals with forms that have two or more related meanings, and homonymy deals with forms that have two or more unrelated meanings. Saeed (2009) argues that there is a long-standing contrast between homonymy and polysemy in lexicology. This distinction is critical for lexicographers when designing their dictionaries, as polysemous senses are combined into a single lexical item, whereas homonymous senses are given separate entries. Lexicographers frequently use ‘relatedness’ criterion to denote polysemy. These criteria include speakers’ intuitions, and what is known about the historical development of the items. This distinction can be seen in action in the *Collins English Dictionary*, where, as provided below, several senses of *hook* are treated as polysemy and hence grouped together under a single lexical entry:

hook (hak) *n.* **1.** a piece of material, usually metal, curved or bent and used to suspend, catch, hold, or pull something. **2.** short for fish-hook. **3.** a trap or snare. **4.** *Chiefly U.S.* something that attracts or is intended to be an attraction. **5.** something resembling a hook in design or use. **6.a.** a sharp bend or angle in a geological formation, esp. a river. **b.** a sharply curved spit of land. **7. Boxing.** a short swinging blow delivered from the side with the elbow bent. **8. Cricket.** a shot in which the ball is hit square on the leg side with the bat held horizontally. **9. Golf.** a shot that causes the ball to swerve sharply from right to left. **10. Surfing.** the top of a breaking wave, etc.

On the other hand, as seen below, two distinct sets of hooker senses are classified as unrelated, implying homonymy, and assigned two distinct entries:

hooker1 (3hakâ) *n.* **1.** a commercial fishing boat using hooks and lines instead of nets. **2.** a sailing boat of the west of Ireland formerly used for cargo and now for pleasure sailing and racing.

hooker2 (3hakâ) *n.* **1.** a person or thing that hooks. **2.** *U.S. and Canadian slang.* **2a.** a draught of alcoholic drink, esp. of spirits. **2b.** a prostitute. **3.** *Rugby.* the central forward in the front row of a scrum whose main job is to hook the ball.

Cann (2011) believes that homonymy may be argued to imply actual ambiguity, whereas polysemy implies some degree of vagueness or underspecification in terms of the meanings a polyseme has in various contexts. The classic example of a polysemous word is *mouth*, which may refer to the mouth of a human or animal or to various other types of opening, such as a bottle or, more distantly, a river. Unlike homonymy no notion of contrast in sense is involved and polysemes are considered to have an apparently unique basic meaning that is modified in context. The word *bank* is both a homonym and a polyseme in its meaning of ‘financial establishment’ between its interpretation as the institution (*The bank raised its interest rates yesterday*) and its physical manifestation (*The bank is next to the school*). One of the distinctions between polysemy and homonymy is that, unlike homonyms, the several senses of polysemes are not ‘suppressed’ in context, but rather one component of sense is foregrounded or highlighted. Different senses are present in the discourse and can be evoked by other words:

(33a) Mary tried to jump through the window (aperture), but it was closed (aperture/physical object) and she broke it (physical object).

(33b) *Mary walked along the bank of the river. It had just put up interest rates yet again.

2.4.3.7 Metonymy

Metonymy is a type of semantic change in which the meaning of a word or group of words is changed by using it for another word with which it is connected, e.g. the ‘bar’ to refer to lawyer’s ‘profession’ or ‘kettle’ to refer to ‘water’ (in the kettle is boiling). Metonymy has alternatively been defined as the process of indirectly naming something by referring to only one of its attributes. For example, ‘*The White House has released a statement*’; by this example, it definitely does not mean the structure itself, but rather the ‘US President’ or his ‘staff’ (the people who work there). Similarly, for many years, people have said ‘*Anfield for Liverpool Football Club*’. An army officer defending a building may say something like ‘*I want four rifles on the roof*’ (Al-Sulaimaan, 2011).

Similarly Jurafsky and Martin (2000) states that metonymy is the use of one aspect of a concept or entity to refer to other aspects of the entity, or to the entity itself. Thus, metonymy is performed when one uses the phrase *the White House* to refer to the administration whose office is in the White House. Other common examples of metonymy include the relation between the following pairings of senses:

- Author (*Jane Austen wrote Emma*), Works of Author (*I really love Jane Austen*)
- Animal (*The chicken was domesticated in Asia*), Meat (*The chicken was overcooked*)
- Tree (*Plums have beautiful blossoms*), Fruit (*I ate a preserved plum yesterday*)

Cruse (2000) refers to metonymy as the second primary approach for extending the meanings of words. It is responsible for a great proportion of the cases of so-called regular polysemy. Despite the fact that some

extensions cannot be defined because the end-point may have been achieved by either route, metonymy and metaphor are quite distinct processes of extension. ‘*The head of the bed*’ and ‘*the back of the chair*’ are two examples of this phenomenon. Basically, a clear distinction is made between metaphor and metonymy, stating that metaphor is based on resemblance, whilst metonymy is based on ‘contiguity,’ which can be glossed without too much distortion as ‘association.’ Metaphor is the act of using one domain as an analogical model to shape the conception of another domain; in other words, the process requires two (at the very least) separate conceptual domains. On the other hand, metonymy is based on a relationship (real, literal) between two components inside a single domain (and no restructuring is involved). Consider the well-known *sandwich ham* case:

(34). The ham sandwich wants his coffee now.

This is, of course, ‘cafe language’, but is perfectly intelligible to all. The domain invoked is a cafe, or similar establishment, where a customer is distinguished by the fact that he has ordered a ham sandwich. This fact associated with the customer serves as a convenient identifying device.

Cruse (2006) asserts that metonymy is a variety of figurative use of language. What distinguishes a metonymic use of an expression is the relationship between its figurative meaning and its literal meaning. Metonymy involves a relation of association. Take the example ‘*England were beaten 4–3 by Germany*’. In their default uses, the words *England* and *Germany* denote countries, but here they are used to refer indirectly to sporting teams representing those countries. The sorts of associative relations that support metonymy are many and varied. There are certain highly recurrent types of metonymy. The following are some illustrative

examples (*X via Y* means that some entity X is referred to using an expression that normally refers to Y) (Cruse, 2000).

(i) CONTAINER for CONTAINED

(35). The kettle's boiling.

(36). Room 44 wants a bottle of champagne.

(37). The car in front decided to turn right.

(ii) POSSESSOR for POSSESSED/ATTRIBUTE

(38). Why is John not in Who's Who?

(39). A: John Smith.

B: That's me!

(40). Where are you parked?

(41). Shares fall 10 per cent after Budget.

(42). He's not in the phone book.

(iii) REPRESENTED ENTITY for REPRESENTATIVE

(43). England won the World Cup in 1966.

(44). The government will announce new targets next week.

(iv) WHOLE for PART

(45). I'm going to wash the car/fill up the car with petrol.

(46). Do you need to use the bathroom?

(47). Jack noticed several new faces tonight

(v) PART for WHOLE

(48). There are too many mouths to feed.

(49). What we want are more bums on seats.

(50). Jack noticed several new faces tonight.

(vi) PLACE for INSTITUTION

(51). The White House denies the allegations.

(52). The Palace defends the sackings.

CHAPTER THREE

THEORIES OF COGNITIVE SEMANTICS

3.1 Introduction

In this chapter, the second part of the theoretical background is presented. It presents a brief account of cognitive semantics. It focuses on the origin, development, and the contributions of this framework, i.e. cognitive semantics. Moreover, this chapter presents the essential pillars that cognitive semantics undertake to construct meaning in the conceptual structure. Each assumption presents an aspect of this framework to explain the nature of conceptual structure, meaning construction, meaning embodiment, and conceptualisation of meaning.

Furthermore, this chapter introduces three main theories of cognitive semantics, namely: image schema theory, mental space theory, and construal theory. These theories are complementary to each other in terms of meaning constructions. Thus, image schema is responsible for cognitive embodiment as meaning is embodied to certain semantic structures in the mind. Besides, mental space theory is another theory for meaning construction, as it seeks to explain how people mentally organize and structure information during the process of perceiving language and constructing meaning. Finally, construal theory is a cognitive framework that employs different aspects of cognitive theories to construe or conceptualise meaning.

3.2 Cognitive Semantics

Cognitive semantics began in the 1970s as a reaction to the objectivist worldview assumed by the Anglo-American philosophical tradition and the similar approach established within formal linguistics, truth-conditional

semantics. In contrast to this perspective, cognitive semantics views linguistic meaning as a manifestation of conceptual structure: the nature and organisation of mental representation in all its complexity and diversity, which distinguishes it as a separate approach to linguistic meaning. Leonard Talmy, one of the original pioneers of cognitive linguistics in the 1970s, describes cognitive semantics as follows: '[R]esearch on cognitive semantics is research on conceptual content and its organization in language' (Talmy 2000: 4). Evans and Green (2006) view cognitive semantics as an approach based on a collection of ideas drawn from other theories like cognitive psychology, cognitive anthropology, etc..

Taylor (2006) states that cognitive semantics is a subfield of the broader field of 'cognitive linguistics'. On a broad level, any method that regards language as residing in the minds of its speakers and describes language as a hypothesis about a speaker's mental state qualifies as 'cognitive'. Chomsky's career has been devoted to pursuing cognitive linguistics on this broad understanding. On the narrower and more specialised interpretation, cognitive linguistics refers to a movement that emerged in the late 1970s and early 1980s, mainly as a reaction to certain tendencies of Chomskyan, and, more generally, formalist linguistics. In this narrow sense, the linguists who were prominently associated with the emergence of cognitive linguistics were George Lakoff, Ronald Langacker, and Leonard Talmy.

Similarly, Evans and Green (2006) believe that cognitive semantics, like the larger enterprise of cognitive linguistics, is not a single unified framework. Those researchers who identify themselves as cognitive semanticists typically have a diverse set of foci and interests. However, there are a number of principles that collectively characterise a cognitive

semantics approach. Although cognitive semantics began life as a reaction against formal theories of meaning deriving from twentieth-century analytic philosophy and objectivism, the guiding principles adopted within cognitive semantics open up a range of phenomena for direct investigation that transcend the initial point of departure for research in cognitive semantics.

Lemmens, (2015) believes that the term ‘cognitive semantics’ is somewhat misleading, as it may suggest that semantics is a separate module within the linguistic model, next to ‘cognitive syntax’, ‘cognitive morphology’, ‘cognitive pragmatics’, etc. However, cognitive linguistics does not adopt a modular view on language: all structures in language, ranging from morphemes to words to syntactic patterns, are considered as inherently meaningful and, moreover, as being of the same kind, i.e. symbolic form-meaning pairings, called “symbolic units” by (Langacker, 1987)

One of the distinguishing contributions of cognitive semantics pertains to the role of the speaker in describing scenes and determining meanings, employing the conventional means of language. Pre-cognitive theories of meaning place an emphasis on objectivism, the belief that the purpose of language is to describe the world's states of affairs. The meaning of a linguistic expression is seen as an objective reflection of the external world. According to this theory, the speaker has no role in developing the language. In cognitive semantics, the emphasis is laid on subjectivism, the doctrine that language does not refer to an objective reality, but to concepts in the mind of the speaker. The meaning of a linguistic expression is seen as relating to a concept derived from bodily experience. In this view, the emphasis is very much on the role of the speaker in shaping the language (Hamawand, 2016).

3.2.1 Guiding Principles in Cognitive Semantics

Cognitive semantics is founded on fundamental assumptions in order to undertake a constructive debate on linguistic meaning. Each assumption is discussed in detail below. These principles can be viewed as outcomes of the two key commitments: the ‘Generalisation Commitment’ and the ‘Cognitive Commitment’. The embodied cognition thesis is also one of these assumptions.

1. Conceptual Structure is Embodied

The nature of the relationship between conceptual structure and the external world of sensory experience is a core issue for cognitive semanticists. The embodied cognition thesis is one idea that has arisen in an attempt to explain the nature of conceptual organisation through interaction with the physical world. According to this thesis, the nature of conceptual organisation is derived from bodily experience, and hence a significant component of conceptual structure is the bodily experience with which it is associated (Evans and Green, 2006).

An example of the way in which bodily experience gives rise to meaning concepts is the concept of CONTAINMENT, the act of keeping an entity in an enclosed space and consequently restricting its movement. The concept arises as a result of the properties of both the enclosed space and the human body. The concept reflects a physical relationship in which embodied experience interacts with enclosed spaces. The concept associated with containment is an instance of what cognitive semanticists call an image schema, a conceptual representation which emerges from human bodily interaction with the world. It is a dynamic pattern which is grounded in human bodily movements through space. The containment schema gives rise

to abstract states conceived as a container, which is shown by the use of the prepositions *in*, *out of* and *into*, as in *He is in debt*, *He is out of work* and *He fell into decay*. These bodily experiences give rise to the conceptual structure, or the image schema, of containment, which in turn projects the conceptual domain of STATES, to which concepts like debt, work and decay belong. The process derives the conceptual metaphor STATES ARE CONTAINERS (Hamawand, 2016).

Evans and Green (2006) believe that image-schematic concept is one of the ways in which bodily experience gives rise to meaningful concepts in the cognitive model. While the notion CONTAINER is grounded in the immediately embodied experience of dealing with bounded landmarks, the image schematic conceptual structure may also provide more abstract meanings. For example, consider the following examples from Lakoff and Johnson (1980: 32):

- (53) a. He's *in* love.
 b. We're *out of* trouble now.
 c. He's coming *out of* the coma.
 d. I'm slowly getting *into* shape.
 e. He entered a state *of* euphoria.
 f. He fell *into* a depression.

Lakoff (1987) and Johnson (1987) both argue that examples like the ones in (53) are licensed by the metaphorical projection of the CONTAINER image schema onto the abstract conceptual domain of STATES, to which concepts like LOVE, TROUBLE and HEALTH belong. The results in the conceptual metaphor STATES ARE CONTAINERS. The idea behind metaphorical projection is that meaningful structure from bodily experience gives rise to concrete concepts like the CONTAINER image schema, which

in turn serves to structure more abstract conceptual domains like STATES (Evans and Green, 2006).

2. Meaning is Motivated

According to precognitive accounts of meaning, a linguistic expression possesses both form and meaning, but their relationship is arbitrary or unmotivated. There is no inherent reason for associating a specific language form with a certain meaning. Arbitrariness is the phenomenon where the form of a sign bears no resemblance to its referent. There is no way of predicting the meaning of a linguistic expression by relying on its form. Cognitive semantics responds to this point by assuming that the relationship between the form and meaning of a language expression is frequently motivated or inseparable. Motivation is the psychological factor that determines the speaker's selection. The choice of the form of a linguistic expression is largely motivated by the meaning which the speaker plans to convey, which in turn is motivated by the communicative purpose. This entails that form is produced with the intention of symbolising meaning. The selection of two language terms is not arbitrary. Semantic factors motivate linguistic differences. Each linguistic structure carries a distinct meaning structure (Hamawand, 2016).

An example of the way in which the form of a linguistic expression is motivated by meaning is the concept of iconicity, the phenomenon where the form of a sign bears some resemblance to its meaning, or where the structure of language bears similarity to conceived reality. According to Generative Linguistics, the two grammatical sentences *He smeared the wall with paint* and *He smeared paint on the wall* are derived from the same underlying structure, and so are regarded as syntactic paraphrases. According to

Cognitive Linguistics, none of the two grammatical sentences is derived from the same underlying structure nor is it considered a syntactic paraphrase. They have dissimilar syntactic structures and so have dissimilar semantic values. The two sentences share the same semantic content, but that content is construed differently by the speaker. The first sentence implies that *the entire wall is painted*. This is reflected by the fact that *the wall*, being a direct object, is close to the verb. The second sentence implies that *just a part of the wall is painted*. This is reflected by the fact that the wall is separated from the verb by a preposition (Ibid).

3. Meaning is Dynamic

According to pre-cognitive explanations of meaning, the meaning of a linguistic expression is more or less constant or inflexible, in the sense that it cannot be changed to accommodate new experiences. It is based on the classical or check-list approach to linguistic meaning. According to this theory, humans categorise concepts by means of necessary and sufficient conditions. In contrast to this assertion, Cognitive semantics assumes that the meaning of a linguistic expression is dynamic and flexible, that it may change in response to new experiences. One compelling reason for this is the emergence of novel meanings. This relates to creativity, the capacity of language to express novel meanings. Creativity manifests itself in two ways. One is language users' capacity to invent new forms for expressing novel ideas. Due to the fact that cultures develop, there is always a need for new meanings to be expressed in language. The other is language users' capacity to expand existing forms to incorporate new meanings. As a means of expressing needs, language extends to cope with the constant changes in the

circumstances language users live through, and deal with the new experiences they encounter in life. The semantic structure of any linguistic expression is thus not rigid; it takes on new meanings and is continuously extending (Hamawand, 2016).

An example of the way in which a linguistic unit demonstrates flexibility is manifested by the concept of polysemy, the phenomenon where a linguistic expression acquires multiple meanings. The preposition *on* is dynamic in the sense that it can conceive a spatial relation differently. In *The camera is on the table*, the two objects are in physical contact, with the camera placed above the table. In *The fly is on the ceiling*, the two objects are in physical contact but the relationship between them is unusual because the fly is placed beneath the ceiling. In *The painting is on the wall*, the two objects are in physical contact, with the wall placed behind the painting. In *The leaves are on the tree*, the two objects are in physical contact, with the leaves covering the tree. In *The writing on the paper is clear*, the paper is construed as a background against which the writing is displayed, which is foregrounded. In all the examples mentioned so far, the relationship between the two objects is one of physical support. In *The house is on fire*, the schema metaphorically extends to an abstract domain, where *fire* is conceived as *a place* (Ibid).

4. Semantic Structure is Conceptual Structure

Evans and Green (2006) believe that this principle asserts that language refers to concepts in the mind of the speaker rather than to objects in the external world. In other words, semantic structure (the meanings conventionally associated with words and other linguistic units) can be equated with concepts in the mental structure. However, the assertion that

semantic structure is comparable to conceptual structure does not imply that the two are synonymous. Rather than that, cognitive semanticists assert that the meanings of words represent just a subset of possible concepts. For example, there must be a concept for the place on people's faces below their nose and above their mouth where moustaches go. People must have a concept for this part of the face in order to understand that the hair that grows there is called *a moustache*. However, as Langacker (1987) points out, there is no English word that conventionally encodes this concept. It follows that the set of lexical concepts is only a subset of the entire set of concepts in the mind of the speaker.

There are two important caveats that follow from the principle that semantic structure represents a subpart of conceptual structure. To begin, it is critical to emphasise that cognitive semanticists do not assert that language is exclusively related to concepts inside to the speaker's mind. This would result in a sort of subjectivism at its most extreme, in which concepts are separated from the world to which they refer to. Cognitive semantics therefore steers a path between the opposing extremes of subjectivism and the objectivism encapsulated in traditional truth-conditional semantics by claiming that concepts relate to lived experience (Evans and Green, 2006).

Consider an example about the concept BACHELOR. This concept, which is traditionally defined as an 'unmarried adult male', is not isolated from ordinary experience because we cannot in fact apply it to all unmarried adult males. It is clear that some adult males are ineligible for marriage due either to vocation or to sexual preference. It is for this reason that people would find it odd to apply the term *bachelor* to either the Pope or a homosexual male, even though they both, strictly speaking, meet the 'definition' of BACHELOR. The second caveat concerns the notion of

semantic structure. It is assumed so far that the meanings associated with words can be defined: for example, BACHELOR means ‘unmarried adult male’. However, word meanings, which are called lexical concepts, cannot straightforwardly be defined. Indeed, strict definitions like ‘unmarried adult male’ fail to adequately capture the range and diversity of meaning associated with any given lexical concept. For this reason, cognitive semanticists reject the definitional or dictionary view of word meaning in favour of an encyclopaedic view (Ibid).

5. Meaning Representation is Encyclopaedic

The central notion of this principle is that semantic structure is encyclopaedic in nature. This means that words do not represent neatly packaged bundles of meaning (the dictionary view), but serve as ‘points of access’ to vast repositories of knowledge relating to a particular concept or conceptual domain (e.g. Langacker 1987). This idea is illustrated in the previous assumption that refers to the concept BACHELOR. Indeed, it is not only known that certain kinds of unmarried adult males would not normally be described as bachelors. It is ‘encyclopaedic’ knowledge of this kind that allows the listener to interpret this otherwise contradictory sentence:

(54). ‘Watch out Jane, your husband’s a right bachelor!’

On the face of it, identifying Jane’s husband (a married man) as a bachelor would appear to be contradictory. However, given our cultural stereotype of bachelors, which represents them as sexual predators, it is understood that the utterance in (54) as a warning issued to *Jane* concerning her husband’s fidelity. As this example illustrates, the meanings associated with words often draw upon complex and sophisticated bodies of knowledge (Evans and Green, 2006).

Cognitive semantics believes that the semantic content of a verbal utterance is broad in scope, a view referred to as the encyclopaedic view. A linguistic expression's meaning cannot be understood apart from the huge store of encyclopaedic information to which it is related. Encyclopaedic knowledge refers to the structured body of non-linguistic knowledge to which a linguistic expression such as a word potentially provides access. In the description of a word, it is not just the general definition that counts, but also the actual circumstance in which it is used and the complete information which it contains. Encyclopaedic knowledge is modelled in terms of a number of constructs such as the domain, the cognitive model and the idealised cognitive model (Hamawand, 2016).

An example of the way in which linguistic expressions differ relying on encyclopaedic knowledge is shown by the concept of domain, a coherent body of conceptual content which serves as an essential background for some individual concepts. The verbs *boo*, *cheer*, *groan*, *scream* and *sob* gather under the domain of *noise*, but they manifest specific differences. The verb *boo* means 'to give a loud shout of disapproval', as in *The crowd booed when the player was sent off the field*. The verb *cheer* means 'to give a loud shout of approval', as in *The supporters cheered the president at the end of the speech*. The verb *groan* means 'to make a long deep sound showing great pain or unhappiness', as in *He lay on the floor groaning with pain*. The verb *scream* means 'to give a loud high cry showing fear, excitement or anger', as in *The girl screamed for help when the thief pulled out a knife*. Finally, the verb *sob* means 'to cry noisily taking in deep breaths', as in *I found her sobbing in the bedroom because she'd broken her doll* (Hamawand, 2016).

6. Meaning Construction is Conceptualization

This section digs deeper into the process of meaning construction. This cognitive semantics principle shows that language does not encode meaning. Rather than that, words (and other linguistic units) serve as 'prompts' for meaning construction. Meaning is constructed conceptually, according to this view: meaning construction is equated with conceptualisation, a dynamic process in which language units serve as prompts for a variety of conceptual operations and the recruitment of background knowledge. As a result of this approach, meaning is a process rather than a discrete 'thing' that can be 'packaged' by language. Meaning construction draws upon encyclopaedic knowledge, and involves inferencing strategies that relate to different aspects of conceptual structure, organisation and packaging (Evans and Green, 2006). The below example illustrates the conceptual nature of meaning construction.

(55) In France, Bill Clinton wouldn't have been harmed by his relationship with Monica Lewinsky.

This sentence prompts people to imagine a scenario in which Bill Clinton, the former US President, is actually the President of France and that the scandal that surrounded him and the former Whitehouse intern, Monica Lewinsky, took place not in the United States but in France. In the context of this scenario, it is suggested that Bill Clinton would not have been politically harmed by his extramarital affair with Lewinsky (Evans and Green, 2006).

Hamawand (2016) believes that concepts are the fundamental forms of mental representation and reflect the existing properties of the world. They are not arbitrary creations of language, but constitute part of people's understanding of what the world is like. Language is the product of our

interaction with the world around us. The structure of language is a direct mirror of thought, of how the mind functions. The way we construct discourses and develop linguistic categories is determined by our perceptions of our environment. Thus, the semantic structure of a linguistic statement includes both conceptual content and a particular mode of construing that content. Two expressions may have the same conceptual content but vary semantically due to their encoding different conceptualizations of experience. These conceptualizations are mapped onto various linguistic realisations by utilising the symbolic resources made available by language. Each linguistic realisation describes the same scene, but does so in its own way. In fact, it is these linguistic realisations that make the mental experiences of the conceptualizer visible.

An example of the way in which linguistic expressions differ relative to the ways in which the speaker describes a scene is shown by the concept of **construal**, the act of conceiving and expressing experiences in different ways. In terms of truth conditions, the two linguistic expressions *The faculty agrees*, and *The faculty agree* refer to the same state of affairs in the world and so they are semantically equal. They share the same truth conditions: they can both be true of the same state of affairs. In terms of cognitive criteria, they have distinct semantic values. They convey different conceptualizations of the same content. In the first expression, the speaker conceptualizes the faculty as a unified body agreeing with an external proposal. In the second expression, the speaker conceptualizes the faculty as a collection of individuals agreeing with one another. The linguistic differences between the two expressions, therefore, reflect conceptual differences which in turn reflect different experiences (Hamawand, 2016).

3.3 Major Theories of Cognitive Semantics

Cognitive semantics represents an approach to the study of mind and its relationship with embodied experience and culture. It proceeds by employing language as a key methodological tool for uncovering conceptual organisation and structure. Although cognitive semantics has numerous theories, this study covers only three cognitive theories of meaning to study the relationship between mind and words. The adopted cognitive semantic theories are: Image Schema Theory, Mental Space Theory, and Construal Theory. Each theory is explained below in detailed with reference to different sources and examples.

3.3.1 Image Schema Theory

The notion of an image schema is closely associated with the development of the embodied cognition thesis proposed by Johnson's (1987) 'The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason', and Lakoff's (1987) 'Women, Fire, and Dangerous Things: What Categories Reveal about Mind.' Johnson (1987) introduced image schema as: 'a recurring, dynamic pattern of our perceptual interactions and motor programs that gives coherence and structure to our experience'. So, image schemas are dynamic analog representations of spatial relations and movements in space. Even though image schemas are derived from perceptual and motor processes, they are not themselves sensorimotor processes. Instead, image schemas are primary means by which people construct or constitute order and are not mere passive receptacles into which experience is poured. In this way, image schemas are different from the notion of schemata traditionally used in cognitive science, which are abstract conceptual and propositional event structures (Evans and Green, 2006).

However, image schemas are imaginative and non-propositional in nature and operate as organising structures of experience at the level of bodily perception and movement. Image schemas exist across all perceptual modalities, something that must hold for there to be any sensorimotor coordination in our experience. As such, image schemas are at once visual, auditory, kinesthetic, and tactile (Gibbs Jr. and Colston, 2006)

The term 'image' in 'image schema' is equivalent to the use of this term in psychology, where 'imagistic' experience relates to and derives from the experience of the external world. Another term for this type of experience is a sensory experience. The term 'schema' in 'image schema' means that image schemas are not rich or detailed concepts, but rather abstract concepts consisting of patterns emerging from repeated instances of embodied experience. Image schemas provide the basis for more richly detailed lexical concepts. For example, the container image schema consists of the structural elements interior, boundary, and exterior: these are the minimum requirements for a container. Part of the meaning of the lexical concepts associated with the following forms: *full*, *empty*, *in*, *out*, etc., has to do with the container schema (Evans, 2007).

Evans and Green (2006) believe that it is important to emphasise that although the term 'image' is restricted to visual perception in everyday language, it has a broader application in psychology and in cognitive linguistics, where it encompasses all types of sensory-perceptual experience. Imagistic experience is contrasted with what psychologists call introspective experience: an internal subjective experience such as feelings or emotions. The term 'schema' in 'image schema' is also very important: it means that image schemas are not rich or detailed concepts, but rather abstract concepts

consisting of patterns emerging from repeated instances of embodied experience.

Lakoff and Johnson were more or less working simultaneously on the introduction of image schema. Johnson was the one to focus on the embodied properties of image schemas. As the progression of cognitive science took a more concrete nature through the increased influence of neuroscience and the growing knowledge of the functions of the brain, the view of connectionism also started to influence the view of image schema research (Hedblom, 2019).

Embodied experience gives rise to image schemas within the conceptual system as proposed by Johnson (1987). Image schemas are formed as a result of our sensory and perceptual experiences when interacting with and moving through the world. For example, given that humans walk upright and because we have a head at the top of our bodies and feet at the bottom, and given the presence of gravity, which attracts unsupported objects, the vertical axis of the human body is functionally asymmetrical. This indicates that the vertical axis exhibits an up-down or top-bottom asymmetry; the top and bottom parts of our bodies are different. Johnson asserts that this part of human experience generates an image schema known as the UP-DOWN schema. Additionally, as developmental psychologist Jean Mandler shows, image schemas are emergent. This means that, because this experience is a function of our bodies and of our interactions in the world, this type of experience arises in conjunction with our physical and psychological development during early childhood. In other words, image schemas are not claimed to be innate knowledge structures (Evans and Green, 2006).

3.3.1.1 Image Schemas and Polysemy

Before embarking upon the relationship between image schemas and polysemy, it is interesting to consider the word 'stand' in the following sentences:

(56) Please stand at attention.

(57) The clock stands on the mantle.

(58) The part stands for the whole.

(59) He wouldn't stand for such treatment.

These sentences illustrate only a few of the numerous senses in which the word 'stand' is used in regular speech and writing. The first two of these senses refer to the physical act of standing while the last two have non-physical, perhaps figurative, interpretations. Thus, what relates the various physical and non-physical senses of 'stand' in the preceding examples?

Some cognitive linguists (such as, Johnson, 1987; Lakoff, 1987; Sweetser, 1990; Bartsch, 2003) believe that the meanings of polysemous words can be characterized by metaphor, metonymy, and various types of image schema. According to this theory, the lexical organisation of polysemous words is not a repository of random, idiosyncratic information, but is governed by systematic and recurrent cognitive principles across the lexicon. Perhaps most significantly is the assertion that these principles emerge from our embodied experience. One possibility is that bodily experience partly motivates people's intuitions as to why different senses of 'stand' have the meanings they do (Lutfi, 2012).

Numerous attempts have been made to demonstrate empirically that the various meanings of the polysemous word 'stand' are motivated by distinct image schemas arising from our bodily experience of standing (see, e.g., Gibbs, Beitel, Harrington, & Sanders, 1994). Their general aim was to

empirically demonstrate that the meanings of the polysemous word 'stand' are not arbitrary for native speakers, but are motivated by people's recurring bodily experiences in the real world. These attempts managed to provide very strong support for the hypothesis that people's understandings of the meanings of 'stand' are partly motivated by image schemes that arise from their bodily experiences of standing (also see Gibbs & Colston, 2006). Psycholinguistic study on 'stand' appears to be the only empirical study in psychology that has explicitly sought to examine the function of image schema in perception, thought, or language use (Ibid).

The Containment schema has been used to examine the semantics of spatial prepositions in a variety of contexts. These studies employ schemas to investigate the typical polysemy of prepositions, i.e., the fact that people may use the English preposition in a variety of related but distinct ways, as demonstrated in the following examples:

- (60) a) the water *in* the vase
b) the crack *in* the vase
c) the crack *in* the surface
d) the bird *in* the tree
e) the chair *in* the corner
f) the nail *in* the box
g) the muscles *in* his leg
h) the pear *in* the bowl
i) the block *in* the box
j) the block *in* the rectangular area
k) the gap *in* the border
l) the bird *in* the field

These uses are best described as extensions of a central, ideal confinement schema, which is defined as 'the inclusion of a geometric construct into a one-, two-, or three-dimensional geometric construct'. From a cognitive semantics viewpoint, there are two critical points to make regarding polysemy: the first is that the diverse and varied real world situations are expressed in language in a way that is essentially metaphorical in nature, relating them all to an underlying schema of containment. The second is that the relationship between the various senses is systematic and natural, not arbitrary (Saeed, 2009).

Force schemas have been used to describe polysemy in modal verbs. Modal verbs like *may* and *can* typically have both deontic and epistemic senses. Talmy (1985, 1988) uses force schemas to analyse modal verbs like *must*, *may* and *can* in their deontic uses; for example, *must* is used to express obligation as in (61a) below, *may* is used for permission as in (61b), and *can* is used for ability as in (61c) (Ibid).

(61a) You *must* hand in your term essay before the end of this week.

(61b) You *may* enter the studio when the light goes out.

(61c) She *can* swim much better than me.

3.3.1.2 Patterns of Image Schema

Johnson (1987) and Lakoff (1987) provide a list of image schema patterns to form the conceptual structure in understanding the basis for meaning relations, and how meaning is embodied in the conceptual structure. Thus, each type is explained briefly.

- The **Source-Path-Goal** schema involves the movement of an entity from a place to another. This pattern includes three parts: a source

- (starting point), goal or destination, and a path (a sequence of contiguous locations connecting the source with the goal).
- The **Link** schema involves two or more entities, and a link connecting these entities. This pattern is activated due to the use of perceptual capacities that gives rise to concrete and abstract linkages.
 - The **Cycle** schema involves a cyclic process of an object or experience. This pattern perceives the cyclic process in a temporal circle that begins with an initial state, and then proceeds through a sequence of connected events, and it ends where it began.
 - The **Scale** schema involves an increase or decrease on the quantitative and qualitative aspects of an experience. Objects can be added to a group or pile, and objects can be taken away from pile and group as well. Thus, this pattern is based on **VERTICALITY** and **SCALARITY**.
 - The **Center-Periphery** schema embodies the idea that the conceptual structure identifies a domain of objects. The object that is placed at the center of the domain is salient or important in reference to some other objects that are less important, so they are placed far from the center.
 - The **Container** schema includes the experience of having an entity in containment. This pattern engages three structural elements: interior, boundary, and exterior.
 - The **Part-Whole** Schema embodies experiences of having parts related to whole. This schematic pattern involves three structural elements: a Whole, Parts, and a Configuration. The schema is asymmetric if A is part of B, then B is not a part of A.

- **Force** schema includes seven force schemas with the following features:
- The first FORCE schema is the **COMPULSION** schema. This emerges from the experience of an object being moved by an external force.
- The second force-related image schema is the **BLOCKAGE** schema. This image schema derives from encounters in which obstacles resist force, for example when a car crashes into an obstacle like a tree.
- The third force-related image schema is the **COUNTERFORCE** schema. This derives from the experience of two entities meeting with equal force, like when we bump into someone in the street.
- The fourth force-related image schema is the **DIVERSION** schema. This occurs when one entity in motion meets another entity and this results in diversion. Examples include a swimmer swimming against a strong current so that she is gradually pushed along the shoreline, or the ricochet of a bullet.
- The fifth force-related image schema is the **REMOVAL OF RESTRAINT** schema. This captures a situation in which an obstruction to force is removed, allowing the energy to be released. This describes a situation like leaning on a door that suddenly opens.
- The sixth force-related image schema is the **ENABLEMENT** schema. This image schema derives from our sense of potential energy, or lack of it, in relation to the performance of a specific task.
- Finally, the **ATTRACTION** schema derives from experiences in which one entity is drawn towards another entity due to the force

exerted upon it. Examples include magnets, vacuum cleaners and gravity.

- Some other image schemas are: **Interaction, Surface, Near-Far, Merging, Matching, Contact, Object, Mass-Count, Splitting, Superimposition, Process, and Collection.**

3.3.1.3 Properties of Image Schemas

The notion of image schema is discussed by outlining a number of properties associated with this aspect of the conceptual system. Evans and Green (2006) introduce 10 properties of image schema as they are discussed below.

1. Image schemas are pre-conceptual in origin

According to Johnson (1987), image schemas like the CONTAINER schema are directly based in embodied experience: they relate to and arise from sensory experience. This suggests that they are pre-conceptual in origin. However, after the recurrent patterns of sensory information have been retrieved and stored as an image schema, sensory experience gives rise to a conceptual representation. This indicates that image schemas are concepts, but of a specific kind: they constitute the basis of the conceptual system.

2. An image schema can give rise to more specific concepts

The concepts lexicalised by the prepositions *in*, *into*, *out*, *out of*, and *out from* are all assumed to relate to the CONTAINER schema; an abstract image-schematic concept that underlies all these much more specific lexical concepts. A lexical concept is a concept particularly encoded and externalised via a specific lexical form.

Most semanticists, including cognitive semanticists, employ words from natural language to represent pre-linguistic components of meaning. Cognitive linguists typically seek to support their formal representations of meaning elements by using diagrams. Although concepts are marked using conventional words, the advantage of a diagram is that it may convey a concept regardless of language.

For example, the CONTAINER schema is diagrammed in Figure 2. This image schema consists of the structural elements interior, boundary and exterior: these are the minimum requirements for a CONTAINER. The landmark (LM), represented by the circle, consists of two structural elements, the interior and the boundary itself. The exterior is the area outside the landmark, contained within the square. The container is represented as the landmark because the boundary and the exterior together possess sufficient Gestalt properties (e.g. closure and continuity) to make it the figure, while the exterior is the ground.

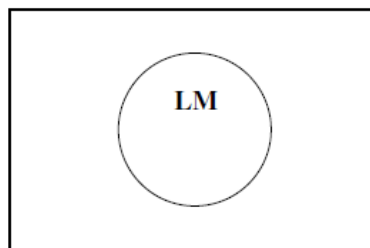


Figure (2) Container Image Schema

Although Figure 2 represents the basic CONTAINER schema, there are numbers of other image schemas that are related to this schema which give rise to distinct concepts related to containment. For instance, just two variants of the CONTAINER schema lexicalised by *out* are considered. The **trajectory** (TR) *John*, which is the entity that undergoes motion, moves

from a position inside the LM to occupy a location outside the LM. The terms ‘TR’ and ‘LM’ derive from the work of Langacker (1987), and have been widely employed in cognitive semantics by scholars including Lakoff and Johnson, among others.

(62) John went out of the room. OUT1

The image schema in Figure 3 corresponds to example (62). In this example, the meaning of *out* is ‘reflexive’.

The honey spread itself out. In other words, liquid substances like *honey*, because of their physical properties, can simultaneously be the LM and the TR. The LM is the original area occupied by the honey, while the honey is also the TR because it spreads beyond the boundary of its original location.

(63) The honey spread out. OUT2

The image schemas shown in Figures 3 and 4 represent two concepts that are more specific and detailed than the image schema diagrammed in Figure 1, because they involve motion as well as containment. This shows that image schemas can possess varying degrees of schematicity, where more specific image schemas arise from more fundamental or schematic ones.

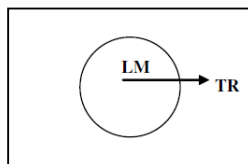


Figure 3: Image Schema for OUT1

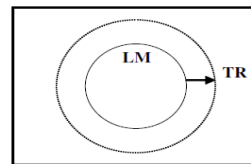


Figure 4: Image Schema for OUT2

3. Image schemas derive from interaction with and observation of the world

Although image schemas derive from embodied experience, they are influenced by how the conceptualiser interacts with the world. Consider the

FORCE image schema as an example of this idea. This image schema arises from the experience of acting upon other entities, or being acted upon by other entities, resulting in the transfer of motion energy. The interactional derivation of this image schema is illustrated by Johnson as follows:

[F]orce is always experienced through interaction. We become aware of force as it affects us or some object in our perceptual field. When you enter an unfamiliar dark room and bump into the edge of the table, you are experiencing the interactional character of force. When you eat too much the ingested food presses outwards on your taughtly stretched stomach. There is no schema for force that does not involve interaction or potential interaction (Johnson 1987: 43).

4. Image schemas are inherently meaningful

Image schemas are inherently meaningful since they are derived by interaction with the world. Embodied experience is inherently meaningful in the sense that embodied experiences have predictable consequences. Another example is used to demonstrate this concept. Assume someone is holding a cup of coffee. People may expect the coffee to move if he/she moves the cup slowly up and down or side to side. This is because a consequence of containment, given that it is defined by boundaries, is that it constrains the location of any entity within these boundaries. In other words, the cup exerts force-dynamic control over the coffee.

5. Image schemas are analogue representations

Image schemas are analogue representations deriving from experience. The term "analogue" refers to the fact that image schemas take on a form in the conceptual system that corresponds to the sensory experience being represented. To put it another way, while image schemas

may be described in words and images, they are not represented in the mind in these ways. Instead, image schematic concepts are stored in the mind as holistic sensory experiences, similar to how a physical event is remembered.

6. Image schemas can be internally complex

Image schemas are frequently, if not always, made up of more complicated aspects that may be examined independently. The CONTAINER schema, for example, is a concept that includes interior, boundary, and exterior aspects. The SOURCE-PATH-GOAL or simply PATH schema is another example of a complex image schema. Because a path is a means of moving from one location to another, it consists of a starting point or SOURCE, a destination or GOAL and a series of contiguous locations in between, which relate to the source and the goal.

7. Image schemas are not the same as mental images

Close your eyes and imagine the face of your mother or father, child or close friend. This is a mental image, relatively rich in detail. Image schemas are not the same as mental images. Mental images are detailed and result from an effortful and partly conscious cognitive process that involves recalling visual memory. Image schemas are schematic and therefore more abstract in nature, emerging from ongoing embodied experience.

8. Image schemas are multi-modal

Image schemas are derived from experiences across several modalities, which is one of the reasons why one cannot close his eyes and 'think up' an image schema. Image schemas, in other words, are buried 'deeper' within the cognitive system, as abstract patterns resulting from a wide range of perceptual experiences that are not available to conscious

introspection. For example, blind people can access image schemas for CONTAINERS, PATHS, and other objects because the kinds of experiences that give rise to these image schemas rely on a variety of sensory-perceptual experiences other than vision, such as hearing, touch, and our experience of movement and balance, to name a few.

9. Image schemas are subject to transformations

Image schemas can undergo transformations from one image schema into another because they arise from embodied experience, which is ongoing.

10. Image schemas can occur in clusters

Image schemas can be found in clusters or networks with other related image schemas. For example, the FORCE schema is actually made up of a number of related schemas. A number of attributes are shared by force schemas as Johnson (1987) identifies them into seven force schemas.

3.3.2 Mental Space Theory

Cognitive semanticists view meaning construction as primarily a conceptual activity. Sentences function as ‘partial instructions’ for the formation of complex but temporary conceptual domains as a result of continuous discourse. These domains, together referred to as ‘mental spaces,’ are linked in a variety of ways, allowing speakers to ‘link back’ to mental spaces formed earlier in the course of the continuing verbal conversation. Meaning, from this perspective, is neither a feature of individual sentences nor a function of their interpretation in relation to the

external world. Rather than that, meaning emerges through a dynamic process of meaning construction known as conceptualisation.

Gilles Fauconnier is the founder of Mental Spaces Theory, a widely important cognitive theory of meaning construction. Fauconnier elaborates on this approach in two seminal works, *Mental Spaces: Aspects of Meaning Construction in Natural Language* (1985] 1994) and *Mappings in Thought and Language* (1997). Fauconnier and Turner have recently developed this theory, resulting in the creation of a new framework dubbed Conceptual Blending Theory (Evans and Green, 2006).

Fauconnier (2007) believes that mental spaces are very partial assemblies that are formed as speakers think and speak for the sake of local comprehension and action. They are composed of elements and are organised using frames and cognitive models. The mental space created by (*you, Mount Rainier, the year 2001, and your climbing the mountain*) may be activated in a variety of ways and for a variety of purposes. *You climbed Mount Rainier in 2001* sets up the mental space in order to report a past event. *If you had climbed Mount Rainier in 2001* sets up the same mental space in order to examine a counterfactual situation and its consequences. *Max believes that you climbed Mount Rainier in 2001* sets it up again, but now for the purpose of stating what Max believes. *Here is a picture of you climbing Mount Rainier in 2001* evokes the same mental space in order to talk about the content of the picture. *This novel has you climbing Mount Rainier in 2001* reports the author's inclusion of a perhaps fictional scene in a novel. Mental spaces are generated and modified over the process of thinking and conversation and are related to one another by a variety of mappings, most notably identity and analogy mappings.

However, Evans and Green (2006) consider mental spaces as regions of conceptual space that contain specific kinds of information. They are constructed on the basis of generalised linguistic, pragmatic, and cultural strategies for recruiting information. Because mental spaces are constructed ‘on-line’, they result in unique and temporary ‘packets’ of conceptual structure, constructed for purposes specific to the ongoing discourse. For example:

(64) If I were your father, I would smack you.

This utterance gives rise to a **counterfactual** conceptualisation. That is, it sets up a scenario that runs counter to a presupposed reality. This scenario represents a mental space. Intuitively, a mental space can be thought as a ‘thought bubble’, rather like the strategy cartoonists use to reveal the inner thoughts of their characters. Crucially, mental spaces theory holds that people can have many ‘thought bubbles’ working simultaneously.

Fauconnier proposes the concept of a *mental space* in place of the concept of a *possible world*, arguing that the mental space is a cognitive structure. This new concept is a metaphysically more appealing model for conveying the status of knowledge that enables elegant solutions to a variety of difficulties in semantic and pragmatic analysis (Croft and Cruse, 2004).

Meaning construction, as Fauconnier (1997) claims, entails two distinct processes: (1) the building of mental spaces and (2) the establishment of mappings between those mental spaces. Additionally, because the mapping relations are governed by the local discourse context, meaning construction is always situated or context-bound. Thus, he defines mental spaces as partial structures that proliferate when people think and talk, allowing a fine-grained partitioning of their discourse and knowledge structures.

Moreover, the parts and relations of a mental space are organised into a package, so the mental space is said to be ‘framed,’ and the organisation is referred to as a ‘frame.’ Thus, the mental space in which *Julie purchases coffee at Peet's coffee shop* contains distinct aspects that are defined by COMMERCIAL TRANSACTION and also by the sub-frame of BUYING COFFEE AT PEET'S. Spaces are constructed from a variety of sources. A single mental space can be constructed from information from several distinct domains. The space of *Julie at Peet's*, for example, incorporates all of the aforementioned conceptual categories. It can be organised in ways other than COMMERCIAL TRANSACTIONS, such as TAKING A BREAK FROM WORK, GOING TO A PUBLIC PLACE FOR ENTERTAINMENT, or ADHERENCE TO A DAILY ROUTINE. Another source of mental space creation is immediate experience: you observe *Julie purchasing coffee at Peet's* and thereby create a mental space for *Julie at Peet's*. Another form of mental space creation is what others say to us. *Julie went to Peet's for coffee for the first time this morning* invites us to build a new mental space, no doubt one that will be elaborated as the conversation goes on. Typically, a rich array of mental spaces is established with mutual connections and shifts of viewpoint of focus from one space to another (Fauconnier, 2007).

3.3.2.1 Types of Mental Spaces

Stockwell (2002) identifies mental space theory as a comprehensive and consistent framework for understanding reference, co-reference, and the interpretation of stories and descriptions, regardless of whether they are actual, historical, imagined, hypothesised, or occur distantly. Thus, there are four distinct sorts of mental space:

- **Time spaces** – current space or displacement into past or future, typically indicated by temporal adverbials, tense and aspect.
- **Space spaces** – geographical spaces, typically indicated by locative adverbials, and verbs of movement.
- **Domain spaces** – an area of activity, such as work, games, scientific experiment, and so on.
- **Hypothetical spaces** – conditional situations, hypothetical and unrealized possibilities, suggestions for plans and speculation.

To understand and negotiate reality, speakers build a **reality space or base space** with mental representations of everything they perceive. Any operation on that set of knowledge creates a **projected space**, whenever they make a prediction, description, imagine a counterfactual, anticipate or recall. The same process applies equally to **fictional spaces**, which people build to follow an ongoing narrative. Minimally, the process can be seen to operate in simple sentence predications. ‘*Perhaps there is intelligent life on other worlds*’ involves both a hypothetical and a spatial projection from Earthly reality. In a **base space**, our familiar cognitive representation of life on Earth is an *idealised cognitive model* (ICM) possessing entities and a familiar structure, with intelligent life (a) on planet Earth (b). The hypothesis builder ‘perhaps’ creates a new projected space that is similarly structured:

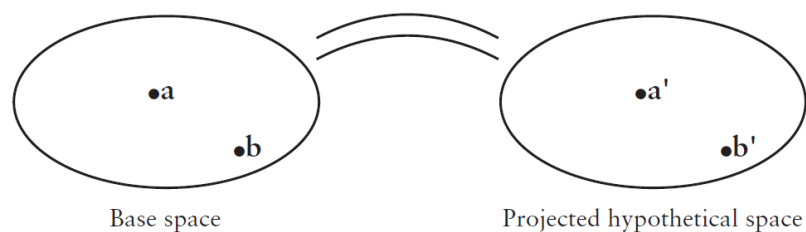


Figure (5) Base Space and Projected Space

3.3.2.2 The Conceptual Structure of Mental Space

Linguistic expressions do not ‘encode’ meaning; rather, they provide partial construction instructions for mental spaces. Given that a sentence’s meaning is dependent on the discourse context in which it is used, its meaning potential is always used in different ways depending on the discourse context. This section examines the cognitive architecture that underpins the meaning-making process (Fauconnier, 1994).

1. Space Builders

Mental spaces are set up when people think and speak. Consequently, they are created by space builders, which are linguistic units that can create new mental spaces or shift attention between existing mental spaces. Space builders can be expressions like prepositional phrases (*in 1966, at the shop, in Fred’s mind’s eye, from their point of view*), adverbs (*really, probably, possibly, theoretically*), connectives (*if . . . then . . . ; either . . . or . . .*), and subject-verb combinations that are followed by an embedded sentence (*Fred believes [Mary likes bananas], Mary hopes . . . , Susan states . . .*), to name but a few. What makes space builders ‘special’ is that they need the audience to ‘set up’ a scenario beyond the ‘here and now,’ regardless of whether the scenario reflects past or future realities, hypothetical situations, or situations that reflect ideas and beliefs (Evans and Green, 2006).

2. Elements

Mental spaces are temporary conceptual domains that are generated in the course of ongoing discourse. These spaces contain elements, which are either entities constructed on-line or pre-existing entities in the conceptual system. Noun phrases (NPs) are the linguistic expressions that represent

elements. These include linguistic expressions like names (*Fred, Elvis, Madonna, Elizabeth Windsor, Tony Blair, James Bond*), descriptions (*the Queen, the Prime Minister, a green emerald, a Whitehouse intern, an African elephant*), and pronouns (*she, he, they, it*). The **presuppositional mode** refers to NPs that have a definite interpretation because they presuppose previous knowledge. **Propagation** is a term used in mental spaces theory to refer to elements introduced in the presuppositional mode that spread to neighbouring spaces (Ibid).

3. Counterparts and Connectors

Different mental spaces are linked to one another. **Connectors** connect elements in different spaces by establishing mappings between counterpart elements. Counterparts are determined by **pragmatic function**: when two (or more) elements located in distinct mental spaces share a common pragmatic function, they are considered counterparts. **Identity** is a prominent example of a pragmatic function. For instance, in Ian Fleming's novels, *James Bond* is the name of the fictional British spy character and *007* is the code name used by the British Secret Service (MI6) to identify this spy. Co-reference or identity is the pragmatic function that connects the entities referred to as *James Bond* and *007* together. An identity connector connects elements in distinct mental spaces that are co-referential (counterparts related by identity) (Fauconnier, 1994). Consider the following example of an identity connector connecting counterparts in two distinct mental spaces (65).

(65) James Bond is a top British spy. In the war, he was an officer in the Royal Navy.

In the first sentence in (65), the first mental space is set up by assigning the property introduced by the indefinite NP *a top British spy*. This mental space is the base space. In the second sentence, the PP *in the war* is a space builder which constructs a new WAR space. This mental space also features an element, introduced by *he*, which also has a property assigned to it, *an officer in the Royal Navy*.

4. The Access Principle

Fauconnier (2007) describes the access principle as a significant feature of language, cognitive structures, and conceptual links (also called Identification Principle). This principle states that a name or description of an element in one mental space may be used to reach its equivalent in another mental space. Access Principle: If two elements a and b are linked by a connector F ($b=F(a)$), then element b can be identified by naming, describing, or pointing to its counterpart a . This means that connectors establish relationships or mappings across regions of conceptual structure. The elements a_1 and a_2 in Figure (6) are counterparts and are linked by an identity connector (Evans and Green, 2006).

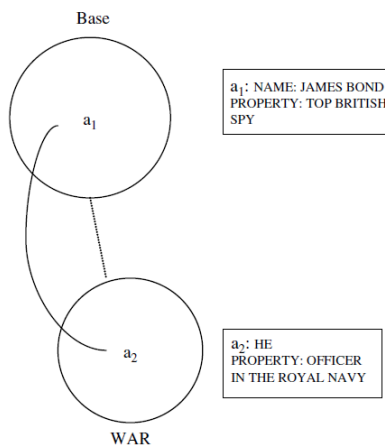


Figure (6) Linking Counterparts

5. Roles and Values

Fauconnier makes a critical distinction between *roles* and *values* in space mappings. A role is a verbal description of a category; a value is an instance of an individual that can be described by that category. Roles can be a category or type with several examples or tokens; *a sport car* is an example of such a role, as it has numerous instances (values) of *sport cars*. A role may also be a category that is performed by a single individual at one point in time but by a variety of individuals over time; *the President of the United States* is an example of this. Roles and values are specific to a single mental space, and all counterpart relations between roles and values in different spaces must be established cognitively by the interlocutors (Croft and Cruse, 2004). Moreover, NPs with definite interpretation lack rigid reference, implying that they may or may not relate to a unique referent. The following examples from Fauconnier (1994) demonstrate this:

- (66) a. The president changes every seven years.
 b. Your car is always different.

The sentences in (66) are ambiguous. Example (66a) could mean that every seven years the person who is president changes in some way, for instance goes bald, becomes insane, grows a moustache and so on. Alternatively, (66a) could mean that every seven years the person who serves as president changes. Similarly, (66b) could mean that every time we see your car, some aspect of the car has changed; it might have had a respray, acquired some new hubcaps and so on. Alternatively, this sentence could mean that you have a new car every time we see you. These ambiguities demonstrate that NPs with definite interpretations can have either a **role** or a **value** reading, as Fauconnier refers to them. For instance,

the president's role reading is relevant to the position of president regardless of who holds it (as the second interpretation (66a)). The value reading is directed at the person who performs the position (as the first interpretation of (66a)). While both roles and values introduce elements into mental spaces, each generates distinct mapping possibilities (Evans and Green, 2006).

6. Transspatial Operators

Many verbs establish relations within spaces, such as *believe*, *paint*, *look for*, *wish*, and set up new spaces. The verb, or copula, *be* has special properties. It can be used very generally to link a trigger and its target, when the relevant pragmatic function is known. For example, *Plato is the red book*. In this example, the writer is connected to a book. A pragmatic function can operate within a space as in the preceding example. In this case, the verb *be* stands grammatically for the metonymic link. A pragmatic function (connector) can also operate from one space to another. In this case, the verb *be* links elements that are counterparts in different spaces (Fauconnier, 1994). Two or more elements undergo a relation due to the use of some action verbs, for example, *in that play, a witch is riding a unicorn*. The expression *is riding* expresses a relation between the two elements and prompts for the RIDE frame. This frame brings with two participant roles, one for the RIDER and one for the ENTITY RIDDEN. The RIDER role is mapped to the entity 'witch', whereas the ENTITY RIDDEN role is mapped to the entity 'unicorn' (Evans and Green, 2006).

3.3.3 Construal Theory

According to Langacker (1986), one of the fundamental ideas of cognitive linguistics is that semantics is conceptualization. This hypothesis

directly contradicts the notion that semantics is purely truth-conditional. Situations can be presented in several ways, such as *my dad* vs. *dad* vs. *father* and *waste time* vs. *spend time* in *My dad wasted most of the morning on the bus* and these ways convey to the hearer different conceptualizations of the relationship between the speaker and the speaker's father, of the positive or negative quality of the situation being described, and even of the nature of the situation being described (characterising *time* in terms of *money*) (Croft and Cruse, 2004). The idea that semantics is largely cognitive rather than a matter of language-world interactions is a fundamental principle in Cognitive Linguistics. This idea is notably evident in the study of different aspects of meaning and grammatical structure (Verhagen, 2007).

People's capacity to conceive and represent the same circumstance in many ways is referred to as constructal. The term refers to a set of conceptual factors (such as prominence) that have been proven to be relevant for lexical and semantic description in cognitive linguistics. It emphasises the importance of conception in linguistic meaning, which is disputed even in recent semantics textbooks (e.g., Palmer 1981: 2.2) (Langacker, 2019).

Langacker (1987: 487–88) defines the construal relationship as follows: “The relationship between a speaker (or hearer) and a situation that he conceptualizes and portrays, involving focal adjustments and imagery.” According to this definition, the construal relation consists primarily of an individual (speaker or hearer) and a conceived situation. Consequently, it roughly corresponds to Langacker's "viewing arrangement".

Croft and Cruse (2004) believe that language is rich in framing; all linguistic units evoke a semantic frame. However, framing is only one illustration of conceptualization in linguistic expression. All aspects of a situation's grammatical expression, including inflectional and derivational

morphology and even the basic parts of speech, involve conceptualization in some way or another. When we speak, we unconsciously arrange every component of the experience we want to convey. Thus, human beings use a variety of conceptualization processes or **construal operations** in language. When the role of conceptualization in language becomes obvious, a single language gives alternative expressions for what appear to be truth-functionally similar situations. These framing lexical phrases *dad/father* and *spend/waste* appear to be truth-functionally similar, but they are not. It's also simple to identify examples of inflectional and derivational differences between phrases that are otherwise almost truth-functionally equivalent:

- (68) a. leaves on the tree
 b. foliage- \emptyset on the tree
- (69) a. Conor lives in New York City.
 b. Conor **is living** in New York City.
- (70) a. The chimney is **above** the window.
 b. The window is **below** the chimney.
- (71) a. Something **moved** in the grass.
 b. There was a **movement** in the grass.
- (72) a. The car brushed the bicycle.
 b. The bicycle **was brushed by** the car.
- (73) a. **There was Sam** sitting on the floor.
 b. **Sam was** sitting on the floor.

Examples (68a–b) and (69a–b) differ in the choice of nominal and verbal inflection, (68a–b) by plural count noun and mass noun, and (69a–b) by the choice of a simple vs. a progressive form. Examples (70a–b) differ in the choice of a function word, in this case a preposition, and a reversal of subject and prepositional complement choice. Examples (71a–b) differ

derivationally in part of speech, between a verb and its derived noun. Examples (72a–b) and (73a–b) differ in the grammatical construction used to describe the scene, active vs. passive voice in (72) and presentational vs. ordinary declarative in (73). All of these sentences seem to be truth-functionally equivalent, but English is not being unnecessarily profligate here: the (*a*) and (*b*) members offer a different conceptualization of the experience in every case.

There is usually more than one method of thinking about and describing a particular scene in language. The speaker "construes" their thoughts in a certain way by choosing one conceptual or linguistic alternative over another. This is what the term "construal" refers to. Construals are cognitive operations that are frequently strikingly comparable to visual perception principles. For example, one may describe the contents of a bottle of whisky as being *half full* or *half empty*. In describing it as *half full*, he is looking at the drink that is (still) left in the bottle, and in describing it as *half empty*, he is thinking of the drink that is gone. The descriptions clearly differ with respect to the perspective adopted: from the perspective of a full bottle or from the perspective of an empty bottle. Adopting a particular perspective is one of many possible construal operations (Radden and Dirven, 2007).

3.3.3.1 Classifications of Construal Theory

Cognitive linguists and other linguists that adopt a conceptualist approach to linguistic semantics have identified a number of construal operations. Various proposals for grouping together construal operations that appear to be related have also been made. The two most comprehensive classifications are those of Talmy and Langacker. However, these

classificatory systems seem to exhibit a substantial amount of arbitrariness. This is partly due to the fact that research into construal phenomena, while ubiquitous in ordinary language and therefore highly important, has at the same time led to a large increase in the number of known distinct construal operations (Verhagen, 2007).

Talmy proposes a four-way classification under the name of **imaging systems** (Talmy 1977, 1978, 1988): (1) Structural Schematization, (2) Deployment of Perspective, (3) Distribution of Attention, and (4) Force Dynamics. On the other hand, under the rubric of focal adjustments, Langacker (1987: 116–37) presents a three-part classification scheme for construal operations (then called as "focal adjustments"): (1) Selection, (2) Perspective, and (3) Abstraction. The first category concerns language users' capacity to selectively attend to some facets of a conceptualization and ignoring others. The second comprises linguistic manifestations of the position from which a situation is viewed, and is divided into four subtypes: (i) Figure/Ground alignment, (ii) Viewpoint, (iii) Deixis, and (iv) Subjectivity/ Objectivity. The third major category relates to our ability to establish commonalities between distinct phenomena and abstracting away from differences, and thus to organize concepts into categories.

Langacker has since revised his classification, which now looks as follows (see Langacker, 2005): (1) Specificity, (2) Prominence, (3) Perspective, and (4) Dynamicity. The first class (Specificity) is approximately equivalent to the preceding class Abstraction. The new category of Prominence includes phenomena such as Figure/Ground and those formerly classified as Selection. Perspective has remained unchanged, with the exception that the subtype Figure/Ground has been moved to the Prominence category. Another category is dynamicity, which refers to the

development of a conceptualization across time (rather than through conceived time). It is first and foremost related to the inherent temporal nature of linguistic utterances: presenting elements of a conceptualization in a different sequence leads in meaning variations. However, a dynamic, sequential conceptualization can also occur from the application of a dynamic concept to a conceptualization object that is not intrinsically dynamic (as in *The road winds through the valley*).

There is a significant overlap between Talmy's and Langacker's classifications, which in itself is indicative of the relevance of these classes. Thus, Talmy's *Schematization* closely matches Langacker's *Specificity*; both have a category *Perspective* that includes similar phenomena, and Talmy's category *Attention* overlaps with Langacker's *Prominence*. *Force Dynamics*, on the other hand, is not included in Langacker's classification. Talmy's (2000: 40–84) classification has since been modified, providing the following primary categories: (1) Configurational Structure, (2) Perspective, (3) Distribution of Attention, and (4) Force Dynamics (Verhagen, 2007).

However, Croft and Cruse (2004: 43–46) further argue that the classification of construal phenomena is arbitrary and cannot be completely motivated. For one thing, they notice that while Langacker and Talmy's classifications share a number of characteristics, it is not immediately clear how their differences may be reconciled. In addition, they say that both classifications are missing some construal aspects (e.g., image schemas), and it isn't clear how they would fit into the proposed classifications. They assert, based on previous comparisons of construal classifications that the primary categories in such a classification should correspond to psychological processes and capacities that have been independently established by psychologists and phenomenologists. Apart from

some reassignments of specific types of construal to other major categories, the primary distinction between Croft and Cruse's classification and Langacker and Talmy's is that the former is more comprehensive. Thus, the present study follows Croft and Cruse's classification to identify construal operations.

3.3.3.2 Aspects of Construal Phenomena

The meaning of an expression is not just determined by the conceptual content it invokes; it is also determined by how that content is construed. Every symbolic structure, as part of its conventional semantic value, interprets its content in a certain way. It's difficult to resist the visual metaphor, in which content is compared to a scene and construed to a certain manner of perceiving it. When we see a scene, what we really perceive is determined by how thoroughly we examine it, what we choose to look at, which parts we focus on, and from which vantage point we view it. Langacker (1993) categorises the construal dimensions into five major categories: specificity, scope, prominence, background, and perspective. Then, Langacker (2008) modifies his classification and uses the following terms: "specificity," "focusing," "prominence," and "perspective" to refer to broad classes of construal phenomena. They apply to conceptions in any domain. These aspects are discussed in detail, and they are all cited by Langacker (2008).

1. Specificity

The degree of clarity and detail with which a situation is described is one dimension of construal. One may characterise the temperature as "hot," but also—with increasing specificity—as "*in the 90s*," "*around 95 degrees*,"

or "*exactly 95.2 degrees*." Similarly, an *aunt* has a greater degree of specificity than a *relative*, while a *large brown rat* has a greater degree of specificity than a *rodent*. The terms "granularity" and "resolution" are often used interchangeably. A highly specific statement provides fine-grained detail about a situation with a high degree of resolution. We are constrained to coarse-grained descriptions with a low resolution that reveal only general aspects and global organisation when using less specific expressions. *Schematicity* is the opposite of specificity. Thus *relative* is schematic with respect to *aunt*, and *rodent* with respect to *large brown rat*. A schematic characterisation is *instantiated* by any number of more detailed ones, each of which serves to *elaborate* the coarse-grained requirements included in the schematic characterization. Expressions can often be arranged in elaborative hierarchies, as in (74), where each expression is schematic with respect to those that follow.

- (74) (a) *rodent* → *rat* → *large brown rat* → *large brown rat with halitosis*
 (b) *hot* → *in the 90s* → *about 95 degrees* → *exactly 95.2 degrees*

2. Focusing

We get access to specific areas of our conceptual universe via linguistic expressions. The focusing dimension of construal refers to both the selection of conceptual content for linguistic presentation and its organisation into what might be widely defined (metaphorically) as *foreground* vs. *background*. Both aspects of focusing are represented by the encyclopaedic view of lexical meaning. A lexical item's conventional value includes direct access to a set of cognitive domains ranked according to their centrality. The domain inventory represents a subset of conceptual content.

Further indications of focusing are seen in the way a lexical item is actually interpreted within the context of a use event.

a. Foreground vs. Background

Numerous asymmetries lend themselves to be described metaphorically as foreground vs. background. Though distinguishable, they can all be seen as manifesting a very general feature of cognition. They all, in general, involve a deviation from a baseline, the use of prior experience to understand later experience. The phenomenon known as "*figure vs. ground*" is a manifestation in perception. For instance, a sudden noise stands out as a figure against a ground of silence, as does a small, moving cursor on a computer screen against a more stable background.

In every scenario in which one notion precedes and facilitates the formation of another, we may fairly talk of background and foreground. In this broad sense, we might argue that expressions rely on background knowledge to be understood. Such knowledge is presupposed even by a detailed sentence like "*I want you to put the canned tomatoes on the top shelf of the pantry.*" By default, it is interpreted using cultural knowledge about food storage and pantry arrangement. Without this background knowledge, we would understand the line to mean that the tomatoes should be removed from the cans before they are placed on the shelf, or that the cans should be glued to the shelf's face rather than its upper surface.

b. Composition

This part of focusing considers the inherent meaning of an expression. The majority of expressions are symbolic in nature, constructed from smaller

symbolic parts. For example, *lipstick*, for example, contains both a *lip* and a *stick* as symbolic components. These are component symbolic structures, with *lipstick* as a composite symbolic structure. Similarly, the symbolic components of the composite expression *maker* are *make* and *-er*. A composite structure can function as a component structure inside a more complicated symbolic expression. *Lipstick* and *maker* are thus components of the higher-level composite structure *lipstick maker*. *Constituency* is the term used by linguists to refer to this hierarchical organization.

c. Scope

Along with foregrounding, focusing involves the initial selection of conceptual content for linguistic presentation. One facet of selection is the access that an expression provides to a certain set of cognitive domains, either in general or on a particular occasion. A second facet is the extent to which an expression's "coverage" in the domains accessed is complete, i.e., which portions of these domains it truly invokes and uses to convey its meaning. An expression's *scope* is defined by its coverage of each domain in its matrix. One reason for combining selection and foregrounding under focusing is that scope, which is an issue of selection, may be classified as foreground or background. Sometimes, it is important to tell the difference between an expression's maximal scope in a certain domain, which is the full extent of its coverage, and a limited immediate scope, which is the portion that is most relevant for a specific purpose. The immediate scope is thus foregrounded vis-a-vis the maximal scope. Metaphorically, we can describe it as the "onstage region," the general region of viewing attention.

Consider the term "elbow." Clearly, one of the domains it selects is human body conception. However, it is also clear that the elbow is not

directly connected to the human body as a whole. A body has major parts, including arms, and an elbow is first and foremost part of an arm. When considering how to conceptualise an elbow, the notion of an arm in particular is particularly pertinent ("onstage"). There is a conceptual hierarchy in which BODY is directly involved in ARM, which is directly involved in ELBOW, while BODY is only indirectly involved in ELBOW (via ARM). Thus, for the elbow, BODY functions as the maximum scope while ARM serves as the immediate scope. This is illustrated schematically in figure 7 (a) and (b).

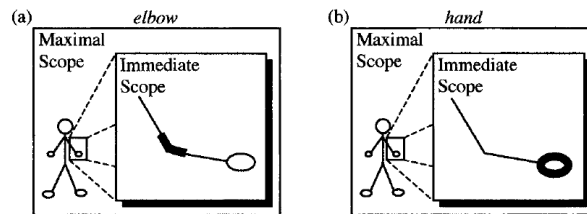


Figure (7) Maximum Scope and Immediate Scope

A striking feature of such hierarchies is that each part functions as immediate scope for the next term in the sequence. The conception of an arm is thus the immediate scope for *hand* (fig. 7(b)), a hand for *finger*, and a finger for *knuckle*. In hierarchies composed of successive whole-part relations, distinctions between maximal and immediate scope are highly significant. While body-part terms provide the most obvious examples, analogous hierarchies exist in other domains of experience:

- (75) (a) *body* > *arm* > *hand* > *finger* > *knuckle*
 (b) *body* > *head* > *face* > *eye* > *pupil*
 (c) *house* > *door* > *hinge* > *screw*
 (d) *car* > *motor* > *piston* > *ring*

3. Prominence

Language structure exhibits a variety of asymmetries that are properly regarded as matters of prominence. The terms "prominence" and "salience" (which are used synonymously) are not self-explanatory. Because something can be salient in many different ways, describing it as such is not an adequate characterization but only a starting point for analysis. Two distinct types of prominence are discussed in this section: *profiling* and *trajector/landmark alignment*. While they are not identical, they are similar in that they both involve the focusing of attention (a strong kind of foregrounding).

a. Profiling

An expression selects a body of conceptual content as the basis for its meaning. This is referred to as the conceptual base. The conceptual base of an expression is defined as its maximal scope across all domains in its matrix. Construed more narrowly, its base is identified as the immediate scope in active domains—that is, the portion put "onstage" and foregrounded as the general locus of viewing attention. Within this onstage region, attention is directed to a particular substructure called the profile. Thus, the profile of a statement stands out as the unique focus of attention within its immediate context. An expression can profile either a thing or a relationship. A good example is a kin term, such as aunt, diagrammed in figure 8. The essential content of this lexeme is the kinship relation between a female and a reference individual, R (the one with respect to whom the person is an aunt). Aunt, however, does not profile the relationship but rather the female it serves to identify—its referent is a person, albeit one characterized as a female relative.

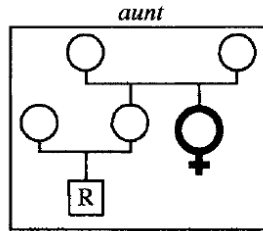


Figure (8) Profiling Kinship Relation

Profiling is figured crucially in the pervasive phenomenon known as **metonymy**. In a narrow sense, we can characterize metonymy as a shift in profile. For example, a customer who says (76) (a) to a waiter is not claiming to be an Italian dessert. While this would be the usual referent of *tiramisu*, in the restaurant context its profile shifts from the dessert to the person who ordered it. Similarly, in (76)(b) the entity absent from the phone book is not the famous golfer per se but rather his name, address, and telephone number. The profile of *Tiger Woods* shifts from the person to the associated information (or its printed representation).

(76a) *I'm the tiramisu.*

(76b) *She couldn't find Tiger Woods in the phone book.*

b. Trajector/Landmark Alignment

When a relationship is profiled, its participants are given varying degrees of prominence. The most prominent participant, referred to as the trajector (TR), is the entity that is perceived to be located, evaluated, or described. Frequently, another participant is elevated to prominence as a secondary focus. If this is the case, it is referred to as a landmark (LM). Expressions can contain the same content and profile the same relationship but have a distinct meaning due to their difference in selecting trajectory and

landmark. The prepositions *above* and *below* are distinguished in this way. Additionally, as seen in Figure 9, they profile the same relationship: X above Y profiles the same relationship as Y below X. Only the degree of prominence accorded to the related participants may account for the semantic contrast. We use X above Y to show that X is the higher participant, and Y below X to show that Y is the lower participant. As a result, X and Y have their own trajectories. In each situation, the other participant serves as a spatial landmark.

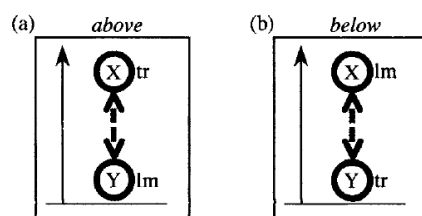


Figure (9) Trajector/Landmark Alignment

If *above* and *below* contrast in their choice of trajector, the discourse context should sometimes determine which preposition will be used. Consider the following examples:

(77) (a) *Where is the lamp?*

- (i) *The lamp (tr) is above the table (lm).*
- (ii) **The table (tr) is below the lamp (lm).*

(b) *Where is the table?*

- (i) *The table (tr) is below the lamp (lm).*
- (ii) **The lamp (tr) is above the table (lm).*

4. Perspective

If conceptualization is the viewing of a scene, perspective is the viewing arrangement, the most obvious aspect of which is the vantage point

assumed. I also include dynamicity within the umbrella of perspective, which refers to the way a conceptualization unfolds across time.

a. Viewing Arrangement

A viewing arrangement is the relationship between the "viewers" and the "viewed" situation. The speakers and the hearers are conceptualizers who comprehend the meanings of language expressions. A defined vantage point is one of the components of the viewing arrangement. By default, the vantage point is the speaker's and hearer's real locations. Numerous expressions include a vantage point with their meaning. For example, in one of its most fundamental uses, *in front of* and *behind*, rely on a vantage point to indicate the trajector's location relative to the landmark. Figure 10 illustrates this. In both cases, one focal participant intervenes in the line of sight leading from the vantage point to the other participant.

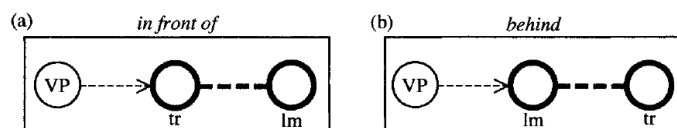


Figure (10) Viewing Arrangement of Vantage Point

3.4.3.3 Construal Operations

Croft and Cruse (2004) take a new comprehensive approach to the study of construal processes in the study of language conceptualization. Unlike Talmy's and Langacker's classifications, they involve two main theories of meaning, namely, metaphor and image schema. All of the construal operations outlined under the four sections in Table 1 are different cognitive processes. Numerous construal processes are manifestations of the

four fundamental cognitive abilities in diverse facets of experience. This section describes and illustrates the construal operations under these four headings, and all these aspects are cited in Croft and Cruse (2004).

I. Attention/ Salience	A. selection	1. Profiling
		2. Metonymy
	B. Scope (dominion)	1. Scope of predication
		2. Search domains
		3. Accessibility
	c. Scalar adjustment	1. Quantitative (abstraction)
		2. Qualitative (schematization)
	D. Dynamic attention	1. Fictive motion
2. Summary/sequential scanning		
II. Judgement/ Comparison	A. Categorization (framing)	
	B. Metaphor	
	C. Figure/ground	
III. Perspective/ situatedness	A. Viewpoint	1. Vantage point
		2. Orientation
	B. Deixis	1. Spatiotemporal (including spatial image schemas)
		2. Epistemic (common ground)
		3. Empathy
C. Subjectivity/objectivity		
IV. Constitution/Gestalt	A. Structural schematization	1. Individuation (boundedness, unity/multiplicity, etc.)
		2. Topological/geometric schematization (container, etc.)
		3. Scale
	B. Force dynamics	
C. Relationality (entity/interconnection)		

Table (1) Linguistic construal operations as instances of general cognitive processes

1. Attention/Salience

Attention is a well-known fundamental phenomenon in cognitive psychology. Attention appears to be the most closely related to what Chafe

(1994:26–30) refers to as the focus of consciousness. Attention is multi-dimensional and is often modeled in terms of the degree to which conceptual structures are activated in a neural network model of the mind. While attention is primarily concerned with the human cognitive ability involved, there are also natural properties of phenomena in the perceived world that lend themselves to human attention, and these properties are said to increase the *saliency* of those phenomena to human attention. In other words, attention is a multifaceted psychological ability whose various aspects are best illustrated by visual ability: one can select one object or another to focus one's attention on; the focus of attention is surrounded by a scope of attention; one can take a coarser or finer-grained view of a scene; and one can fix one's gaze on a scene or move it over it. Attention has four dimensions, and they are presented in every domain of cognition.

a. Selection

Selection is our capacity to focus on parts of our experience that are relevant to the task at hand and dismiss others that are irrelevant. Selection is demonstrated by the phenomenon of profiling a notion within a semantic frame. In most situations, the various terms inside a semantic frame or domain direct our attention to the frame's various elements, such as *radius*, *arc*, and *circumference* in the *CIRCLE* frame. In some situations, derivational morphology alters the profile, as in *writer*, where the "-er" suffix alters the profile from process to agent. The participant selected by the "-er" suffix is not tied to a particular participation role but is determined by saliency. On the other hand, two semantic processes that require more subtle and/or systematic changes in profile lend themselves to a construal analysis.

The first example is the highlighting of different **facets** or **domains** in a domain matrix, as in (78) and (79):

- (78) a. Where is the Sunday Times? (physical object or tome)
 b. Have you read the Sunday Times? (semantic content or text)
- (79) a. Paris is a beautiful city. (location)
 b. Paris closed the Boulevard St. Michel. (government)
 c. Paris elected the Green candidate as mayor. (population)

The second example is the phenomenon of **metonymy**. Metonymy is the use of a word to denote a concept other than its ‘literal’ denotation. Examples of metonymy include the following (Nunberg 1995:115; Langacker 1991b:189):

- (80) That french fries is getting impatient.
 (81) They played lots of Mozart.

A cognitive linguistic analysis of metonymy is the ability of a speaker to select a different contextually salient concept profile in a domain or domain matrix than the one usually symbolized by the word. In (80)–(81), it is the nouns (*french fries* and *Mozart*) whose concept profiles are shifted. The evidence for this analysis is found in the grammar of the sentences. In (80), although *french fries* is plural, the demonstrative modifying it and the verb are singular, indicating that *french fries* is profiling the single individual who has ordered french fries. In (81), although *Mozart* is countable, the quantifier modifying it is used with mass nouns, indicating that *Mozart* is profiling the abstract uncountable music of Mozart.

b. Scope of Attention (Dominion)

The focus of attention – what is selected – is surrounded by a scope of attention, that is, a consciousness peripheral where entities are available to

attention (Chafe 1994:29). Example (82) provides an illustration of the scope of attention:

- (82) a. A body has two arms.
 b. A hand has five fingers.
 c. A finger has three knuckles and a fingernail.
 d. ?An arm has five fingers.
 e. ??A body has twenty-eight knuckles.

Another example of a grammatical constraint that makes reference to the scope of attention has to do with a combination of locative expressions specifying a location. Each locative expression profiles an entity in the scope defined by the preceding locative expression as presented in (83), and scrambling the order of locative expressions creates cognitive chaos as in (84):

(83) The money is in the kitchen, under the counter, in the left hand cabinet, on the top shelf, behind the meat grinder.

(84) The money is on the top shelf, in the kitchen, under the counter, behind the meat grinder, in the left hand cabinet.

c. Scalar Adjustment

The third component of attention is an adjustment of the scale of attention. It may be represented visually using the following example by presenting **coarse-grained** and **fine-grained** view of the scene (Talmy 1983:238):

- (85) a. She ran across the field.
 b. She ran through the field.

While both examples (85a-b) might be used to describe the same scene, (85b) invites the listener to consider the thickness of the vegetation in the field by assuming a three-dimensional volume; (85a) instead construes

the field as a two-dimensional surface without thickness. Granularity is frequently used to convey the conceptualization involved here. Example (85a) offers a coarse-grained view of the field, seen as if from a distance, so that the thickness of whatever covers the field is invisible to us. Example (85b) provides a fine-grained view of the field, as if we were magnifying our view to see its thickness. This example demonstrates quantitative scalar adjustment, which is the process of construing an object by modifying the granularity of its scalar dimensions, in this instance, the three spatial dimensions. Scalar adjustment is also present in other measurable dimensions.

Langacker also includes what he calls "schematization" under the same category. Schematization is a *qualitative scalar adjustment*. Rather than losing a quantifiable scale or dimension, unnecessary qualities are lost. For example, the term triangle indicates the number of sides of the shape, but the more schematic polygon, which might be used to describe the same shape, is vague about its number of sides (Langacker 1987:135).

d. Dynamic Attention

While the first three characteristics of attention, focus, scope, and scale of attention are all static construals of a scene, the fourth aspect of attention is dynamic: one's attention may move throughout a scene. The fact that this is a question of conceptualization, rather than just a truth about the reality, is demonstrated in (86):

(86) The road winds through the valley and then climbs over the high mountains.

Although the road does not truly move anywhere, it is conceptualised as if it does: one's mind's eye, so to speak, shows one as moving along the

road. Talmy (2000) describes this as "fictive motion," because it is a construal of a static scene in dynamic terms. Of course, speakers frequently construe static scenes statically and dynamic scenes dynamically, which explains why predicates distinguish between state and process. However, example (86) and other similar examples illustrate that this semantic property is subject to construal.

Langacker contrasts between summary scanning, which is a holistic conceptualization of an entire scene, and sequential scanning, which is a scanning of a scene in conceived time (Langacker 1987:144–45, 248–49). For instance, when a verb predicates an action, as in ‘*the Boston Bridge collapsed*’, the event is scanned sequentially and in chronological order. By contrast, when the verb is nominalized in a referring expression, such as ‘*the collapse of the Boston Bridge*’, the event is construed summarily as a whole unit without being scanned over time, despite the fact that the event occurred objectively over an interval of time. Scanning in summary or sequential order is not synonymous with fictive motion. Fictive motion represents the state/process construal, but summary/sequential scanning underlies the difference between sentence predication and non-predicated states of affairs. According to Langacker, ‘*the road in the valley*’ involves sequential scanning because its motion is predicated, but ‘*the road winding through the valley*’ requires summary scanning since the road's (fictive) motion is not predicated.

2. Judgement/Comparison

Kant describes judgement, which he regards as a fundamental cognitive ability, as a specific type of comparison: "judgement in general is the faculty of thinking the particular as contained under the universal" (Kant

1790 [1952]:18). Additionally, Langacker (1987:103–05) regards comparison as a basic cognitive operation. Thus, the basic philosophical concept of judgement may be linked to the cognitive psychological process of comparing, which is what we do when we make decisions.

a. Categorization

Perhaps the most basic comparison judgement is categorisation. The act of categorization involves associating a word, morpheme, or construction with a specific experience to be communicated; it entails comparing the new experience to prior experiences and determining whether it belongs to the class of prior experiences to which the linguistic expression has been applied. There are several ways to compare and judge if a situation is similar to a former experience. The selection of a linguistic category in reference to a previous situation frames—or construes—the current situation differently, as in *foetus* vs. *unborn baby* or *thrifty* vs. *stingy*. Along with the flexibility to frame a situation by comparing it to one or more former situations, speakers also have the flexibility to frame the current situation by comparing it to a prior one, thereby redefining the frame. For example, upon entering a holding pattern over Milan airport, a pilot said, "*We'll be on the path they call a racetrack; that's essentially a circle with two straight sides*"—a significant reconceptualization of the category "circle."

Langacker discusses the procedure of comparing the current situation to the sanction category to which it has been assigned (Langacker 1987:66–71). He distinguishes between full sanction, a straightforward subsumption of the new situation, and partial sanction, a more creative extension of the category to the present situation. Categorization entails both schematization and judgement: when we compare a new experience to previous ones and

categorise it in one way or another, we attend to some characteristics and ignore others.

b. Metaphor

Metaphor is another construal operation widely discussed in cognitive linguistics that also involves judgement or comparison. It entails a relationship between a *source domain*, which serves as the source of the literal meaning of the metaphorical expression, and a *target domain*, which serves as the domain of the experience being represented by the metaphor. For instance, "to waste time" entails comparing TIME (the target domain) to MONEY (the source domain) using the Lakoffian metaphor of "time is money" (Lakoff and Johnson 1980). Time is construed as a valuable thing that human beings possess and can be "used" in the same way that money is.

c. Figure-ground Alignment

Figure-ground alignment is a third example of comparison as a linguistic construal. Figure-ground alignment appears to be largely impacted by the scene's objective properties, but these may be overcome in a variety of ways (that is, it is subject to construal). Talmy brought the figure-ground distinction into cognitive linguistics via Gestalt psychology (Talmy, 1972, 1983, 2000). Talmy employs the figure-ground relation to account for how spatial relations are expressed in natural language. In language, all spatial relations – whether location (87) or motion (88) – are expressed by identifying the position of one object, the figure, relative to another object, the ground (or, in rare cases, many ground objects, as in [89]–[90]):

(87) The book [*figure*] is on the floor [*ground*].

(88) Sheila [*figure*] went into the house [*ground*].

(39) The Isaac CDs [*figure*] are between Comp`ere [*ground*] and Josquin [*ground*].

(90) Greg [*figure*] drove from San Rafael [*ground*] to Trinidad [*ground*] in five hours.

In the narrower domain of spatial relations, Talmy distinguishes the following features of objects that favour figure or ground construal (based on Talmy 1983:230–31; also Talmy 2000:315–16):

Figure	Ground
location less known	location more known
smaller	Larger
more mobile	more stationary
structurally simpler	structurally more complex
more salient	more backgrounded
more recently in awareness	earlier on scene/in memory

Table2: Some Characteristics of Figure and Ground

3. Perspective/ Situatedness

Perspective, particularly deixis, is probably the most apparent and discussed of the construal procedures. Perspective is important, particularly for spatial descriptions, and its dependence on the speaker's relative location and viewpoint is well-known. However, perspective exists in non-spatial domains as well; we have a perspective that is based on our knowledge, beliefs, and attitudes, as well as our spatiotemporal location. The most closely related cognitive feature to perspective in broad terms is probably the

philosophical concept of our situatedness in the world in a given location, where location must be construed widely to encompass temporal, epistemic, and cultural context in addition to spatial location. This expansive view of location corresponds to what Heidegger, the phenomenological philosopher, refers to as Being-in-the-world. According to Heidegger, Being-in-the-World is more than a matter of spatial inclusion; it is the basic situatedness of existence in all aspects.

a. Viewpoint

It is simplest to begin with spatial examples when demonstrating perspectival construals. Langacker (1987:122–124) says that viewpoint is a type of focal adjustment that has two types: *vantage point* and *orientation*. The speaker's viewpoint point is demonstrated in (91a–b): whether *Timmy is in front of or behind the tree* is dependent on the speaker's *vantage point*. A particular vantage point imposes a foreground-background alignment on a scene (ibid., 124–25).

(91) a. Timmy is **in front of** the tree.

b. Timmy is **behind** the tree

Timmy's location can be construed differently merely by the speaker moving his or her position; that is, the linguistically communicated spatial relation is dependent on the speaker's situatedness. Orientation is a term that refers to the vertical dimension of a person as described by their canonical upright position. The choice of "above" and "below" in (92a–b) is an example of orientation: the actual chimney-window orientation is relative to the speaker's canonical orientation.

(92) a. The chimney is **above** the window.

b. The window is **below** the chimney.

Alternative construals for orientation are much rarer, since we rarely go around standing on our heads or hanging from our feet.

b. Deixis

Deixis is the use of elements of the subject's situatedness in a speech event to denote something in the scene. Deixis has been extensively investigated, and it will be studied as a construal in this section. Person deixis—the pronouns *I*, *you*, *he/she/it*, *us*, and *they*—is defined only in relation to the speaker, and this variation is an illustration of alternative construals established by the speech act situation. Similarly, deictic demonstratives such as *this* and *that*, as well as deictic time references such as present and past tense, are defined only in terms of the location and time of the speech event.

The usage of the definite and indefinite articles is the simplest example of epistemic perspective. The following examples (93a–b) provide an alternate construal of what the listener knows:

(93) a. Did you see a hedgehog?

b. Did you see the hedgehog?

Example (93a) implies that the hedgehog is unknown to the listener, but (93b) implies that it is a part of their common ground. The construal in (93b) might also be applied in situations when the hearer is unaware of the hedgehog, as a means of surprising the hearer with the discovery by manipulating the epistemic deictic construal.

c. Subjectivity

The final perspective-related construal operation in Table 1 is Langacker's notion of subjectivity/objectivity. This refers to one's

conceptualization of a situation that involves the speaker. Two straightforward examples show the alternative construals (Langacker 1987:131):

(94) [*said by mother to child:*]

- a. Don't lie to me!
- b. Don't lie to your mother!

The speaker in Example (94a) is construed subjectively using a deictic personal pronoun, defining her identity in relation to the speech act circumstance. Example (94b) involves objectification: the speaker describes herself in terms independent of the speech act situation.

4. Constitution/Gestalt

The construal operations described in this section are the most fundamental level of constituting experience and imparting it with structure or Gestalt, as defined by Gestalt psychologists (Koffka 1935; Wertheimer 1923 [1950]) and phenomenologists such as Husserl (who uses the term "constitution" in a similar context; see Husserl 1948 [1973]). For instance, many of Gestalt psychology's concepts, such as proximity, bounding, and good continuation, are assessments of how human minds construe a single complex entity from apparently fragmented perceptual perceptions.

a. Structural Schematization

Structural schematization is a term that refers to the conceptualization of the topological, meronomic, and geometrical structures of entities and their component parts. Individualization is the first subgroup of structural schematization. It encompasses whether entities are individuated (boundedness), their unity and relationship to their parts, and their

multiplicity if more than one individual is construed. These fundamental structural qualities of entities are manifested in the choice of a count noun, mass noun, or pluralia tantum form for nouns, and aspectual inflections for verbs. Even these qualities are construal-dependent. Boundedness, for example, is not only a spatial or material property. A *person*, *star*, and *island* represent individuals bounded spatiotemporally, but a *team*, *constellation*, and *archipelago* are also bounded entities (count nouns) where the speaker has construed them as whole units with distinct parts (Langacker 1987:200–1).

Often, there are several expressions for what appear to be the same entity that differ in their construal of structure. For instance, whereas *chocolate* is a homogenous, unbounded entity as a mass noun, *a chocolate* is a bounded entity with an internal structure, which is the typical construal of a count noun. Once more, the mass noun denotes a coarser-grained scalar adjustment. Countability also interacts with qualitative scalar adjustment: a *chair* construes the entity as individuated and of a specific type; *furniture* construes it as an abstract mass along with *tables*, *sofas*, *beds*, and so on in a coarse-grained schematization. The bounded/unbounded structural schematization also applies to states and processes. The simple tense/aspect in *Ira is a nuisance* construes Ira's behavior as a temporally unbounded behavioral trait of Ira that abstracts away from individual instances of nuisance behavior on Ira's part. On the other hand, the progressives in *Ira, stop being a nuisance!* It provides a finer-grained scalar adjustment that construes an individual bounded action of Ira's.

Image schemas such as containers or surfaces represent a construal of a more specific topological or geometric structure of objects. There are some natural construals of items that lend themselves toward being containers or

flat objects, such as *in the box* or *on the carpet*; nonetheless, there are several examples of alternate construals of objects (Herskovits 1986:76):

- (95) a. There is milk in the bowl.
 b. There is dust on the bowl.

If there is a lot of dust or a few drops of milk, the actual spatial configuration of figure and ground in (95a) and (95b) is not that much different. But since the function of bowls is to contain potable liquids, the bowl is construed as a container with *in* in (95a), and since dust is thought of as an extraneous substance, the bowl is construed as a surface with *on* in (95b).

Another image schema that imposes a structure is the **scale** image schema, which provides a gradable dimension to a domain, which may or may not be measurable. Here we simply note that the same domain may be construed with a scale (in contrast to a polar construal, as in [96a–b] and [97a–b]), or construed as calibratable, as in (98), a domain not usually considered measurable:

- (96) a. Sally's pregnant.
 b. Sally's very pregnant.
 (97) a. Here is a used washing machine.
 b. Let me offer you this slightly used washing machine for only \$300!
 (98) a. This Sauternes has a fragrant bouquet.
 b. The bouquet of the Fargues is twice as fragrant as that of the Climens.

b. Force Dynamics

The force dynamic model of event conceptualization is a second important category of constitutive construals (Talmy 1976, 1988b, 2000). The force dynamic model is an generalisation of the notion of causation, in

which processes are conceptualised as involving several types of forces operating in distinct ways on the event's participants. The examples in (99) exhibit some of Talmy's force-dynamic patterns:

(99) a. I kicked the ball.

b. I held the ball.

c. I dropped the ball.

Example (99a) represents the prototypical causative type: an antagonist (the causer) forces an agonist (the causee – the ball) that tends towards rest to move. Example (99b) extends the notion of causation to maintaining a rest state: the antagonist resists the agonist's tendency to move. Example (99c) further extends to notion of causation to enablement: the antagonist acts in a way that allows the agonist to exert its tendency towards motion.

Different verb choices, voice forms, and argument linking constructions convey distinct conceptualizations of the event's force-dynamic structure. For instance, (100a) construes the situation as force dynamically neutral (i.e., static), but (100b) construes the situation as possessing a force-dynamic value capable of resisting the effects of some (unspecified) force-applying process.

(100) a. The bowl was on the table.

b. The bowl stayed on the table.

c. Relationality (Entity/ Interconnection)

Numerous semanticists make a distinction between relational and non-relational entities. A relational entity inherently implies the existence of another entity. For instance, an adjectival concept such as *ROUND* cannot be conceived without reference to something *round*, but a verbal concept such

as *RUN* cannot be conceived without reference to a runner. A non-relational entity can be conceived in this manner: for instance, a nominal concept such as *TABLE* can be conceived independently of another entity.

According to Langacker (1987:214–17), the distinction between nouns ('things' in his conceptual terminology) and adjectives or verbs is that the latter are relational, whilst the former are not (Langacker 1987:214–17). Thus, in Langacker's conceptual scheme, verbs ('processes') are construed as relational and scanned sequentially; adjectives and other modifiers ('atemporal relations') are regarded as relational but scanned summarily; and nouns ('things') are construed as non-relational and scanned summarily.

Langacker's idea of relationality is founded on his concept of things/nounhood. He believes that nounhood construes a concept as a region or "group of interconnected entities" (Langacker 1987:198); entities are non-relational. In contrast to non-relational things, Langacker defines a relational concept as "a profile of the interconnections between entities," whereas a noun is "a profile of the entities that are interconnected" (ibid, 216). For instance, the (non-relational) word *circle* may be thought of as profiling the points (entities) that constitute the circle, but the (relational) adjective *round* can be thought of as profiling the interconnections that determine the circle's curvature.

3.4 Previous Studies

The Cognitive Semantic approach has been employed to analyse different kinds of data from various fields. However, very few studies are conducted on the lexical (sense) relations from the cognitive semantic approach. There are many studies on lexical (sense) relations from traditional perspectives, and there are many studies of Cognitive Semantics

on different issues rather than lexical (sense) relations. However, this section tackles only some previous related studies, and each work studies an aspect of this approach to focus on a set of data.

The first study to start with was conducted by Kihara (2005) on the concept of irony from cognitive perspective. This article presented a theory that verbal irony is a reference to a mutually manifest expectation space without any distinct space builders, and analysed ironical utterances of verbal structure adopting Fauconnier's (1985) Mental Space Theory. The researcher concluded that verbal irony is a reference to an expectation space E without any distinct space builders. Space builders were recognized as ironical element.

Gharagozloo (2009) carried out a study on the concept of hyponymy from cognitive perspective. The author was concerned with the role of cognitive and mental abilities of humans in the formation of hyponymy sense relation at the level of words of Persian language. The researcher analysed some Persian simple structures including hyponymy adopting the theory of layered image schemas. The researcher concluded that, factors like perspective (focus point and reference point), profile and scanning, totally known as construal, have the main role of making developed image schemas in the minds of speakers.

McCaughren (2009) conducted a study on polysemy and homonymy. These two relations were presented with regard to word meaning to examine how they were dealt with in English. They were analysed adopting Image Schema Theory to show how the senses of a particular word are linked in a structural way and how this should ease the task of the lexicographer. The

researcher concluded that language that displays polysemy can be expressed in terms of image schemas. Moreover, when a polysemous word occurs in everyday communication, speakers have the ability to select the context-related meaning very rapidly. Perhaps, it is a result of using mental representations or schema to select the correct meaning.

A work on Construal Theory was added to the cognitive portfolio by Liu (2013). In this study, the researcher analysed the lexical relation synonymy by adopting the Construal theory. This study used both corpus and elicited data to examine the use of two sets of synonymous nouns (*authority/power/ right* and *duty/obligation/responsibility*). This study aimed to determine the fine-grained semantic differences among the nouns in each set and the key factors governing language users' decision-making pertaining to the two sets of synonyms. The researcher concluded that the corpus analysis and the results of the forced-choice study jointly showed that lexical salience and language users' construal are two key factors in the use of synonymous nouns.

Aajami (2019) presented a study on English vocabulary adopting the Cognitive Semantic Approach. This study aimed at testing the validity of the English vocabulary of second language learners adopting the theory of domain and how this theory increases vocabulary in second language learners. The model of analysis was based on the theory of semantic domains by Langacker (1987). This research tried to detect the reasonability of using the Domains theory in order to get a deep understanding of the semantic connectivity among words, identify the matrix domains and sub-domains, and used new vocabularies to sink deeply into their meanings. The selected data were seven words (*love, space, mother, war, food, school, and*

bird). The researcher concluded that the theory of domains can offer a considerable benefit in vocabulary learning.

Another work on the Cognitive Semantic approach in lexical studies was published by Abd Al-Hussein and Mayuuf (2021). This study aimed at finding classifications of lexical ambiguities in lexical (sense) relations in English literature and how these categories of lexical ambiguities were used in English Literature. This study adopted Lobner's (2013) approach to studying lexical ambiguities. The data in this study were collected randomly from different literary works. The researcher concluded that looking up what a word means in a dictionary is sufficient, but the context is the best way to determine the intended meaning.

Al-Qadi and Naser (2022) conducted a cognitive study on three lexical relations, namely: antonymy, synonymy, and polysemy. This study aimed at investigating the semantic relation aspects, including antonymy, synonymy, and polysemy, adopting usage-based cognitive semantics rather than the traditional use of semantics. The researcher concluded that language learners face challenges when they deal with semantic relations, e.g., synonymy, antonymy, and polysemy. Additionally, the researcher discovered that a cognitive semantic approach should consider extra-linguistic parameters when dealing with semantic relations, including synonymy, antonymy, and polysemy.

Finally, a study on etymologically related lexical pairs in cognitive was carried out by Altohami and Khafaga (2023). This study aimed at identifying and comparing some senses associated with the Qur'anic text and linking these senses to historical and theological contexts underlying the

use of the target pair to show how they were cognitively framed. This study adopted the cognitive semantic approach, especially the theory of Semantics by Fillmore (1976) and (2007). The data in this study included 20 etymologically related Qur'anic lexical pairs. The researcher concluded that etymologically-related lexemes in the Qur'anic text have the potential to generate distinct referential ranges as far as their historical and theological contexts are considered.

The present work is different from the previously mentioned studies at some points. It addresses all the types of lexical (sense) relations, namely synonymy, hyponymy, meronymy, antonymy, polysemy, homonymy, and metonymy. Unlike the previous studies, this work analyses these lexical (sense) relations from a Cognitive Semantic perspective, adopting three cognitive semantic theories, namely Image Schema, Mental Space, and Construal. The current study analyses these relations in different parts of speeches. This study addresses these theories entirely, as it incorporates their entire types, elements, and categories. Although Image Schema Theory has many types, Mental Space Theory has many elements, and Construal Theory has many categories, all of them are employed in this study without considering one and neglecting another.

CHAPTER FOUR

METHODOLOGY, DATA ANALYSIS, & RESULT DISCUSSIONS

4.1 Introduction

This chapter presents the methodology and the framework adopted in analysing the lexical (sense) relations, along with data analysis and result discussions. The adopted model of analysis makes use of some cognitive semantic theories, such as image schema, mental space, and construal, to analyse the lexical (sense) relations. As these theories are very broad, in this section, light has been shed on some original works. The subsequent section, method of analysis, presents the methods employed in analysing the lexical (sense) relations adopting a qualitative descriptive method. The last section is about data collection. The data in this study are examples extracted from original works, and these examples are all mentioned in the theoretical background chapter.

Moreover, cognitive representations of lexical (sense) relations are investigated, adopting three cognitive semantics theories, namely, Image Schema Theory, Mental Space Theory, and Construal Theory. The analysis passes through three stages. In each stage, the lexical (sense) relations (synonymy, hyponymy, meronymy, antonymy, polysemy, homonymy, and metonymy) are analysed using one of the cognitive semantic theories. The data collected to be analysed according to the aforementioned theories is thirty five. However, the data is overused three times or in three theories, so the examples analysed in this chapter are one hundred and five.

4.2 Model of Analysis

In this study, the lexical (sense) relations, which were traditionally studied within Lexical Semantics, are analysed and discussed in accordance with Cognitive Semantics. While Cognitive Semantics manifests different theories in the areas of meaning construction, conceptual structure of meaning, conceptualization of meaning, and configuration of meaning, the present study adopts three theories in analyzing some selected sentences that exhibit lexical (sense) relations.

The first theory employed in the analysis of examples of lexical (sense) relations is Image Schema Theory. This study adopts Mark Johnson (1987) and George Lakoff (1987). These two works present authentic account of image schema theory, and they present different patterns of image schema. This work tries to embody the lexical (sense) relations using these schematic patterns. Thus, this theory is used as the conceptual representation that depicts lexical items as schematic structures in the mind. Perception and conceptualization of lexical items are identified as embodied cognition in the mind.

The second cognitive semantic theory adopted in this study is Fauconnier's (1994 and 1997) Mental Space Theory, which is ideally used in meaning construction. This theory designs the conceptual structure for lexical items throughout the course or process of speaking. Every lexical item is partitioned in the mind according to this theory. Thus, this theory is manifested in the analysis of lexical (sense) relations to see how these lexical items are mentally depicted, structured, and connected to construct meaning.

The third cognitive semantic theory adopted for the analysis of lexical sense relation examples is Croft and Cruse's (2004) Construal Theory. One of the essential assumptions in cognitive semantics is that semantics is conceptualization, so this theory investigates the conceptualization and construal of the lexical (sense)

relations to find how these lexical items are construed in the mind. However, this theory incorporates a wide range of conceptualization processes that human beings employ in language. In other words, this theory is made up of four comprehensive categories, and each category includes sub-categories. Thus, this study employs all the categories and their sub-categories if applicable to the collected data.

The present study incorporates the three mentioned theories (Image Schema, Mental Space, and Construal) in an eclectic model of analysis as there is no ready model to cover them all. This adopted model investigates the examples employed in the lexical (sense) relations chapter to see how a lexical sense relation item is embodied as a schematic pattern, and how a lexical sense relation form a space to design conceptual structure in the mind and how this new formed space is linked to other spaces. Finally, this adopted model investigates the conceptualization of a lexical sense relation item in the mental structure.

4.3 Method of Analysis

After the model of analysis has been designed, adopting three cognitive semantic theories, the methods employed in analysing the collected data are presented in this section. The adopted lexical (sense) relations undergo the analysis of three cognitive semantic theories. Examples from each of the lexical (sense) relations discussed in chapter two, namely synonymy, hyponymy, meronymy, antonymy, polysemy, homonymy, and metonymy, are extracted to be analysed cognitively using the adopted theories. The analysis of these lexical (sense) relations passes through three processes, i.e., the analysis of these lexical (sense) relations is divided into three main stages.

In the first stage, the examples employed by the lexical (sense) relations are analysed adopting the Image Schema Theory. In this stage, the cognitive

embodiments of the lexical (sense) relations are depicted using schematic patterns. Thus, the examples of each lexical sense relation are analysed based on the cognitive framework of this theory, and an image schema pattern is designed to embody the lexical items in each relation. In other words, a schematic pattern is formed to represent a pair of synonyms or any other lexical (sense) relations in two identical sentences to investigate the image schema patterns involved in representing each synonym or any other lexical (sense) relations.

The second stage of the data analysis involves the analysis of the lexical (sense) relations adopting Mental Space Theory. In this stage, meaning of each lexical item in a sentence is cognitively constructed using spaces to form conceptual structures. Thus, the examples of each lexical sense relation are analysed using the components and the framework of this theory. In other words, a mental space structure is formed for the lexical items in each sentence to construct meaning. The relations between two synonyms, hyponyms, meronyms etc. are represented through the use of mental space in the conceptual structure.

The last stage involved in analysing the examples of the lexical (sense) relations adopts the Construal Theory. In this stage, two or more lexical items of the same relation are conceptualized in the mind, adopting different cognitive mechanisms employed in this theory. In other words, the conceptualization of a pair of synonyms, antonyms, hyponyms, homonyms, or other relations are analysed using all the components of this theory. Different cognitive mechanisms are incorporated in this study, and all of them are employed in the examples of the lexical (sense) relations if they are applicable to the employed examples and relations.

Thus, this study adopts a qualitative descriptive method of analysis to answer the questions and hypotheses in chapter one. In each stage, the same collected data are analysed using a cognitive semantic theory. Thus, the essential

goal of this study is to check whether these cognitive semantic theories can be employed in studying lexical (sense) relations or not?

4.4 Data Collection

The collected data for the analysis in this work are examples of lexical (sense) relations discussed in chapter two, so the collected data are all extracted from the theoretical background part of this study. Thus, the data are authentic, as they are mainly taken from books and articles. The data are all mentioned in chapter two to discuss the lexical (sense) relations adopted by lexical or traditional semantics. This study analyses seven types of lexical (sense) relations, and five examples are extracted from each relation. So, the collected data or examples for all relations are thirty five examples.

However, the same data is used in the analysis of all cognitive semantic theories. In other words, the thirty-five extracted examples from the theoretical part are overused in all three cognitive semantic theories, namely Image Schema, Mental Space, and Construal. Therefore, the overall data analysed contains one hundred and five examples. The data are cited from these works: (Brinton and Brinton, 2010), (Kreidler, 1998), (Cruse, 1986, 2000, 2002), (Cann, 2019), (Lyons, 1977), (Larson, 1984), (Hamawand, 2016), (Hinders, 2023), and (Al-Sulaimaan, 2011).

4.5 Analysis of Lexical (Sense) Relations Using Image Schema Theory

In this part, the adopted lexical (sense) relations are analysed adopting Image Schema Theory based on Johnson's (1987) and Lakoff's (1987) works. In this section, a cognitive account of each example is presented using image schema to embody the relation between the lexical items or between the senses. Moreover, a figure is drawn for each example to present the cognitive embodiment of the lexical (sense) relations in the conceptual structure.

I: Synonymy Relation

1a. The shirt is *pale* in colour.

1b. The shirt is *light* in colour.

This pair of synonyms is constructed using the SCALE image schema which represents a gradient or scale of colours ranging from dark to light. The synonyms 'pale' and 'light' involve a decrease in intensity of colour in the object 'the shirt', so they fall towards the lighter end of the scale as the qualitative degree or intensity of colour is reduced. This implies that 'the colour' is conceptualized as an object that has a certain degree of intensity. This schema is vertical in nature, with more intense colours mapped to the UP and less intense colours mapped to the DOWN. The use of these two synonyms implies a low degree of saturation or intensity, so they are conceptualized at the bottom of the scale. This schemata construction is illustrated in the following figure.

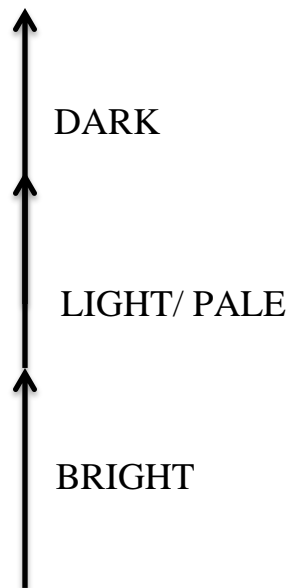


Figure (11) Scale Image Schema of Pale/ Light as Synonymy Relation

2a. The train travelled *fast*.

2b. The train travelled *rapidly*.

The FORCE schema is conceptualized in the construction of image schema in the above pair of sentences. This schema involves the movement of an object ‘the train’ through space in some directions which implicates a vector quality or directionality. A force was exerted against the object ‘the train’ that led to the movement of the train. The synonyms ‘fast’ and ‘rapidly’ describe the force vector that causes the movement of ‘the train’. These two synonyms identify the degree of power or the intensity of the force, i.e., a greater force is exerted on the movement of the train. The exerted force and the entity moved are organized as Gestalt structure. So, any given schema can be analysed and broken down because it has unified parts and patterns.

This pair of sentences is embodied by the COMPULSION FORCE type which refers to the idea that an object is moved by the external force along a path. Therefore, there must be an external force that caused the movement of the train

which is the ‘Train Operator’. The above two synonyms ‘fast’ and ‘rapidly’ represent the degree of the exerted force in this pattern. This image schema can be represented in the below figure as the dark long arrow refers to an actual force vector and the broken arrow represents a potential force vector. Moreover, (F1) refers to the actual force vector



Compulsion

Figure (12) Compulsion Image Schema of Fast/ Rapidly as Synonymy Relation

3a. Little Billy was so *brave* at the dentist this morning.

3b. Little Billy was so *courageous* at the dentist this morning.

The above pair of synonyms is formed using the complex image schema, as two image schemas are involved in the structure of these sentences. The first image schema is the ENABLEMENT FORCE schema. The trajector ‘Little Billy’ is conceptualised as having a sense of power to perform some action on him. The two synonyms ‘brave’ and ‘courageous’ initiate this sense of power, as there is no actualized or potential force vector to block this action. On the other hand, the second image schema is the CONTAINER schema. The trajector ‘Little Billy’ occupies a location inside the landmark ‘at the dentist’. The synonyms ‘brave’ and ‘courageous’ attribute the same property to the trajector element. However, the landmark is metaphorically used to refer to the dental clinic. So, the lexical item ‘dentist’ is referred to as the source domain, but the ‘dental clinic’ is referred to as

the target domain. The CONTAINER schema consists of three structural elements: interior, boundary, and exterior. In the below figure, the interior is situated within the boundary or within the circle, but the exterior is situated outside the boundary or the circle, i.e., within the square.

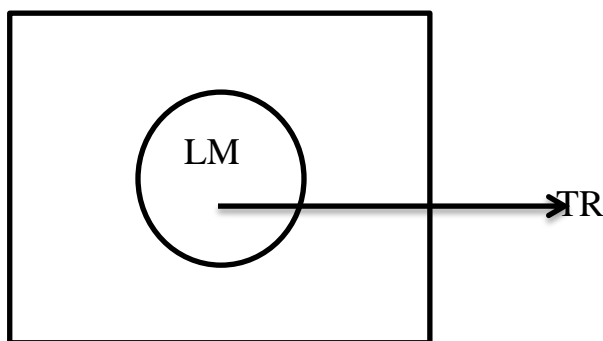


Figure (13) Container Image Schema of Brave/ Courageous as Synonymy Relation

4a. Sara may play a *violin* concerto.

4b. Sara may play a *fiddle* concerto.

The synonyms ‘violin’ and ‘fiddle’ in the above pair of sentences are conceived employing the same image schema pattern. This pair is formed using the FORCE image schema, specifically the REMOVAL OF RESTRAINT schema. The force is experienced through interaction as it affects an object. The force in these sentences is targeted by the agent ‘Sara’ to affect the objects ‘violin’ and ‘fiddle’. The REMOVAL OF RESTRAINT schema is used as an absence of external force, so both synonyms receive the same force and do the same action, i.e., making sound. There is no barrier blocking the action of ‘PLAYING’. The use of the modal verb ‘may’ conveys that some potential barrier to the action ‘PLAYING’ is absent or has been removed. The synonyms ‘violin’ and ‘fiddle’ receive the same force from the agent ‘Sara’. Accordingly, these two synonyms are

conceptualised similarly and maintain the same image schema pattern. In the below figure, the dark long arrow (F1) refers to an actual force vector, and the broken arrow represents the potential force vector that causes the ‘violin’ and ‘fiddle’, represented by a small square, to be played by the agent ‘Sara’.

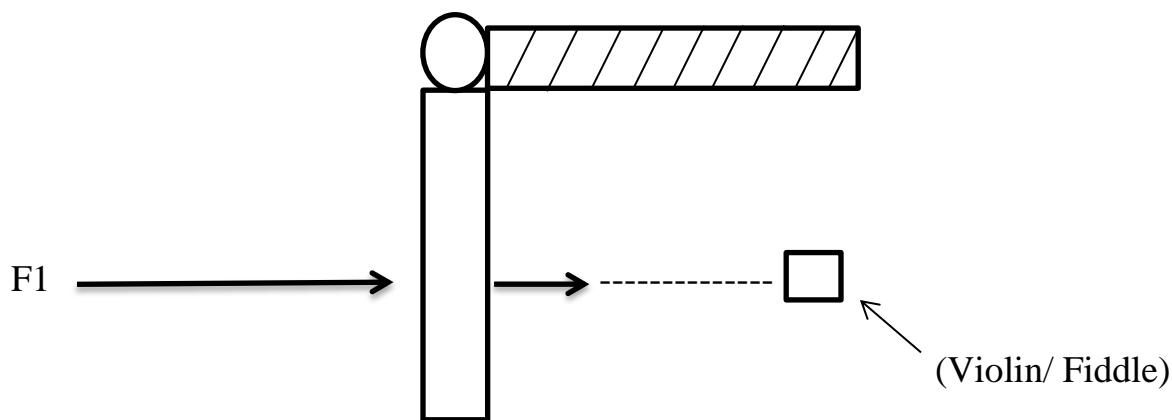


Figure (14) Removal of Restraint Image Schema of Violin/ Fiddle as Synonymy Relation

5. John was *killed*, but I can assure you he was not *murdered*, madam.

Due to its compound structure, the above sentence employs different image schema patterns. The two synonyms ‘killed’ and ‘murdered’ are the prevailing lexical items in the construction and conceptualization of image schema and each is conceptualized by a different schema pattern. The first clause is embodied using the COMPULSION FORCE schema which implies that there must be an external force vector to perform the action of killing. There must be someone who killed ‘John’. Thereby, the target, ‘John’ received a force vector, which is the action of ‘KILLING’ from an unknown agent. However, the second clause is made up using the BLOCKAGE FORCE schema. The negative particle ‘not murdered’ entails that this force vector was blocked or resisted. This implies that the target, ‘John’ was prevented or blocked from receiving the force from the agent. This schema pattern is identified in the below figure.

Another schema pattern can be interpreted from the above sentence. The synonyms ‘killed’ and ‘murdered’ are used in two different clauses, but there is a connection or a LINK schema between them. These two lexical items share a common schematic structure, and they are spatially contiguous within the perceptual and cognitive realm. The logical connective, ‘but’, acts as a link structure to relate these two lexical items, and establish a sort of connectedness between them in the conceptual structure.

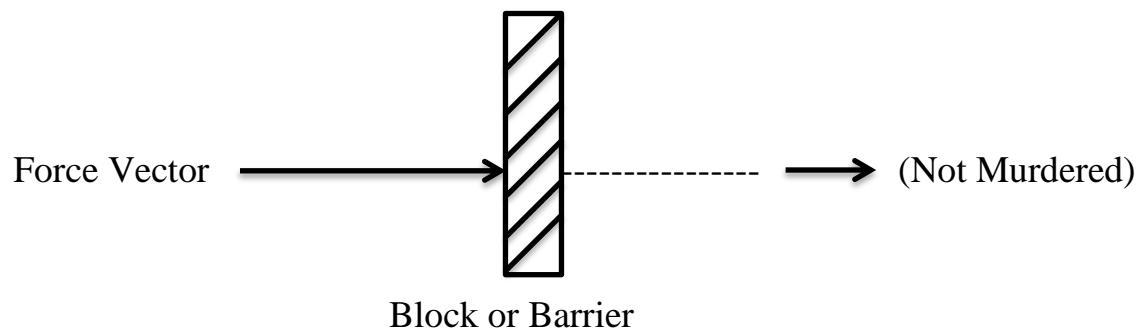


Figure (15) Blockage Image Schema of Killed/ Murdered as Synonymy Relation

II: Hyponymy Relation

6a: I bought some *flowers*.

6b: I bought some *roses and tulips*.

The above pair of sentences is formed using the LINK image schema. Inclusion structures are generally interpreted in terms of the LINK image schema and some others. This schema involves three structural elements: entity A, entity B, and a link connecting them. The entity A is represented by the superordinate ‘flower’, but the entity B is represented by the hyponyms ‘roses’ and ‘tulips’. The meanings of the hyponyms ‘roses’ and ‘tulips’ are included in the meaning of the superordinate ‘flowers’, whereas the meaning of ‘flower’ includes more than ‘roses’ and ‘tulips’. Thus, the link between these lexical items conveys an asymmetric schema structure, as the meaning of entity B is included in the

meaning of entity *A* but not the opposite. Moreover, these two entities share some features, and these shared features are the cognitive links. The conceptual representations of the hyponyms and the superordinate are interwoven. However, this type of link is manifested as a Genetic Connection in which one or more entities are related to (connected with) a source.

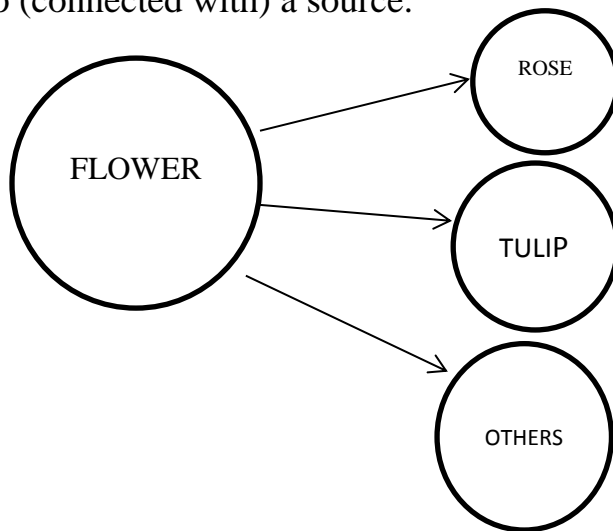


Figure (16) Link Image Schema of Flowers/ Roses and Tulips as Hyponymy Relation

7a. If all *cars* are forbidden, I shan't go.

7b. If all *vehicles* are forbidden, I shan't go.

There are different natural relationships between image schema patterns, and this sentence holds a transformation relation from the FORCE schema to the PATH schema. The first clause in each sentence is patterned using the BLOCKAGE FORCE image schema. The conditional subordinator 'If' entails the POSSIBILITY of a BLOCKAGE to block the force vector. The source of this blocking power is unknown. Hence, the force vector is being diverted due to the interaction with the BLOCKAGE power, and this barrier leads to the transformation of the schema. Thus, this force power blocks the movement of the hyponym 'cars' and the superordinate 'vehicles'. However, the second clause in

each sentence resumes the action and inverts or transforms the diverted BLOCKAGE power into PATH schema. This schema is made up of three patterns: a source or the current point, a goal or an end point, and a sequence of contiguous locations connecting the source with the goal. The source point (A) is known, but the destination or goal point (B) is unknown, i.e., the path from the source to the goal is unknown. Moreover, the PATH towards the GOAL is based on a condition. Thus, the PATH moves forward if the condition is fulfilled. Furthermore, the hyponym ‘cars’ and the superordinate ‘vehicles’ share some characteristics as they are conceptualized as LINK schema, and they undergo the same BLOCKAGE power. The below figure represents the BLOCKAGE schema, that stops the cars and vehicles from moving.

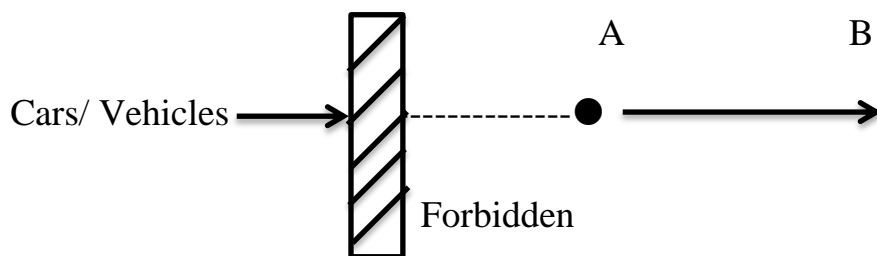


Figure (17) Blockage Image Schema of Cars/ Vehicles as Hyponymy Relation

8a. There’s a *palomino* in that field.

8b. There’s a *horse* in that field.

The above pair of sentences employs two image schema patterns: LINK and CONTAINER. As the hyponym ‘palomino’ and the superordinate ‘horse’ share some features, and the meaning of one is included in the meaning of the other, they are embodied using the LINK image schema. However, in these two constructions, the prepositional phrase ‘in that field’ denotes the presence of these lexical items in a PLACE.

Therefore, these two sentences use the CONTAINER image schema. In these schematic structures, an apparent spatial orientation is found between the

landmark ‘field’ and the trajector ‘horse and palomino’. However, different representations of schema are realized in each sentence. In the case of the hyponym ‘palomino’, a specific trajector is identified in the landmark, whereas in the case of the superordinate ‘horse’ the trajector is indefinite in the landmark. The two lexical items ‘palomino’ and ‘horse’ as trajectors correspond to the entity that undergoes or occupies a space in the landmark ‘in that field’. The hyponym and the superordinate items convey two concepts that are motion and containment. However, this indicates that image schema can present varying degrees of schematicity. In the below figures, the coloured horse refers to palomino, but the silhouette refers to horse.

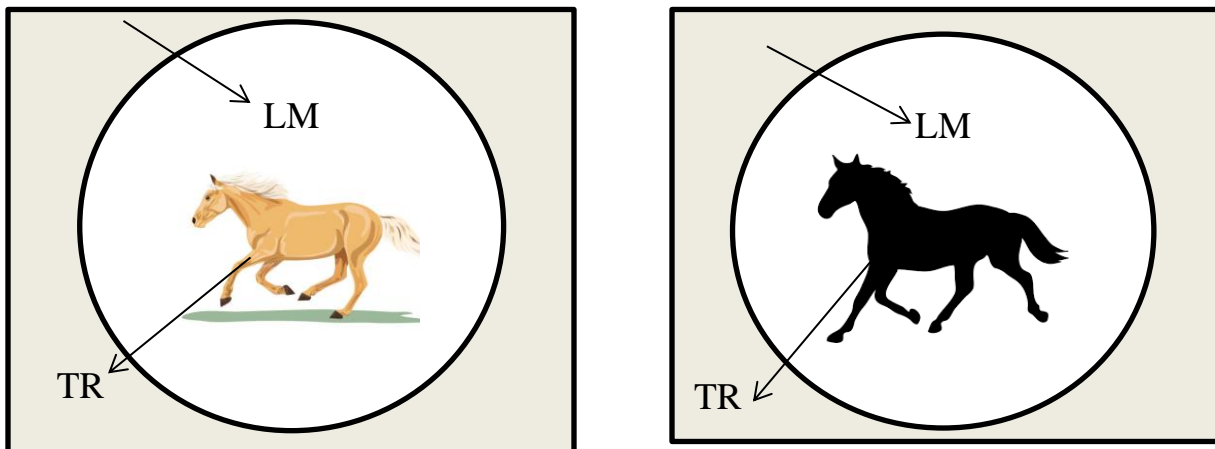


Figure (18) Container Image Schema of Palomino/ Horse as Hyponymy Relation

9a. The weary soldiers *trudged* forward.

9b. The weary soldiers *moved* forward.

This pair of sentences has a similar structure but different perceptual representations. The hyponymy relation in this pair is conceptualized using LINK and COMPULSION FORCE image schema patterns. The LINK image schema involves three structural elements: entity *A*, entity *B*, and a LINK connecting them. The entity *A* is represented by the superordinate ‘moved’, but the entity *B* is

represented by the hyponym ‘moved’. The link between these entities is that the meaning of the hyponym is included in the meaning of the superordinate, so these two entities are conceptually interwoven as they share similar features.

However, the COMPULSION FORCE image schema embodies this relation differently. The use of the hyponym ‘trudged’ and the superordinate ‘moved’ conveys that ‘the weary soldiers’ undergo an external force that leads them to leave one point and go forward to another. The motion of ‘the weary soldiers’ is not spontaneous as some other verbs are not used, for instance ‘walk’, ‘run’ or ‘stroll’. Accordingly, these two constructions are perceived with a COMPULSION FORCE image schema. This force power moves the agents, ‘the weary soldiers’, with different degrees or intensity of power as the motions ‘trudged’ and ‘moved’ are perceived differently. The hyponym ‘trudged’ construes that the agent spent more power than the situation in the superordinate ‘moved’. Thus, this force has the vector quality as it moves the agent from one source to another. As a result, this force has the PATH OF MOTION quality, as the agent is moved along a path, as shown in the following figures:

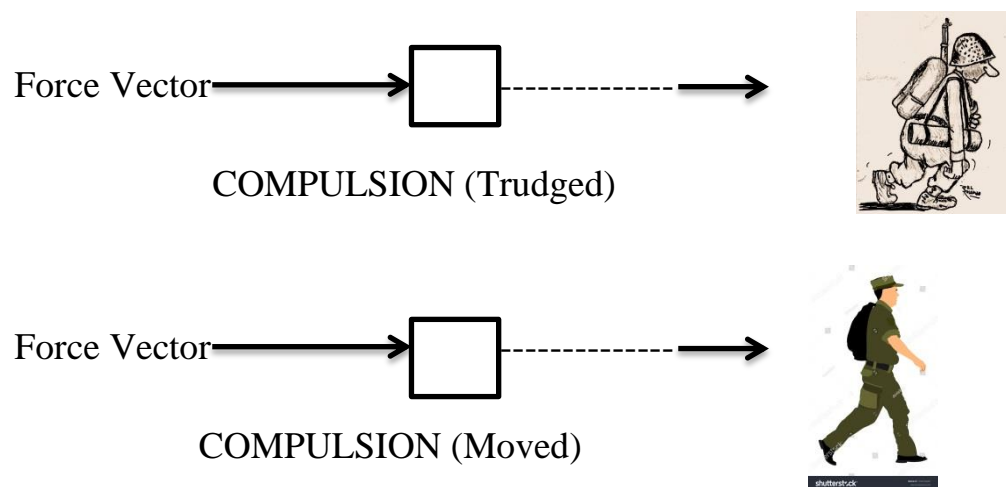


Figure (19) Compulsion Image Schema of Trudged/ Moved as Hyponymy Relation

10a. The *oak* produces fruit every other year.

10b. The *tree* produces fruit every other year.

The inclusion relation between the hyponym ‘oak’ and the superordinate ‘tree’ is embodied using two schematic patterns. The first schematic pattern is represented by the LINK image schema. The cognitive link between these two entities is represented by the shared features, as the meaning of the hyponym entity is included in the meaning of the superordinate entity. However, the other schematic construction of these sentences is different due to the use of the prepositional phrase ‘every other year’. This phrase conveys the experience of producing fruit within a cyclic process. Therefore, these two sentences are embodied using the CYCLE image schema. The use of ‘every other year’ entails that the hyponym ‘oak’ and the superordinate ‘tree’ undergo a cyclic or temporal relation with the item ‘fruit’. This schematic cyclic structure starts with an initial stage, then a sequence of connected events is processed, and finally it ends where it started. These cyclic procedures are applied to the hyponym ‘oak’ and the superordinate ‘tree’, as shown in the following figures. Figure (A) represents the cycle of ‘acorns’ as the tree ‘oak’ is identified, whereas figure (B) represents the cycle of ‘a fruit’ of any tree, i.e., an unidentified type of tree.

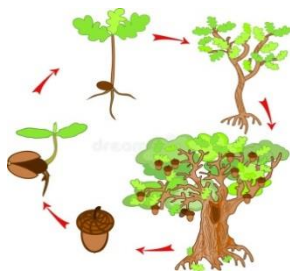


Figure (A)

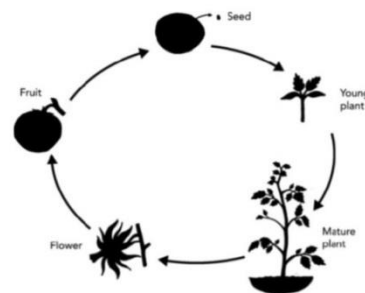


Figure (B)

Figure (20) Cycle Image Schema of Oak/ Tree as Hyponymy Relation

III: Meronymy Relation

11a: Mary hurt her *finger*.

11b: Mary hurt her *hand*.

Hierarchical relations are generally interpreted using PART-WHOLE or UP-DOWN image schema patterns. The meronym ‘finger’ and the holonym ‘hand’ in the above sentences are conceived employing the PART-WHOLE image schema. This schematic pattern involves three structural elements: WHOLE, PARTS, and CONFIGURATION. The WHOLE element is represented by the holonym ‘hand’, but the PART element is represented by the meronym ‘finger’. The meaning of the meronym ‘finger’ is included in the meaning of the holonym ‘hand’, whereas the meaning of ‘hand’ includes more than ‘finger’, which may be ‘palm’ or ‘wrist’. The CONFIGURATION between the meronym and holonym items conveys an asymmetric schema structure as they are conceived in different spaces in the conceptual structure. Moreover, the CONFIGURATION is asymmetric, as the relation between the WHOLE element and the PART element does not hold in both directions. In other words, unlike the meronym item ‘finger’, the holonym item ‘hand’ cannot enhance the embodiment of the exact hurt part of hand.

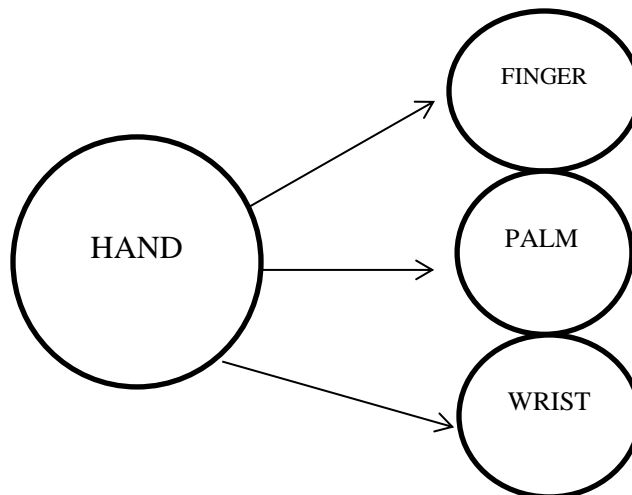
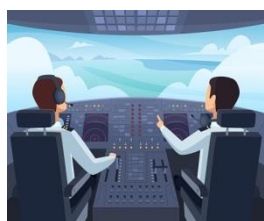


Figure (21) Part-Whole Image Schema of Finger/ Hand as Meronymy Relation

12a. John is in the *cockpit*.

12b. John is in the *aeroplane*.

This pair of sentences can be illustrated conceptually with two different types of image schema. The meronymic lexical items ‘cockpit’ and ‘aeroplane’ are perceived conceptually employing the PART-WHOLE image schema. Therefore, the PART element is embodied by the meronym item ‘cockpit’, whereas the WHOLE element is embodied by the holonym item ‘aeroplane’. These two elements are related lexically and conceptually as there is a CONFIGURATION relation between them. In other words, the meaning of the PART element is included in the meaning of WHOLE element. This schematic structure is not enough to understand this sentence, so another image schema is involved to construe its meaning. The CONTAINER image schema is used as well due to the use of the preposition ‘in’. This schema is interpreted using Landmark and Trajector. The entity ‘John’ is referred to as a trajector since it undergoes motion and position, whereas the meronym ‘cockpit’ and the holonym ‘aeroplane’ represent the landmark. According to the CONTAINER schema, the trajector ‘John’ occupies a definite landmark in the meronymic part ‘cockpit’. On the other hand, the position of the trajector is not quite identified in the second sentence, as the landmark or the holonym item designates a general concept. These orientations are depicted in the following figures. Figure (A) represents sentence A, whereas figure (B) represents sentence B.



(A)



(B)

Figure (22) Container Image Schema of Cockpit/ Aeroplane as Meronymy Relation

13. It's a *university*, but it doesn't have a *medical school*.

The above compound sentence is made up of two image schema patterns. The meronym 'medical school' and the holonym 'university' share some features, so the prevailing schematic pattern is the PART-WHOLE schema. The WHOLE element is represented by the holonym lexical item 'university', whereas the PART element is represented by the meronym item 'medical school'. The CONFIGURATION between these two elements is that the meronym 'medical school' is a subset of, or included in, the holonym 'university'. Due to the use of the verb 'have' another image schema is involved, which is the CONTAINER schema. This verb reveals the schematic concept of CONTAINMENT or INCLUSION. The negative form of this verb, 'doesn't have', however, implies that the holonym 'university' DOES NOT CONTAIN the meronym 'medical school', i.e. the meronym 'medical school' is not part of the holonym 'university' in this context. Normally, universities HAVE or contain medical schools, but this university doesn't have or contain any. The CONTAINER image schema consists of three elements: interior, exterior, and boundary. The exterior element is represented by the holonym 'university', whereas the interior element is represented by the other academic structures in the university except 'medical school'. Thus, the landmark is referred to as the holonym and it is represented by the big square, but the trajector is not the "medical school," but other university structures.

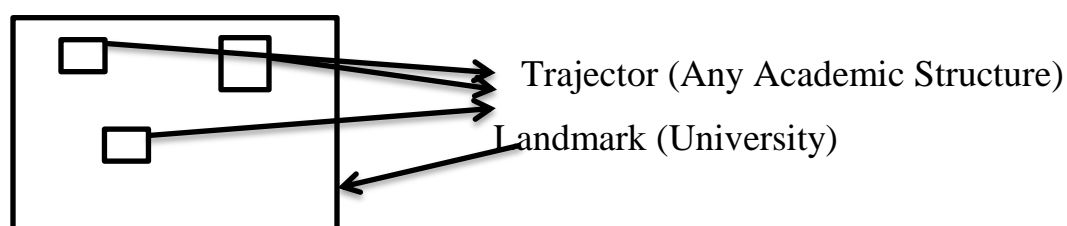


Figure (23) Container Image Schema of Medical School/University as Meronymy Relation

14. The *sleeves* of this *jacket* have no *cuff*.

The lexical hierarchy between the meronyms ‘sleeves’ and ‘cuff’ and the holonym ‘jacket’ explicates a clear relation between them, so PART-WHOLE image schema is involved as a result. This image schema pattern is made up of three elements: PART, WHOLE, and CONFIGURATION. The WHOLE element is embodied by the holonym ‘jacket’, whereas the PART element is depicted by the meronyms ‘sleeves’ and ‘cuff’. However, the CONFIGURATION between the holonym ‘jacket’ and each meronym ‘sleeves’ or ‘cuff’ is unbalanced. Due to this asymmetric relation, a cognitive concept called ‘scope of attention’ appears in this configuration, as the holonym ‘jacket’ is in relation to the two meronyms ‘sleeves’ and ‘cuffs’. This concept shows how these two meronyms activate different scopes or spaces in the conceptual structure. Thus, the configuration between the holonym ‘jacket’ and the meronym ‘sleeves’ activates an immediate scope in the conceptual structure, whereas the configuration between the holonym ‘jacket’ and the meronym ‘cuff’ activates an maximal scope in the conceptual structure. Therefore, the two meronyms are in different relations to the holonym item. Furthermore, the verb phrase ‘have no’ explicates a new image schema of CONTAINMENT. The holonym ‘jacket’ is schematised as an object that includes or contains other meronyms such as ‘cuff’ and ‘sleeves’. However, in this context the meronym ‘sleeves’ is not CONTAINED in the holonym ‘jacket’, due to the use of *have no*.

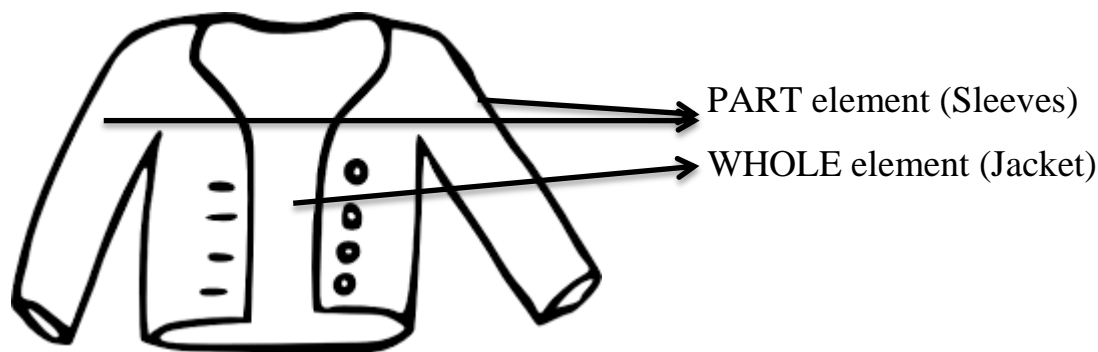


Figure (24) Part-Whole Image Schema of Sleeves/ Jacket as Meronymy Relation

15a. The *table-leg* was damaged.

15b. The *table* was damaged.

These two constructions trigger two different image schema patterns: PART-WHOLE image schema and FORCE image schema. The meronym ‘table-leg’ in the first sentence and the holonym ‘table’ in the second sentence share some features, so PART-WHOLE image schema is initiated. The WHOLE element is represented by the holonym ‘table’, but the PART element is represented by the meronym ‘table-leg’. The CONFIGURATION relation between these two elements demonstrates INTEGRITY. In this structure, the meronym is an integral part of the holonym ‘the table’. Moreover, the verb ‘damage’ in both sentences leads to the use of the COMPULSION FORCE schema as well. An external force causes damage to the meronym ‘table-leg’ in the first sentence and the holonym ‘table’ in the second sentence. However, the damage that was caused by the exerted force in both sentences is unknown. In other words, it is unknown whether the exerted force damaged the holonym ‘table’ or a part of it, i.e., ‘a meronym’. The schematic structures of these sentences are depicted in the following figures.

The figure (A) represents the first sentence in which a COMPULSION FORCE (F1) damaged the meronym ‘table-leg’. However, the figure (B) depicts the second sentence in which a COMPULSION FORCE (F1) damaged the holonym ‘table’.

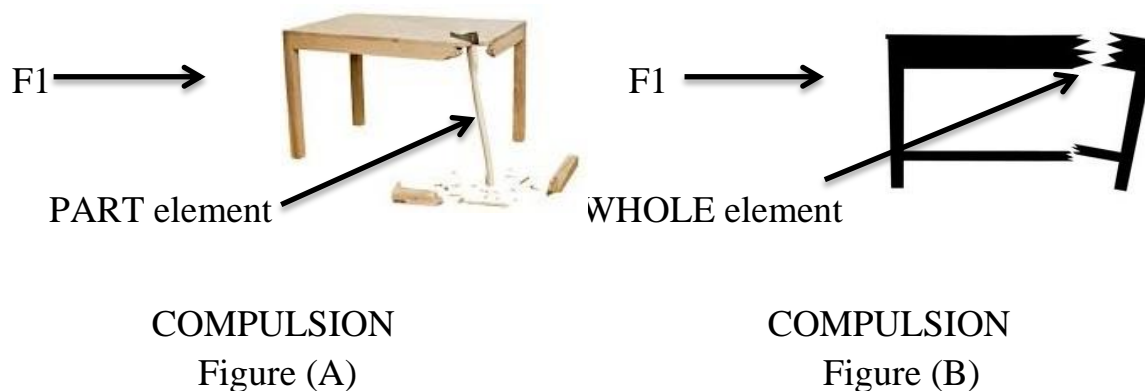


Figure (25) Compulsion Image Schema of Table-leg/ Table as Meronymy Relation

IV: Antonymy Relation

16. John is a *bad* tennis player, but he is *better* than Tom.

Antonymy structures are generally perceived using SCALE and VERTICALITY image schema patterns. The antonyms ‘bad’ and ‘better’ form the SCALE image schema. This schema accounts for quantitative and qualitative aspects or qualities of an object or a person, i.e., the number or quality of an item can be decreased or increased using the schematic structure of this pattern. From this perspective, these two antonyms are conceptualised as having certain degrees of intensity. In this case, the schematic structure of these antonyms can be viewed in terms of less, more, and the same. Accordingly, the antonym in the first clause, ‘bad’, is viewed as having less quality or standard, whereas the antonym in the second clause, ‘better’, is conceived as having more quality or standard. Therefore, these two antonyms are related, as one denotes LESS quality than the other, and the other denotes MORE quality than the other, so they can be comprehended virtually in terms of SCALARITY. Another image schema that can be used in conceptualizing the antonyms in this sentence is IDENTITY pattern. There is a sort of MATCHING between the entity ‘John’ and the quality ‘bad’ on one hand and between ‘Tom’ and ‘better’ on the other hand. The schema enables the perceiver to understand how John's identity as a tennis player is characterised by both being ‘bad’ and being ‘better than Tom’, emphasising the comparison of qualities while maintaining the central role of identity.

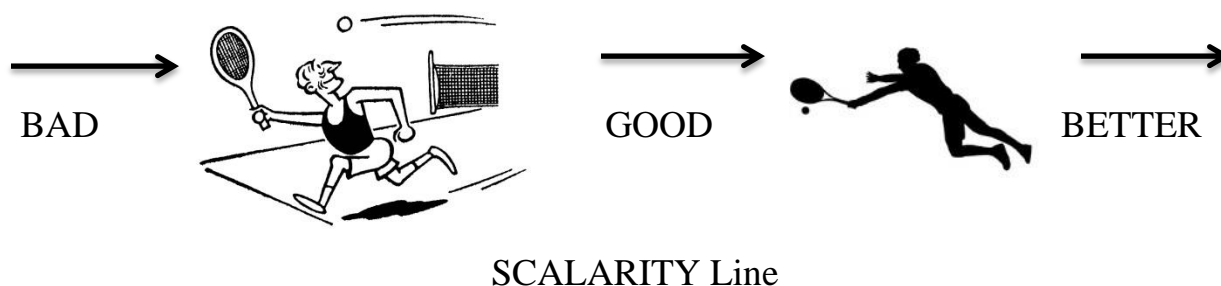
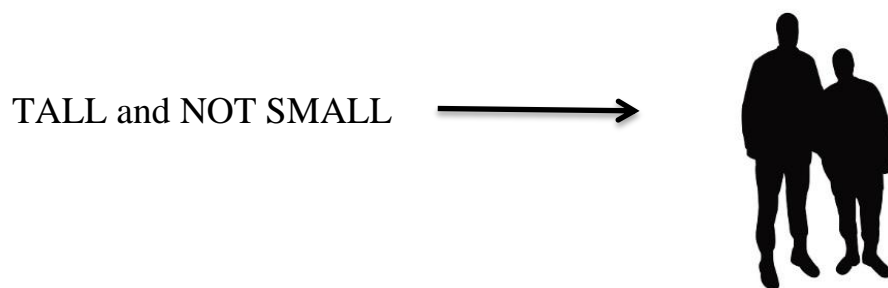


Figure (26) Scale Image Schema of Bad/ Better as Antonymy Relation

17. If John is *tall*, then he is not *small*.

The usage of the antonyms ‘tall’ and ‘small’ facilitates the conceptualization of this construction within the framework of the SCALE image schema. The relationship between the two clauses in this sentence highlights a specific SCALARITY schematic structure in the cognitive domain. The antonyms ‘tall’ and ‘small’ trigger the activation of the HEIGHT and SIZE frames within the conceptual structure. Based on the VERTICALITY property, the entity ‘John’ is perceived as ‘tall’ in comparison to the human HEIGHT scale. Likewise, the entity ‘John’ is conceived as ‘not small’ in comparison to the human SIZE scale. These two antonyms offer a fine-grained detail about the HEIGHT and SIZE of the entity ‘John’. Furthermore, they enrich the schematic structure in the mind by providing multiple degrees of variation along the HEIGHT and SIZE scales. This pattern has MORE or LESS fixed directionality, i.e., the further along the scale a quality moves, the greater the HEIGHT or the SIZE. Thus, these antonyms have a normative character. In other words, having MORE HEIGHT and SIZE is desirable, whereas having LESS HEIGHT and SIZE is undesirable. The accompanying figure visually represents the contrast between ‘John’ as ‘tall’ and ‘not small’ in comparison to another individual, underscoring the application of the SCALE image schema.



HEIGHT and SIZE SCALARITY

Figure (27) Scale Image Schema of Tall/ Small as Antonymy Relation

18. Mr. Adams may be neither *old* nor *young*.

According to image schema theory, the antonyms ‘old’ and ‘young’ can be embodied using the SCALE image schema pattern. This pattern is deeply connected to the concept of VERTICALITY, where the notion of MORE being UP and LESS being DOWN is utilized to represent various degrees of increase or decrease in quality or quantity. In this case, the antonyms ‘old’ and ‘young’ can be mapped onto this SCALE schema, signifying different levels of AGE intensity. The antonym 'old' fits into the schema by embodying the concept of MORE in AGE. It is positioned at a higher point on the scalar line due to its association with increased age. On the other hand, the antonym 'young' is characterized by LESS in AGE and is located at a lower point on the scalar line to indicate decreased age. The SCALARITY direction of these antonyms is open-ended, reflecting the notion that 'old' is positioned UP, while ‘young’ is positioned DOWN. This alignment with verticality helps to establish a clear contrast between the two terms, creating a visual and cognitive distinction in terms of age-related intensity. The figure below illustrates these two antonyms on the scalar line. On this line, the arrow pointing upwards would represent ‘old’, indicating a higher degree of age, while the arrow pointing downwards would signify ‘young’, denoting a lower degree of age. The distance between these arrows along the vertical line signifies the contrast between the levels of age intensity associated with each term.

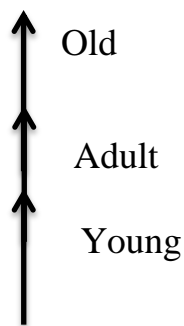


Figure (28) Scale Image Schema of Old/ Young as Antonymy Relation

19. John *gave* Mary a book.

20. Mary *received* a book from John.

Image schema theory is projected differently in the two different sentences above; as a result, different schematic patterns are embodied. The two antonyms ‘gave’ and ‘received’ depict the MULTIPLICITY image schema. This pattern involves COLLECTION and SPLITTING image schemas, and both are used in each sentence. These two patterns are perceived by the relation between SENDER and RECEIVER, i.e., between ‘John’ and ‘Mary’. The first sentence is schematized using the SPLITTING schema pattern, as the lexical item ‘a book’ is split or separated from the possession of ‘John’. Similarly, the same sentence is perceived using the COLLECTION schematic pattern, as the lexical item ‘a book’ is collected by ‘Mary’. However, the second sentence is schematized using the SPLITTING pattern as well, as the lexical item ‘book’ is split from ‘John’. The COLLECTION pattern is also perceived in the second sentence, as the lexical item ‘a book’ is collected by ‘Mary’. Thus, the antonyms ‘gave’ and ‘received’ denote reciprocal relations in each sentence, as both forms of the MULTIPLICITY image schema are embodied in each sentence.

Moreover, another schematic pattern can be observed, which is the LINK image schema. The structural elements of the LINK pattern consist of two entities, A and B, and a LINK connecting them. The entity ‘John’ is referred to as (A), whereas the entity ‘Mary’ is represented by (B). The antonyms ‘gave’ and ‘received’ represent the LINK that connects these two entities conceptually. These two sentences are structurally and conceptually linked, as one gives rise to the other. These mechanisms are depicted in the following figures. Figure (A) represents the entity ‘John’, i.e. the entity ‘A’, but the figure (B) represents the entity ‘Mary’, i.e. the entity ‘B’. The letter (X) represents the lexical item ‘book’ that links them altogether.

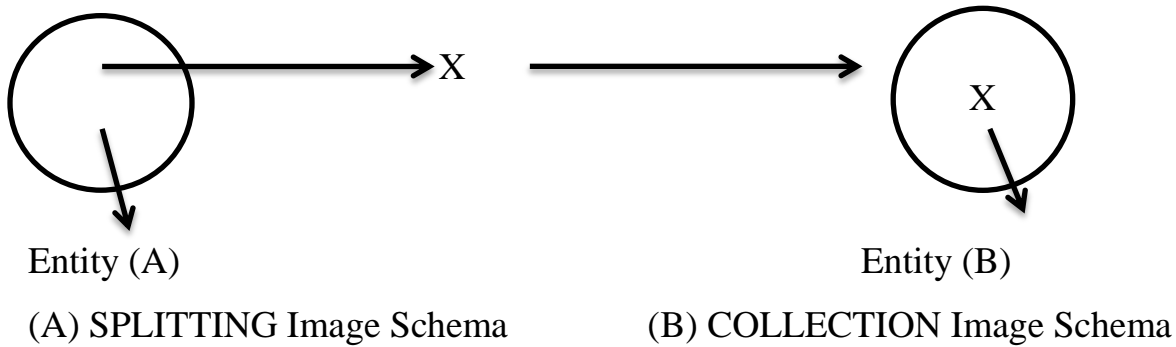


Figure (29) (A) SPLITTING Image Schema of Gave as Antonymy Relation

Figure (30) (B) Collection Image Schema of Received as Antonymy Relation

V: Polysemy Relation

21. She sat at the *head* of the table.
22. The thought never entered my *head*.
23. She resigned as *head* of department.

The polysemous word ‘head’ in the above sentences denotes different meanings as it is formed in different structures. The polysemous word ‘head’ in the first sentence is perceived using the SPACE image schema. This type of image schema has different patterns, such as UP-DOWN, LEFT-RIGHT, NEAR-FAR, but FRONT-BACK pattern is manifested in this sentence. This polysemous item ‘head’ is spatially grounded in the conceptual structure in relation to the OBJECT ‘table’. This object can be conceived as having different dimensions, but the entity ‘she’ is schematized in the FRONT SPACE of the table in the conceptual structure.

However, the polysemous word ‘head’ in the second sentence is projected using the CONTAINER image schema. This polysemous word is represented by the Landmark, as it occupies a SPACE in the conceptual structure. The landmark, ‘head,’ consists of the interior element, the space within the boundary, and the boundary element itself. So, the polysemous word ‘head’ is conceived as a CONTAINER element that includes other entities. Similarly, the entity "the

thought' is represented by the trajector element as it undergoes motion inside the landmark, but this element is **BLOCKED** by an unknown vector force as it is mentioned by the linguistic element 'never entered'.

Furthermore, the third sentence is formed with different linguistic elements and structures. Thus, the polysemous 'head' is embodied differently, so it is conceptualised using the **MATCHING** image schema. This sentence presents two linguistic items 'she' and 'head of department', and these two linguistic items are **MATCHED** using the rank or position parameter. This implies that these two elements are perceived as having mutual attributes, and one represents or matches the other in the conceptual system. Therefore, the polysemous word 'head' is projected to match or present the linguistic item 'she' in the conceptual structure.

However, the polysemous word 'head' in the above three sentences can be viewed with one image schema pattern, which is **CENTER-PERIPHERY** schema pattern. Every single word radiates from perceptual center to peripheral boundaries. The perceptual system identifies the space of the vocabulary in the conceptual structure. Polysemous items are arranged in the conceptual structure in the form of prototypical and peripheral, i.e., from most related to least related. The most related polysemous word occurs in the center, but the least related polysemous word occurs at the boundaries. Thus, in the image schema theory, the polysemy relation assigns different schematic patterns. The below figures identify the polysemous word 'head' in each sentence. Figure (A) represents the first sentence, figure (B) represents the second sentence, and figure (C) represents the third sentence. Figure (D) includes all the sentences in **CENTER-PERIPHERY** image schema pattern, and each bullet represents a different polysemous word 'head'. Consequently, the polysemous word 'head' in all the sentences is depicted in the figure (D) with different locations: only the second sentence occurs in the perceptual center, whereas the others occur in the boundary, i.e., peripheral space.

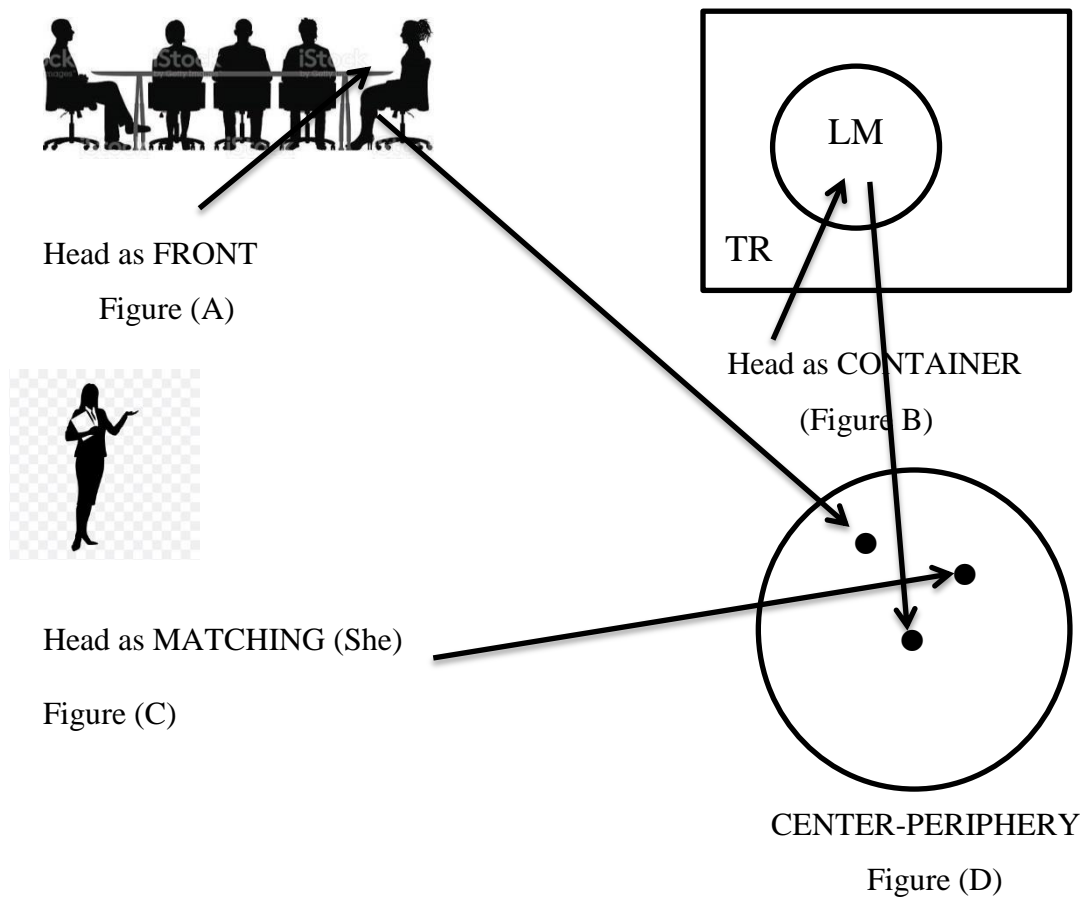


Figure (31) Space, Container, Matching, and Center-Periphery Image Schemas of Head as Polysemy Relation

24. Rambo found the *hammer*.

25. Rambo *hammered* the nail into the tree.

The above two sentences include the polysemous words ‘hammer’ and ‘hammered’. Absolutely, each is formed using a distinct image schema pattern. The polysemous word ‘hammer’ in the first sentence is perceived using COLLECTION image schema. This pattern is formed when an OBJECT is received, found, or collected by an entity. This OBJECT ‘hammer’ constructs an image of existence in the conceptual structure, as it is based on everyday interaction with concrete objects. The lexical item ‘Rambo’ is schematized as an animate entity that COLLECTS the polysemous word ‘hammer’.

In the second sentence, the polysemous word ‘hammered’ is construed using the COMPULSION FORCE image schema. This polysemous item represents a physical force that is exerted on an OBJECT ‘the nail’, and it causes motion on the OBJECT. However, the polysemous words ‘hammer’ and ‘hammered’ can be viewed in CENTER-PERIPHERY image schema pattern as well. These polysemous words are similar and have shared attributes and features, but one is more salient than the other. The salient polysemous ‘hammer’ occupies a CENTER region in the conceptual structure, whereas the PERIPHERAL polysemous ‘hammered’ occurs far from the center. The following figures represent all the aforementioned schematic patterns: figure (A) represents the schematic pattern of the first sentence; the letter (X) signifies the polysemous word ‘hammer’, and the circle represents the animate entity ‘Rambo’. Figure (B) represents the schematic pattern of the second sentence, whereas figure (C) includes both polysemous words depicted employing the CENTER-PERIPHERY image schema.

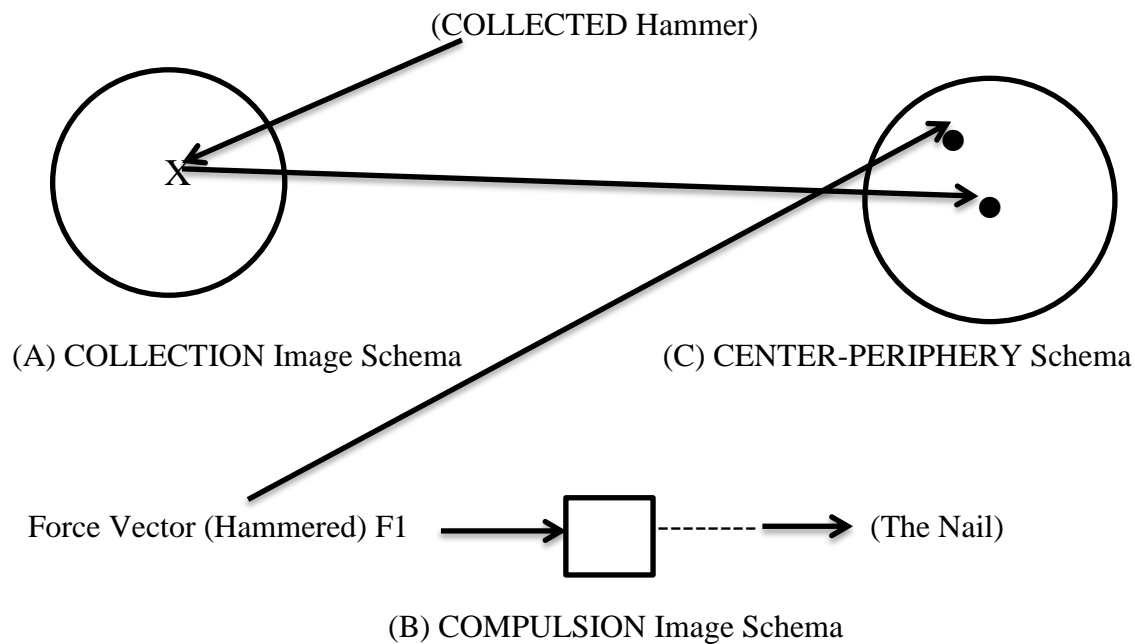


Figure (32) Collection, Compulsion, and Center-Periphery Image Schemas of Hammer as Polysemy Relation

VI: Homonymy Relation

26: Rita's favorite color is *blue*.

27: Samuel picked a tissue and *blew* his nose in the café.

The above two sentences are formed with different structures and meanings, so image schema theory is maintained using different patterns as well. The first sentence is perceived using CENTER-PERIPHERY pattern. Rita is viewed as having a domain of colours, so the homonymous lexical item 'blue' is placed in the CENTER of the domain of colours, but 'other colours' is positioned in the PERIPHERY part of the domain of colour. Usually, the centered-entity is given more importance than the others, so the homonymous lexical item 'blue' is represented as the favourite colour of 'Rita'. This pattern can be oriented as a NEAR-FAR schema, as the homonymous 'blue' occurs nearer to the center, whereas 'other colours' occur farther from the center.

The second sentence is made up using two image schema patterns. The vertical orientation in the sense of the verb 'pick' gives rise to the VERTICALITY image schema. This pattern is viewed in the sense of an UP/DOWN axis, which is considered one of the forms of directionality of the PATH pattern. The entity 'tissue' is viewed as being risen up by the animate entity 'Samuel', so there is a sort of vector motion in the sense of RISING UP configuration. However, the homonymous lexical item 'blew' in the second sentence undergoes the COMPULSION FORCE image schema pattern. Thus, Samuel uses an external force to 'BLEW' or move the mucus from the nasal cavities. In this way, a puff of air is exerted from the lungs as an external force to move the mucus out of the nasal cavities. The homonymous word 'blew' has a vector quality, as it involves the movement of the entity 'mucus' from one position to another. This pattern is tied up with the path of motion quality of an entity by a vector quality of external force. The following figures represent the aforementioned image schema patterns.

Figure (A) represents ‘blue’ in the first sentence, whereas figure (B) represents ‘blew’ in the second sentence.

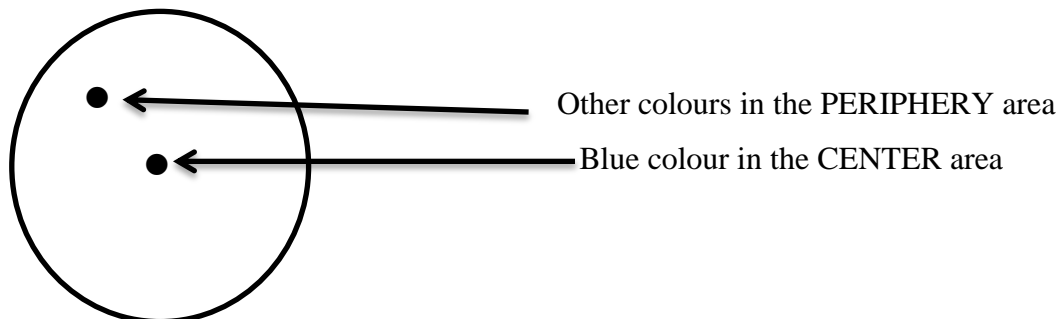


Figure (A)

Figure (33) Center-Periphery Image Schema of Blue/ Blew as Homonymy Relation



Figure (B) COMPULSION FORCE Schema

Figure (34) Compulsion Image Schema of Blue/Blew as Homonymy Relation

28. The film got approval from the *sensor* board.

29. The employees found *sensor* water taps and sanitizer disposal in the office building.

The above two sentences are related using the two homonymous lexical items ‘*sensor*’ and ‘*sensor*’, but they are formed using different schematic patterns and meanings. The first sentence is embodied employing the ENABLEMENT/FORCE image schema. The use of the homonym in the phrase ‘the *sensor* board’ is conceptualised as the actual force that gives approval or denial. However, this sentence is conceived using this type of FORCE schema because the actual force is removed or absent. So, the film got approval because the actual force, ‘the *sensor* board’, is enabled by an unknown force vector that is the quality of the film. In

other words, the quality of the film affords the approval from the potential force vector that is ‘the censor board’.

However, the second sentence is formed using the CONTAINER image schema. The lexical item ‘office building’ gives rise to a concept related to a CONTAINMENT structure that includes the homonymous lexical item ‘sensor water taps’. This schematic structure consists of three structural elements: interior, boundary, and exterior. The interior is represented by the restroom, the boundary is represented by the office, and the exterior is represented by the building. The element landmark is represented by the interior element, whereas the homonym ‘senor’ in the phrase ‘sensor water tap’ is represented by the trajector element. Thus, the homonym in the phrase ‘sensor water taps’ is contained in a bounded location that is the landmark. The following figures embody the image schema patterns in the above two sentences. Figure (35) embodies the homonym ‘censor’ in the first sentence, so the arrow is spread out without any blockage or barrier, whereas figure (36) embodies the homonym ‘sensor’ in the second sentence.

The Censor Board -----> Approval

Figure (35) Enablement Image Schema of Censor as Homonymy Relation

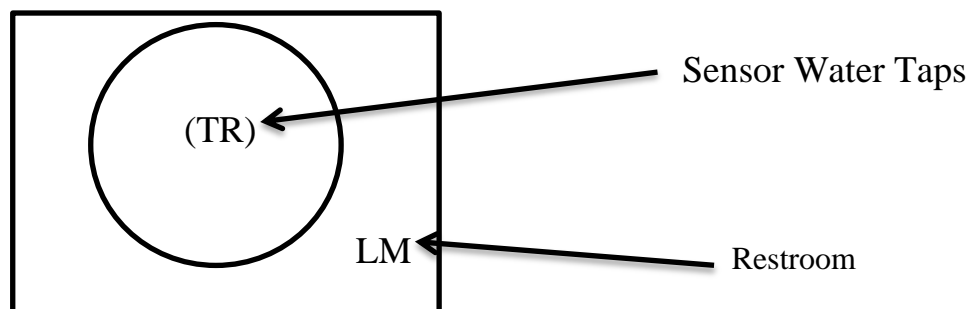


Figure (36) Container Image Schema of Sensor as Homonymy Relation

30. There is no **right** way to **write** a great novel.

This sentence is made up of two homonymous lexical items, ‘right’ and ‘write’. The sentence is conceived by the concept of removing or blocking ‘writing a good novel’ by unknown force power. Thus, this sentence undergoes the schematic pattern BLOCKAGE/ Force image schema as it is manifested in the phrase ‘no right way’. Therefore, this schematic structure presents two potential forces, and each represents a homonym. The blockage force is presented by the first homonym in the phrase ‘no *right* way’. On the other hand, the force vector is presented by the second homonym in the phrase ‘*write* a great novel’. In other words, an unknown source of power is blocking the potential force vector of writing a great novel. The configuration of these two forces is depicted in the figure below.

Moreover, the sentence also incorporates the PATH image schema to express the notion of progress or progression towards a goal. The phrase ‘to *write* a great novel’ represents the path that one takes to accomplish the task of creating a remarkable piece of literature. The PATH implies a sequence of actions or steps that need to be followed in a specific order, but the destination towards the PATH is blocked by an unknown potential force, as it is signified by the use of the phrase ‘no *right* way’.

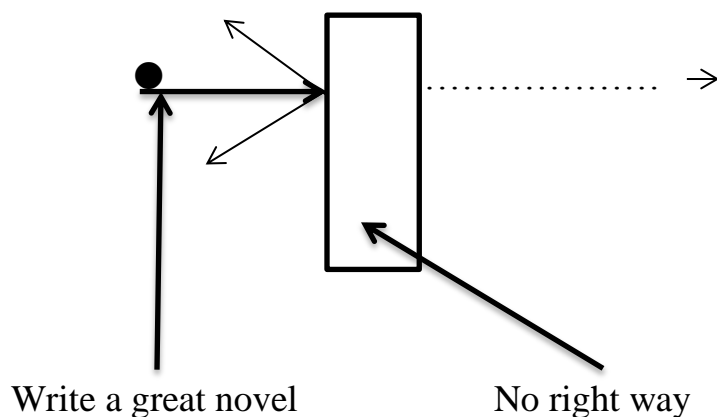


Figure (37) Blockage Image Schema of Right/ Write as Homonymy Relation

VII: Metonymy Relation

31. The White House has released a statement.

The above sentence uses the noun phrase ‘The White House’ in a metonymic form, as it refers to the government’s authority. This sentence exemplifies the application of the COMPULSION/FORCE image schema pattern. The schematic structure of this pattern is that an entity is moved or influenced by an external force, so it implies that there is a driving force behind the action of ‘releasing a statement’. The metonymic lexical item ‘The White House’ is conceived in this pattern as it has the force vector power to move an item, i.e., to release a statement. In this case, the metonymic item, ‘The White House’ as a building structure, has no vector power to move an entity or initiate an action, whereas the metonymic item, ‘The White House’ as a government authority, has the vector power to move or block an entity from moving. So, the concept of ‘releasing a statement’ is closely tied to the potential authority of ‘The White House’. The act of releasing a statement is portrayed as an action that cannot occur without the underlying potential to exert authority. In other words, the authority represented by ‘The White House’ is what enables the action of releasing a statement to take place. This further reinforces the metonymic use of ‘The White House’ as a representation of authority rather than a mere architectural structure. In this figure, F1 represents the force vector that is exerted by The White House to release a statement.

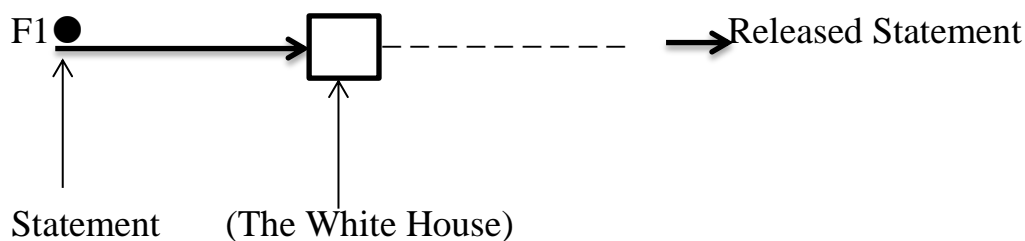


Figure (38) Compulsion Image Schema of The White House as Metonymy Relation

32. **The ham sandwich** wants his coffee now.

The above sentence is conceptualised using the metonymic relation in the form of ‘the ham sandwich’. The ENABLEMENT Force image schema is used to conceive this sentence. The schematic pattern of this structure involves the removal or lack of an actual force vector or barrier to the performance of a specific task. The lexical item ‘wants’ explicates that there is no actual force vector to block the movement of the ‘coffee’, but a potential force vector is found to move the lexical item ‘coffee’. Thus, the desire in the metonymic lexical item ‘the ham sandwich’ enables or qualifies the movement of the ‘coffee’. The noun phrase ‘The ham sandwich’ has two metonymic forms: one refers to a type of sandwich, while the other refers to the person who has eaten the sandwich in this context. Therefore, the ham sandwich as a type of sandwich does not have the force vector power to motivate or influence the movement of the coffee, so the second sense or the second form of the metonymic relation is involved. In this structure, ‘The ham sandwich’ is a form of metonymic relation that refers to a person, and this schematic pattern is formed to afford a potential force vector to move an entity that is the ‘coffee’. The below figure depicts how this metonymic form is configured, as there is no actual force vector to block the movement of the coffee from the restaurant to ‘The ham sandwich’.

Coffee ----- → The ham sandwich

Figure (39) Enablement Image Schema of The ham sandwich as Metonymy Relation

33. **The car** in front decided to turn right.

The above sentence seems to be relation-free, but it is formed employing the metonymic relation using the lexical item ‘The car’. This metonymic expression

has two forms; one refers to a vehicle with four wheels, whereas the other refers to the driver. Through the use of the schematic structure, the right form of the metonymic expression is conceptualized. This sentence is formed using COMPULSION FORCE image schema. The schematic structure of this pattern involves an external force vector that moves the metonymic lexical item ‘the car’. Therefore, the represented image schema in this sentence is perceived by the second form of the metonymic lexical item, i.e., the driver rather than the car itself. The car can’t be turned right unless there must be a driver. Thus, ‘the driver’ sense of the metonymic lexical item ‘the car’ is attributed to the external vector force in the COMPULSION FORCE image schema, as the driver causes the car to be moved or driven. The configuration of this schematic pattern is depicted in the below figure. The actual force vector (F1) is represented by ‘the driver’ sense, and this force influences the car to be turned or moved.

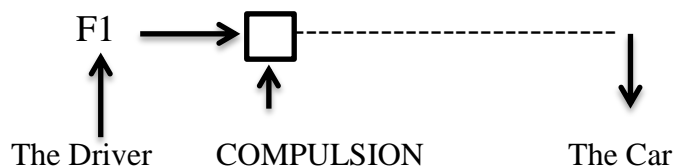
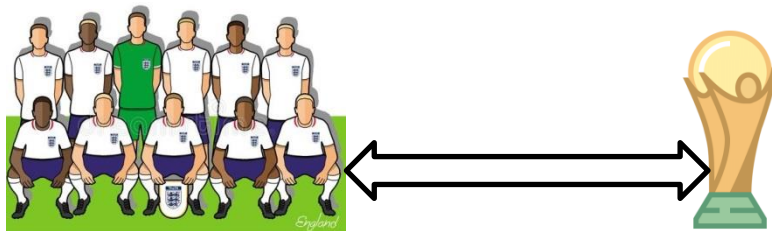


Figure (40) Compulsion Image Schema of The driver as Metonymy Relation

34. **England** won the World Cup in 1966.

The metonymy relation is used in the above sentence by using the metonymic lexical item ‘England’. The sentence presents a factual event that happened in 1966. Therefore, the LINK image schema undergoes the conceptualization of this metonymic lexical item in the conceptual structure. The schematic structural elements of this pattern are: two entities (*A* and *B*) and a link

connecting them. The entity (A) is represented by the metonymic expression ‘England’, whereas the entity (B) is represented by the noun phrase ‘the World Cup’. The lexical item ‘won’ and the year ‘1966’ represent the configurational elements that link these two entities, i.e., (A) and (B). In the conceptual structure, the metonymic lexical item is linked to the noun phrase ‘the World Cup’ by the use of the two elements ‘won’ and ‘1966’. The word ‘England’ in this sentence has two metonymic forms: one refers to the country itself, whereas the other refers to the team that represents this country. Certainly, the configurational elements ‘won’ and ‘the World Cup’ are conceptually linked to the second form of the metonymic relation that is represented by the team of the country, as it has enough attributes to link conceptually with other elements.



Configurational elements (Won/ 1966)

Figure (41) Link Image Schema of England as Metonymy Relation

35. Jack noticed several new **faces** tonight.

This sentence is formed using the metonymy relation through the use of the metonymic expression ‘faces’. This lexical item has two metonymic senses: one refers to the front part of the head of a person, whereas the other refers to individuals, i.e., people. The image schema theory attempts to address the appropriate form so that the metonymic word can be mapped properly into the conceptual structure. This sentence is formed using **IDENTITY MATCHING**

image schema. The lexical item ‘noticed’ triggers the concept of MATCHING or identifying some attributes or features with some other people. For this reason, this schematic pattern utilises the second form of the metonymic word ‘faces’, which refers to people rather than the front part of the head.

However, another image schema is involved in the configuration of this sentence in the conceptual system. The metonymic lexical item is perceived using the COLLECTION image schema, as it is motivated by the use of the expression ‘several new’. The schematic structure of this image identifies that a number of ‘faces’ are COLLECTED or grouped under the NEW parameter due to the use of the verb ‘noticed’. The metonymic word ‘faces’ is COLLECTED or grouped in the conceptual system under the NEW parameter by the perceiver. Thus, these two image schema patterns, MATCHING and COLLECTION, can be embodied together in the conceptual structure. After the metonymic word ‘faces’ is MATCHED or identified, it is COLLECTED or grouped under the NEW parameter. Both schematic patterns are depicted below. The letters represent different faces that are MATCHED and COLLECTED by ‘Jack’.

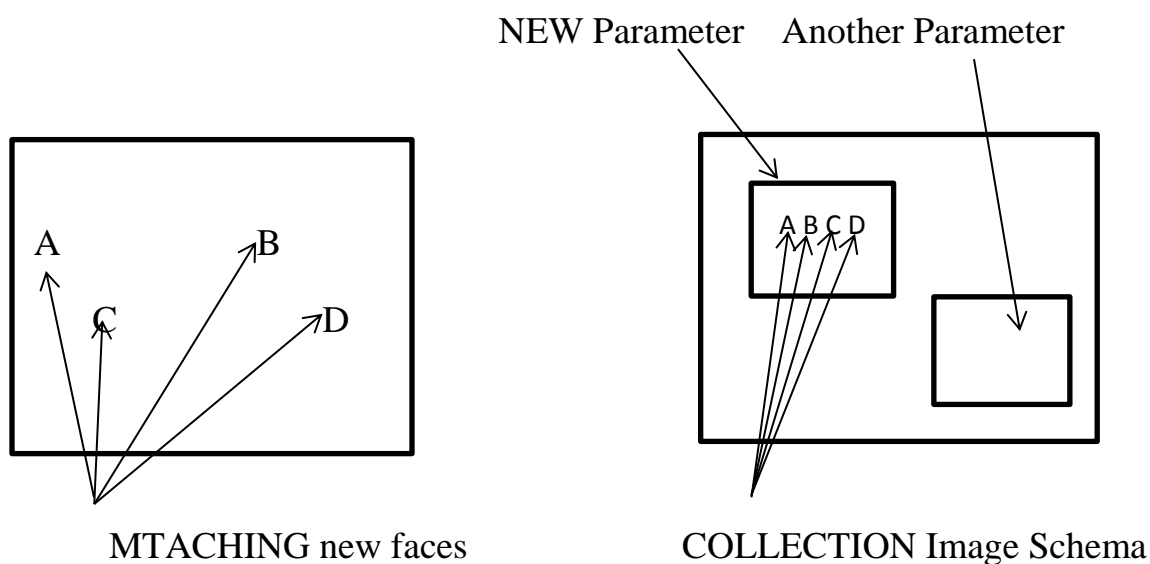


Figure (42) Matching & Collection Image Schemas of Faces as Metonymy Relation

4.6 Analysis of Lexical (Sense) Relations using Mental Space Theory

Mental space theory is a highly essential cognitive theory of meaning construction. This section covers the construction of mental space and setting up conceptual mappings and relations between the lexical (sense) relations employing the collected data. Mental space provides partitions or regions of conceptual space that contain specific information. Thus, this section provides analysis of every single unit in the following sentences to show whether lexical (sense) relations can be constructed in accordance with this theory or not.

I: Synonymy Relation

36.a. The shirt is **pale** in color.

36.b. The shirt is **light** in color.

This sentence is constructed conceptually firstly employing an element in the base space, which is ‘the shirt’, and it is represented by *aI*. Beside the base space, the prepositional phrase ‘in color’ sets up a new mental space entitled COLOR space. The synonyms ‘pale and light’ are depicted as two different elements that assign the property of BRIGHTNESS to the element ‘the shirt’ in the COLOR space, and they are labelled as *bI*. Therefore, these two elements, pale and light, are depicted and connected in the COLOR space by the domain of color. Moreover, the elements ‘the shirt’ and ‘pale and light’ can be further manifested by the role-value relationship. The element ‘the shirt’ is represented by the value element in the base space, whereas the synonyms ‘pale and light’ can be represented by the role element in the COLOR space. These two elements are linked by the role-value relationship, as they are co-referential. Therefore, the synonyms ‘pale’ and ‘light’ occupy the same role element in the COLOR space.

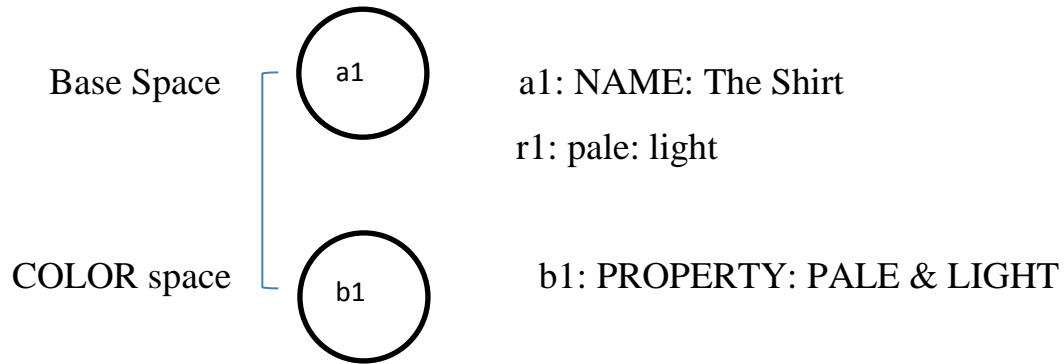


Figure (43) Mental Space of Pale/ Light as Synonymy Relation

37a: The train travelled *fast*.

37b: The train travelled *rapidly*.

These two sentences construct two relevant mental spaces in the conceptual structure, i.e., the base space and the SPEED space. The element referred to as ‘the train’ has a definite interpretation in the base space, and it is referred to as *a1*. Therefore, it is presented in the presuppositional mode as it presupposes the existence of the element ‘the train’ in the base space. The synonyms ‘fast’ and ‘rapidly’ function as space builders. Consequently, these two synonyms construct a new mental space, which is the SPEED space. This space builder sets up a scenario that ‘the train travelled fast or rapidly’. Consequently, these two synonyms assign the SPEED property to the element ‘the train’ in the base space, and they are labeled as *b1*.

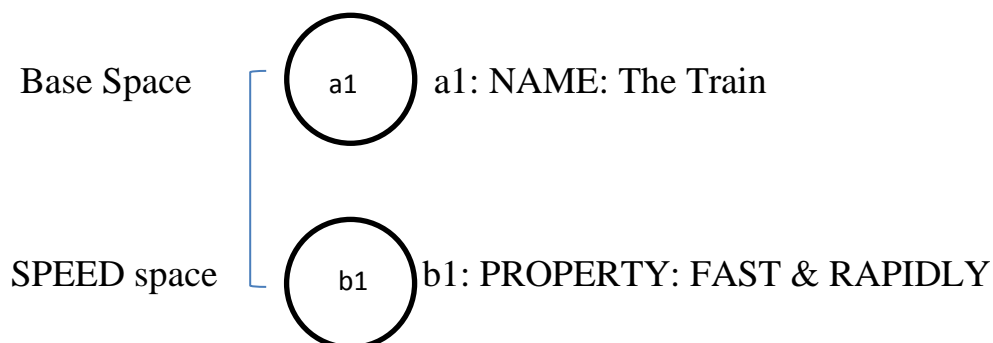


Figure (44) Mental Space of Fast/Rapidly as Synonymy Relation

3a. Little Billy was so **brave** at the dentist this morning.

38b. Little Billy was so **courageous** at the dentist this morning.

The above pairs of sentences are very close in meaning, so their mental constructions are alike as well. In the base space, the definite NP ‘Little Billy’ is introduced as an element, and it is represented as *a1*. Then, different space builders are triggered. The first space builder is ‘at the dentist’, which defines the event’s location, whereas the space builder ‘this morning’ defines the time of the event. The element ‘Little Billy’ and the synonyms ‘brave and courageous’ can be represented in the mental structure adopting role-value relationships. The value element ‘Little Billy’ is represented by two roles: ‘brave’ and ‘courageous’. So, the synonyms, ‘brave’ and ‘courageous’, assign the DARING property to the mentioned element, and they are labelled as *r1* and *r2*. The synonym ‘brave’ means physically confronting fear or danger, whereas ‘courageous’ means mentally confronting fear or danger. Here, the property DARING is assigned to physical fear or danger. Thus, the element ‘courageous’ seems to be irrelevant to the DARING space because it cannot be associated with the space builder ‘at the dentist’. This space builder indicates a clinical place where people feel fear in. Moreover, the background knowledge informs us that the synonym ‘brave’ is more associated with physical fear or danger.

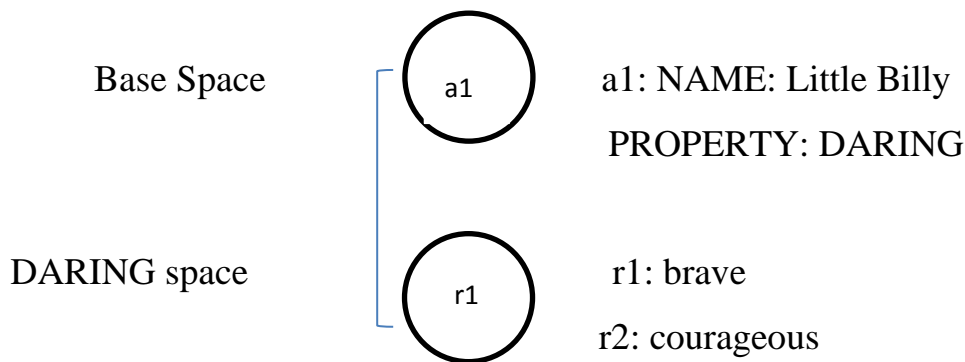


Figure (45) Mental Space of Brave/ Courageous as Synonymy Relation

39a: Sara may play a **violin** concerto.

39b: Sara may play a **fiddle** concerto.

The above pairs of sentences introduce two elements in the base space. The first element is introduced by a definite NP, ‘Sara’, whereas the second element is introduced by an indefinite NP, or synonyms, a ‘violin: fiddle concerto’. The possibility reference ‘may play’ is represented by the domain space, as it refers to the activity of playing a musical instrument. This domain space ‘may play’ expresses a relation between the aforementioned two elements. Due to the use of this activity in the sentence, the PLAY space is set up with two participant roles; one role is for a PLAYER participant, and the other role is for the ENTITY PLAYED. The PLAYER role is mapped with element *a1*, which is introduced by the element ‘Sara’, and the ENTITY PLAYED role is mapped with element *b1*, which is introduced by the element a ‘violin: fiddle concerto’. Therefore, both synonyms ‘violin’ and ‘fiddle’ have the same participant role, and they both occur in the same PLAY space, as illustrated in the below figure.

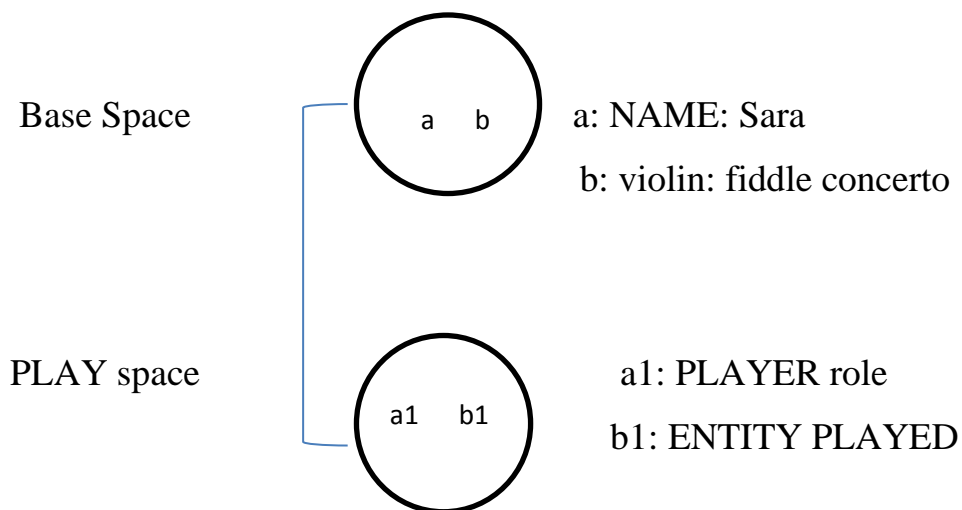


Figure (46) Mental Space of Violin/ Fiddle as Synonymy Relation

40. John was *killed*, but I can assure you he was not *murdered*, madam.

The first clause in the above sentence offers a definite description of the NP element ‘John’, so the first clause sets up a base space. Additionally, the synonym ‘killed’ represents a relation that is linked to the element ‘John’ in the base space. Moreover, the coordinating conjunction ‘but’ provides a counter-expectational interpretation of the previous clause. However, the second clause contains a subject-verb combination as a space builder ‘I can assure you’. This space builder sets up a new CERTAINTY space, which is established relative to the base space. The synonym ‘murdered’ is established in relation to the element ‘he’ in the CERTAINTY space. Moreover, the second clause uses the anaphor ‘he’ that refers to the element ‘John.’ Therefore, these two elements, ‘John’ and ‘he’, are counterparts, and they are linked by the identity connector. This identity connector provides access to counterparts in a different mental space. Thus, the Access Principle is found in the mental construction of these two clauses. The element referred to by ‘John’ serves as the target, whereas the element corresponding to the anaphor ‘he’ serves as the trigger. The element ‘John’ in the base space prompts for *a1*, whereas the element ‘he’ in the CERTAINTY space prompts for *a2*. Consequently, the two near synonyms ‘killed and murdered’ occur in two different spaces: base space and certainty space, but they assign the same relation.

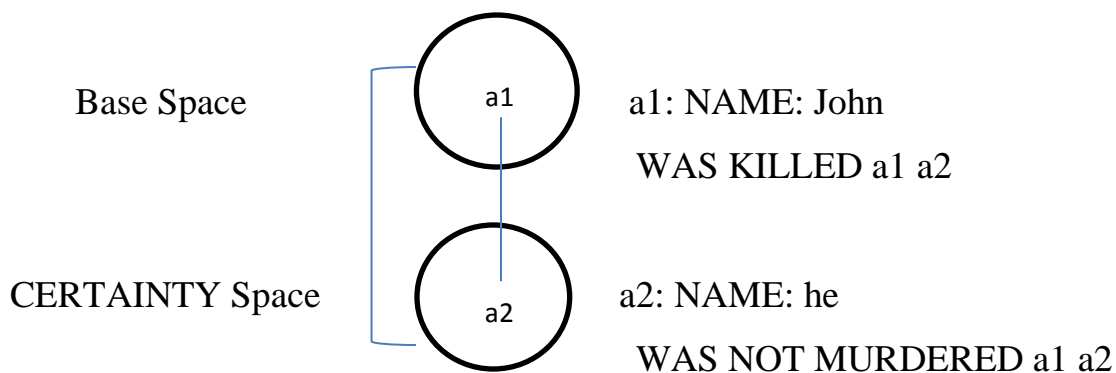


Figure (47) Mental Space of Killed/ Murdered as Synonymy Relation

II: Hyponymy Relation

41a: I bought some **flowers**.

41b: I bought some **roses and tulips**.

These two sentences are made up of two elements: ‘I’ and ‘some flowers’ and ‘some roses and tulips’. In the base space, the first element is constructed in the form of the definite pronoun ‘I’, and it prompts for *a*. However, another space is built due to the relation between the elements ‘I’ and ‘some flowers’ and ‘some roses and tulips’. Therefore, the other element is presented in the BUYING space by the superordinate ‘some flowers’ and the hyponyms ‘some roses and tulips’, and they both prompt for *b*. The verb ‘bought’ expresses a relation between the two elements based on the BUYING space, which involves two participant roles: BUYER and ENTITY BOUGHT. The BUYER role is mapped onto ‘I’ the element ‘a1’ while the ENTITY BOUGHT role is mapped onto the hyponyms ‘some flowers’ and ‘some roses and tulips’ and prompts for by the element ‘b1’. Consequently, the hyponyms ‘roses and tulips’ and the superordinate ‘flowers’ receive the same conceptual role in the BUYING space.

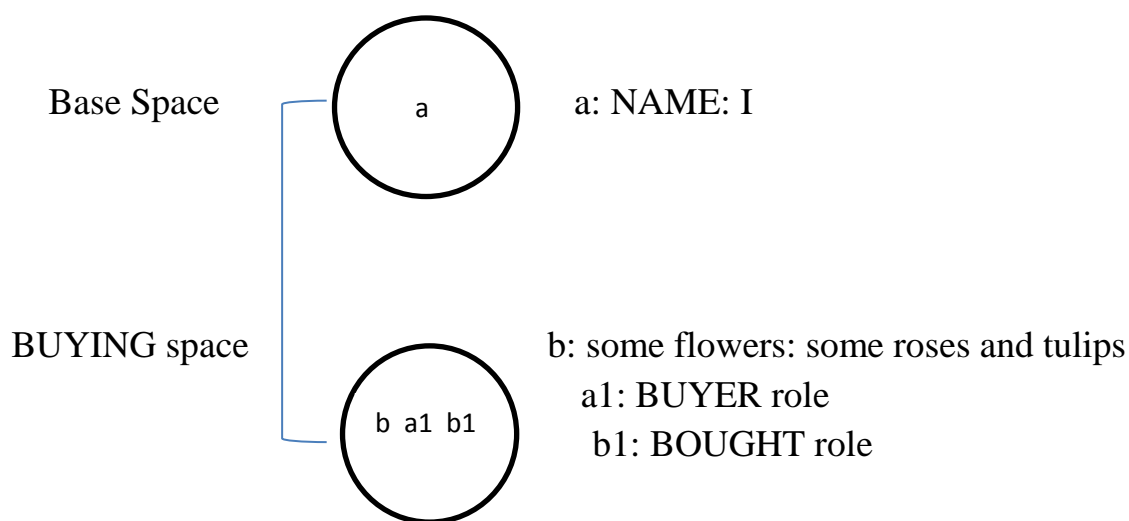


Figure (48) Mental Space of Flowers/ Roses and Tulips as Hyponymy Relation

42a: If all **cars** are forbidden, I shan't go.

42b: If all **vehicles** are forbidden, I shan't go.

These two sentences are made up of two clauses. The first clause in each sentence gives rise to a counterfactual construction of another space. Thus, a hypothetical space is built up by using the space builder 'If'. This HYPOTHETICAL space consists of an element, prompts for *a1*, as indefinite NP or hyponyms 'all cars' and superordinate 'all vehicles. In this space, the word 'forbidden' assigns a property to the hyponym and the superordinate, i.e., the elements 'all cars' and 'all vehicles, referred to as *b1*. The second clause accounts for the construction of the base space, or the reality space. This base space is made up of a definite NP 'I' that is prompts for as *a2*. Moreover, the expression 'shan't go' in both clauses expresses a relation between both spaces and prompts for the GOING frame. Therefore, the hyponym 'cars' and the superordinate 'vehicles' occur in the same space, and they assign the same element in the HYPOTHETICAL space.

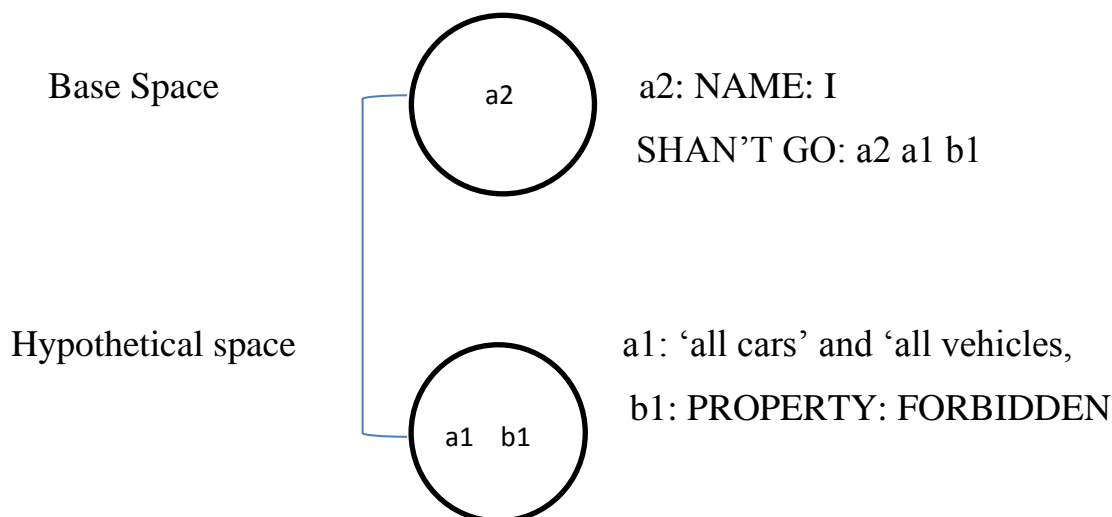


Figure (49) Mental Space of Car/ Vehicle as Hyponymy Relation

43a: There's a **palomino** in that field.

43b: There's a **horse** in that field.

In both sentences, the base space is constructed using a common element referred to as *a1*. This element represents the hyponym 'palomino' and the superordinate 'horse'. These two elements are presented as indefinite noun phrases (NPs) in the base space. This base space serves as a foundation for understanding the more elaborate constructions in the sentences. Moreover, the prepositional phrase 'in that field' functions as a space builder. This space builder establishes a new space referred to as the FIELD space. The purpose of this construction is to create a distinct cognitive space that encompasses the concept of a field and its relationship to the horse-related terms. Within the FIELD space, the elements 'palomino' and 'horse' are further depicted as *a2*. This means that the FIELD space contains representations of these elements in the context of a field. Thus, this space builder helps the hearer to construct a scenario that reflects the presupposed location of the hyponym 'palomino' and the superordinate 'horse'. Consequently, the hyponym 'palomino' and the superordinate 'horse' are constructed in the same base space, and they are depicted in the same FIELD space as well.

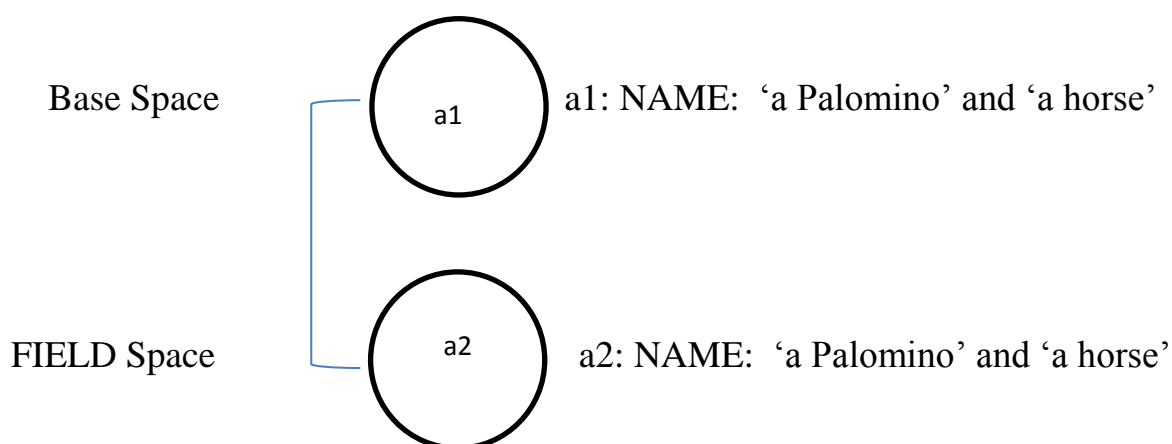


Figure (50) Mental Space of Palomino/ Horse as Hyponymy Relation

44a. The weary soldiers *trudged* forward.

44b. The weary soldiers *moved* forward.

The above pairs of sentences are made up of two spaces: a base space and a locative space. The element ‘the weary soldiers,’ which appears in both sentences in the form of definite NP, is used to construct the base space. The adverb ‘forward’ is used as a space builder. This space builder forms a new space entitled space space or DIRECTION space. The hyponym ‘trudged’ and the superordinate ‘moved’ are used to express a relation between the base space and the DIRECTION space. The hyponym ‘trudged’ establishes a relation between the ENTITY TRUDGED and the PLACE TRUDGED TO. The TRUDGED ENTITY is mapped onto the element *a*, whereas the PLACE TRUDGED TO is mapped onto the element *b*. However, the superordinate ‘moved’ introduces the same relation between ENTITY MOVED and the PLACE MOVED TO. The MOVED ENTITY is mapped onto element *a1*, whereas the PLACE MOVED TO is mapped onto the element *b1*. Therefore, the hyponym ‘trudged’ and the superordinate ‘moved’ initiate the same relations between the base space and the DIRECTION space.

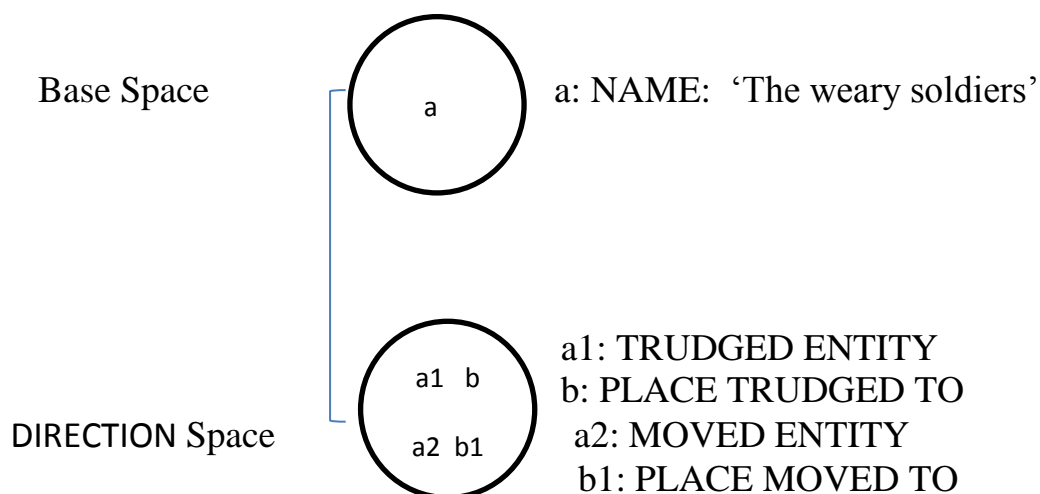


Figure (51) Mental Space of Trudged/ Moved as Hyponymy Relation

45a. The *oak* produces fruit every other year

45b. The *tree* produces fruit every other year.

The above two sentences form different elements in the base space. The hyponym ‘oak’ and the superordinate ‘tree’ in the phrases ‘the oak’ and ‘the tree’ construct two different elements in the base space, and they are represented by the element *a*. However, another element in the base space is formed by the use of the indefinite NP ‘fruit’, and it is referred to as *b*. The lexical item ‘produces’ initiates a relation between the aforementioned elements. This relation involves two participant roles. One role is given to the PRODUCER, i.e., ‘the oak’ or ‘the tree’, and it is mapped onto element *a1*. On the other hand, another role is given to the ENTITY PRODUCED, i.e., the ‘fruit’, and it is mapped into element *a2*. A new mental space is built by using the space builder ‘every other year’ that is labelled the TIME space. This new space assigns the hearer to set up a scenario that reflects the time of the relation between the elements in the base space. As a result, the ‘oak’ as a hyponym and the ‘tree’ as a superordinate occur in the same space and receive the same relation as well.

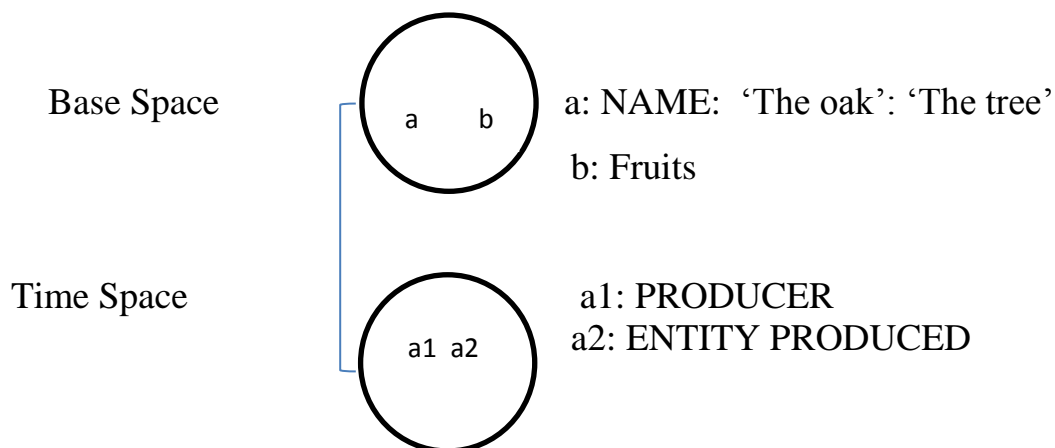


Figure (52) Mental Space of Oak/ Tree as Hyponymy Relation

III: Meronymy Relation

46a: Mary hurt her **finger**.

46b: Mary hurt her **hand**.

There are two elements in each of the above sentences. The first element is identified by the definite NP ‘Mary’ in the base space, and it is represented by *a*. However, the second element is identified by the meronym ‘finger’ and the holonym ‘hand’ in the phrases ‘her finger’ and ‘her hand’. Due to the relation between the element ‘Mary’ and the other elements, i.e., the meronym and the holonym, another mental space is constructed to build a relation of HURT between these elements. Thus, the HURT space is built and the meronym ‘finger’ and the holonym ‘hand’ are presented in it, and they both referred to by *b*. The verb ‘hurt’ expresses a relation between the elements in both mental spaces, so these two elements are linked by the relation HURT. This relation affords two participant roles. One role is for the PERSON BEING HURT, and the other role is for the PART BEING HURT, i.e., the meronym ‘finger’ and the holonym ‘hand’. Thus, the element ‘Mary’ is prompted by *a1*, whereas the elements ‘her finger’ and ‘her hand’ prompt for by *b1*. Therefore, the meronym the ‘finger’ and the holonym the ‘hand’ are constructed as two similar elements in the HURT space, and they both hold the same relation, i.e., the PART BEING HURT.

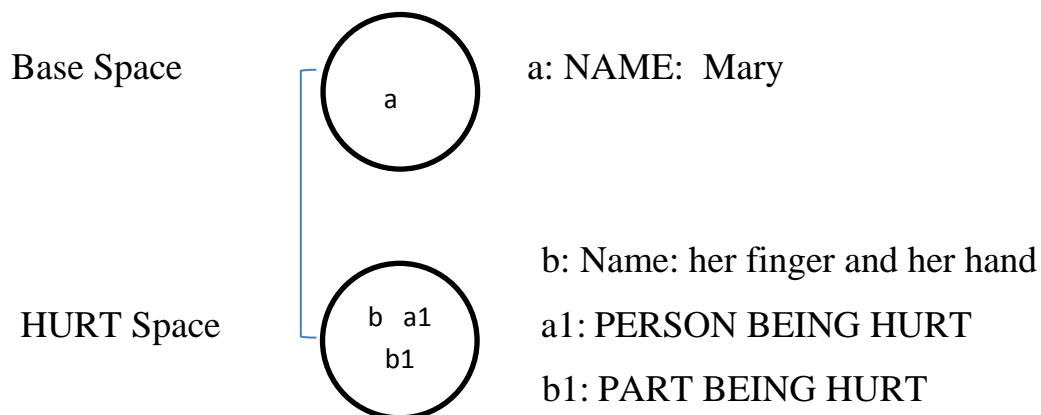


Figure (53) Mental Space of Finger/ Hand as Meronymy Relation

47a: John is in the **cockpit**.

47b: John is in the **aeroplane**.

These two sentences are made up of an element and a space builder. The definite NP referred to by ‘John’ in each sentence acts as an element in the base space, and it is represented by *a*. The second part of the above two sentences includes the meronym ‘the cockpit’ and the holonym ‘the aeroplane’, which function as space builders in the form of prepositional phrases ‘in the cockpit’ and ‘in the aeroplane’. These space builders help the hearer set up a space space or LOCATIVE space. The space builder ‘in the cockpit’ helps the hearer set up a scenario that reflects the exact location of the element ‘John’ in the locative space, and it is mapped onto element *a1*. However, the space builder ‘in the aeroplane’ helps the hearer set up a scenario that reflects a general location of the element ‘John’ in the locative space, and it is mapped onto the element *a2*. As a result, the meronym ‘cockpit’ and the holonym ‘aeroplane’ in the form of prepositional phrases work as space builders that assign two different locative spaces in the mental construction.

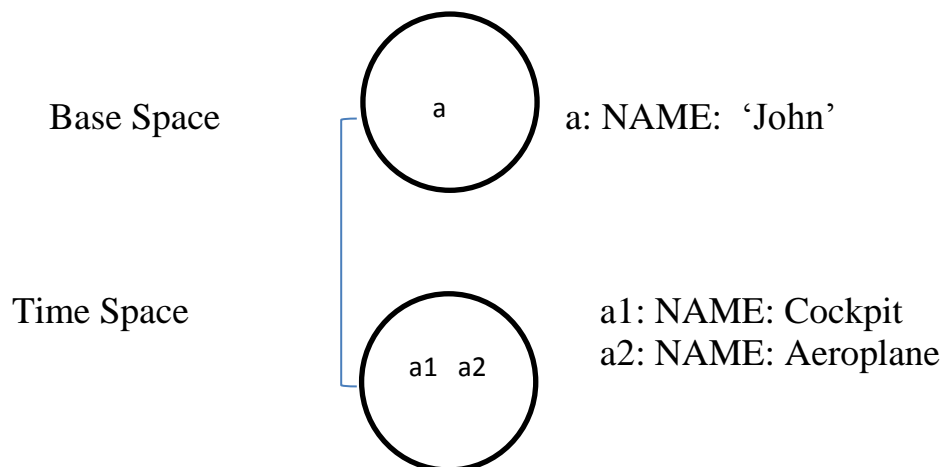


Figure (54) Mental Space of Cockpit/ Aeroplane as Meronymy Relation

48. It's a *university*, but it doesn't have a *medical school*.

The above sentence is made up of two clauses. The first clause introduces the holonym 'a university' as an element in the form of an indefinite NP in the base space. However, the second clause introduces the connective 'but', which functions as a space builder. This space builder sets up a new mental space by the name of COUNTERPOINT. The element 'a university' is propagated, i.e., spread to the neighbouring mental space through the lattice of spaces, as it has a counterpart that is employed by the anaphor 'it' which refers to 'a university' element in the base space. The COUNTERPOINT space introduces the meronym 'medical school' as a new element in the form of indefinite NP. However, the negative aspect of the expression 'doesn't have' express a CONTRAST relation between the holonym 'university' and the meronym 'medical school'. Thus, in the COUNTERPOINT space, the holonym, which is represented by the propagated element 'a university' DOESN'T INCLUDE the meronym, which is represented by the element 'a medical school'. Consequently, the meronym and the holonym occur in two different spaces, but they both function as an element in the constructed space.

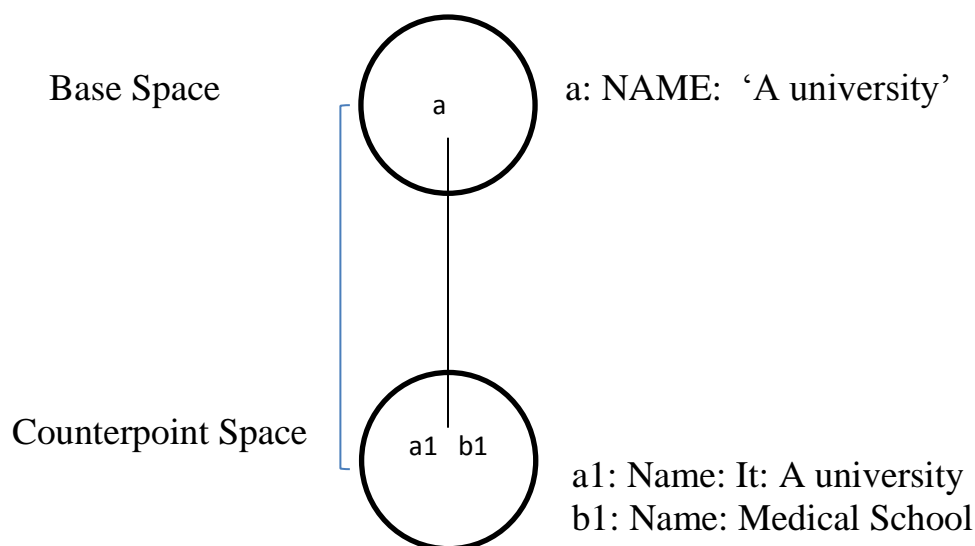


Figure (55) Mental Space of University/ Medical School as Meronymy Relation

49. The *sleeves* of this *jacket* have no *cuff*.

The above sentence introduces the meronyms ‘the sleeves’ and the ‘cuff’ as definite NP elements in the base space. Likewise, the holonym ‘jacket’ in the form of the prepositional phrase ‘of this jacket’ sets up a new mental space known as Domain space. The meronyms ‘sleeves’ and ‘cuff’ and the holonym ‘jacket’ are connected in this new domain space by the access principle. This principle links the meronyms and the holonym through the INCLUSION connector. This connector provides access to their counterparts in other mental spaces. The lexical items ‘have no’, on the other hand, express a relation between the holonym and the meronyms. This relation signifies that the INCLUSION connector between the meronyms ‘sleeves’ and ‘cuff’ does not exist. The meronym ‘sleeves’ is mapped onto element *a1*, whereas the meronym ‘cuff’ is mapped onto element *b1*. However, the holonym ‘jacket’ is mapped to element *c1*. The below figure identifies the configuration between the meronyms and the holonym in the base and the domain space. Consequently, the meronyms are constructed in both mental spaces, whereas the holonym is built in the Domain space only.

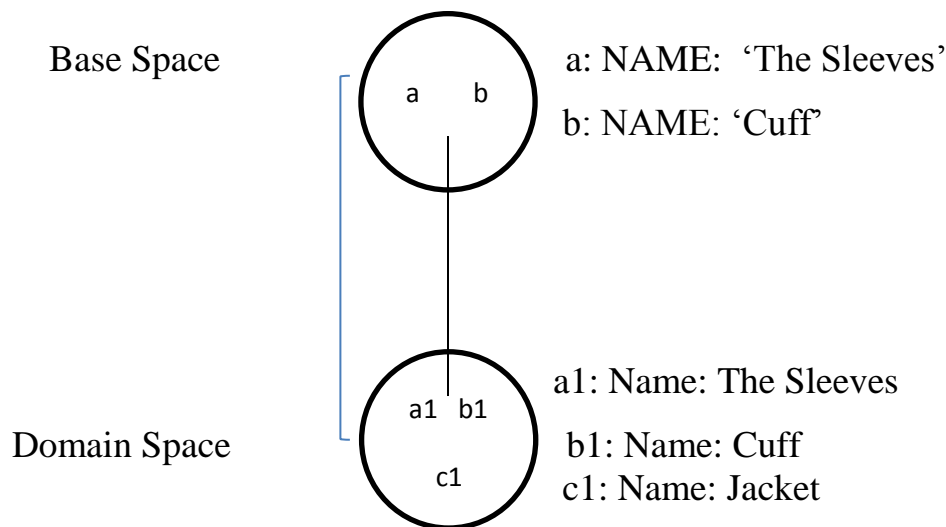


Figure (56) Mental Space of Sleeves/ Cuff/ Jacket as Meronymy Relation

50a. The *table-leg* was damaged.

50b. The *table* was damaged.

The base space in the above pair of sentences presents the meronym ‘table-leg’ and the holonym ‘table’ in the phrases ‘the table-leg’ and ‘the table’ as elements in the form of definite NP. These two elements are presented in the presuppositional mode, as they are already accessible in the mental construction. However, the lexical item ‘was damaged’ initiates a relation between the actual elements ‘the table-leg’ and ‘the table’ and the hidden element. Actually, the hidden element is not introduced in the mental construction, but it is understood through the course of discourse. Thus, this hidden element leads to the construction of another space entitled DAMAGER Space. Moreover, the lexical item ‘was damaged’ involves a relation between two participant roles: DAMAGER and ENTITY DAMAGED within the base space and the DAMAGER Space. The DAMAGER role is mapped onto the concealed element *b* in the DAMAGER Space, whereas the ENTITY DAMAGED role is mapped onto the meronym ‘table-leg’ and the holonym ‘table’ element *a* in the base space. Therefore, the meronym and the holonym exist in the same base space, and they both undergo the same relation.

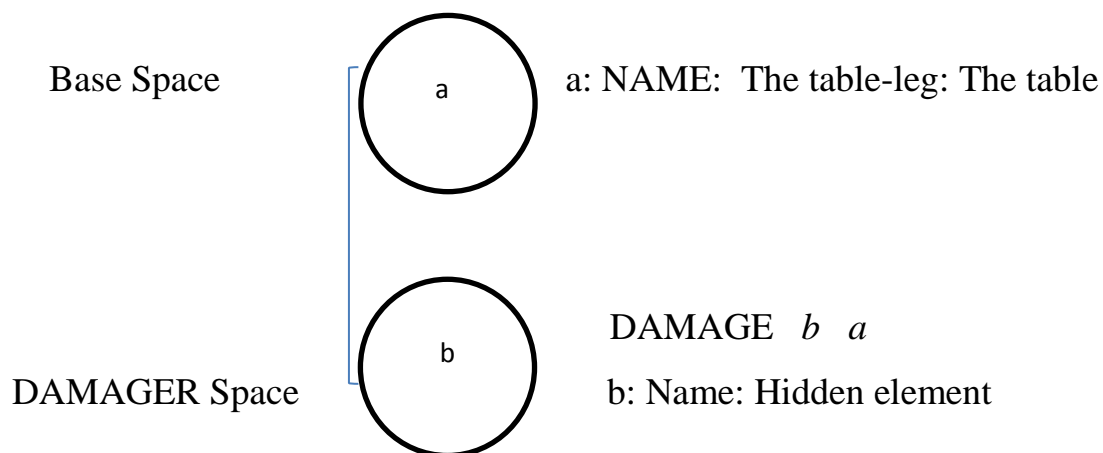


Figure (57) Mental Space of Table-leg/ Table as Meronymy Relation

IV: Antonymy Relation

51. John is a **bad** tennis player, but he is **better** than Tom.

This construction is made up of two independent clauses. The first shows a definite description of the element ‘John’. The antonym ‘bad’ is a property that prompts for *a*, and it associates with an indefinite NP element that is referred to as ‘tennis player’. The element ‘John’ prompts for *a1*, whereas the element ‘tennis player’ prompts for *b1*. In the second clause, the conjunction ‘but’ provides a counter-expectational interpretation of the previous base space. The other antonym, ‘better than’ functions as a space builder in the second clause, which sets up a Comparison space that is established relative to the base space. The pronoun ‘he’ is an anaphor of the element ‘John’, which prompts for as *a2*. Also, another element is introduced in the second clause that prompts for as *b2*. This implies that these two elements, ‘John’ and ‘He’, are counterparts, and they are linked by the identity connector. This identity connector provides a mapping between two mental spaces, so Access Principles help to access both counterparts in two different mental spaces. Thus, the identity connector helps to establish a pragmatic function between the target element ‘John’ and the trigger element ‘he’. Consequently, the antonyms ‘bad’ and ‘better’ occur in two different spaces. Moreover, the second antonym ‘better’ functions as a space builder.

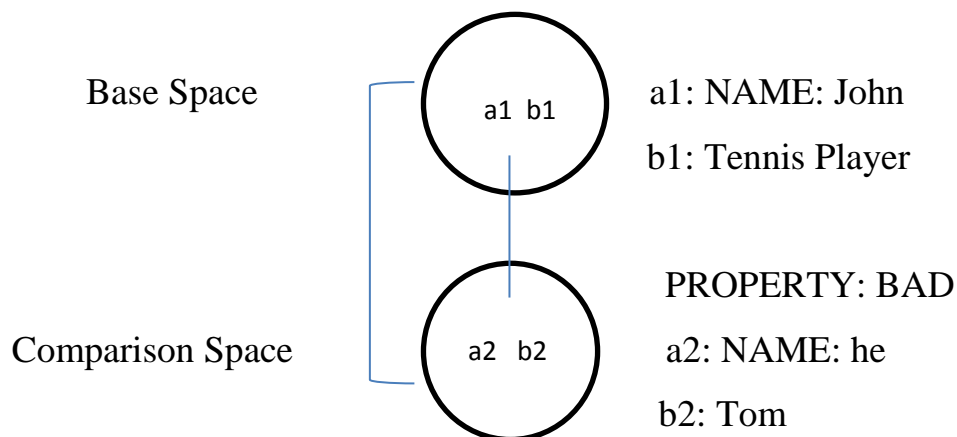


Figure (58) Mental Space of Bad/ Better as Antonymy Relation

52. If John is **tall**, then he is not **small**.

The above construction is made up of two propositions, which make two spaces in addition to the base space that refers to the reality space. The first proposition sets up the foundation space with the use of the space builder ‘if’, and the second proposition sets up the expansion space by the use of the space builder ‘then’. The base space provides a definite description of the element ‘John’, so it presupposes the existence of ‘John’. In the Foundations space, the element ‘John’ is given the property of being TALL. Thus, the antonym ‘tall’ is used as a property of an element. Similarly, the Expansion space contains an anaphor ‘he’ that refers back to the element ‘John’ in the Foundation space. Consequently, these two elements, ‘John’ and ‘he’, are counterparts, and they are linked by the identity connector. These two elements can be related via the Access Principle. The element ‘John’ serves as the target, but the anaphor ‘he’ acts as the trigger. The element ‘John’ prompts for as *a1*, and the corresponding counterparts ‘he’ prompts for as *a2*. Therefore, the antonomies ‘tall’ and ‘small’ provide two different properties, and they occur in two different mental spaces.

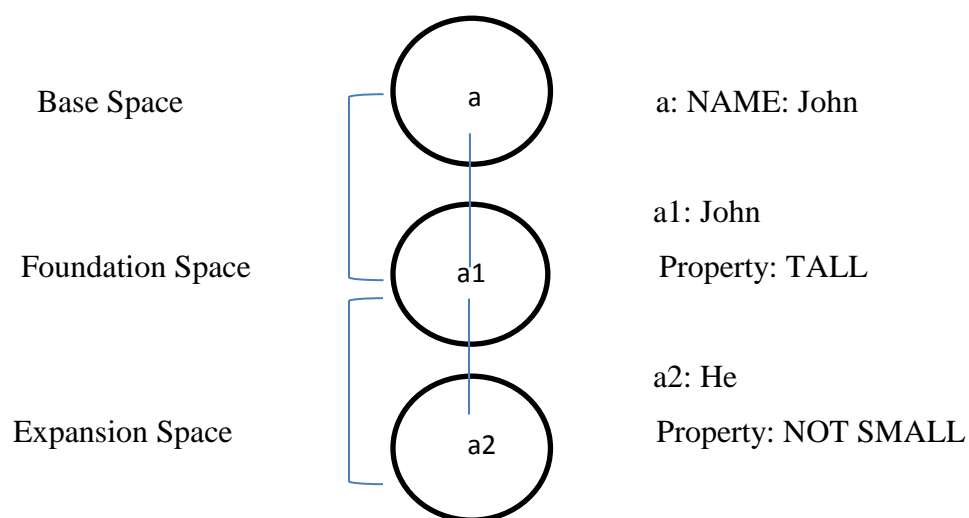


Figure (59) Mental Space of Tall/ Small as Antonymy Relation

53. Mr Adams may be neither **old** nor **young**.

In the above construction, the base space is constructed in relation to the presupposed element ‘Mr. Adams’ in the form of a definite NP that presents the existence of ‘Mr. Adams’. The connectives ‘neither... nor’ function as a space builder, and they set up INVALIDITY space. Accordingly, the antonyms ‘old’ and ‘young’ function as properties that are not found or invalid in the element ‘Mr Adams’. The verb phrase ‘may be’ expresses a relation between the element ‘Mr Adams’ and the two antonyms or properties ‘old’ and ‘young’ in the INVALIDITY space. This verb phrase sets up a relation of possibility between the element ‘Mr Adams’ and the properties ‘old’ and ‘young’. This construction holds the role-value relation. The definite NP element ‘Mr Adams’ has the value reading, and this value element is linked to the role that is ‘neither old nor young’. Hence, the antonyms ‘old’ and ‘young’ function as roles for the value element ‘Mr Adams’. This value element conceives these properties differently in the frame of AGE, so it has different roles. In other words, different roles can be assigned to the value element regarding age. Consequently, these two antonyms, old and young, assign different properties and roles to the element ‘Mr Adams’, but they occur in the same invalidity space.

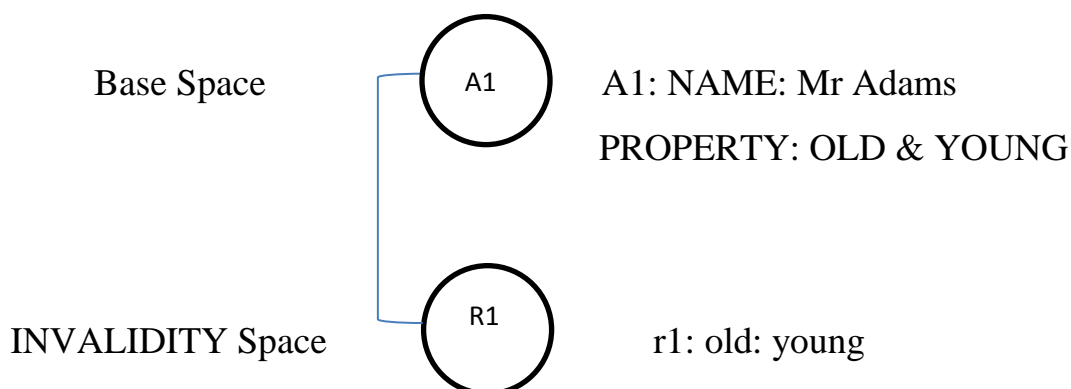


Figure (60) Mental Space of Old/ Young as Antonymy Relation

54: John **gave** Mary a book.

55: Mary **received** a book from John.

The first sentence provides a definite description of the elements ‘John’ and ‘Mary’ in the base space, and they are represented by *a* and *b* labels respectively. These two elements are presented in the presuppositional mode, which entails that they are presented in the discourse context. Thereby, these two elements are established in the base space as part of the background knowledge. Due to the relation between these two elements, another space is constructed through the course of discourse entitled TRASFER Space. This new space is made up of an element, ‘a book’, in the form of indefinite description, which is referred to as ‘*c*’. The antonym ‘gave’ affords a relation between the three elements based on the GIVING frame which includes three participant roles. This frame is projected to the base space by the use of schema induction. Thus, the GIVER role is mapped onto the element ‘John’ prompt for as *a1*, the RECEIVER role is mapped onto the element ‘Mary’ prompt for as *b1*, and the ENTITY GIVEN is mapped onto the element ‘a book’ prompt for as *c1*. Mental space construction is viewed in figure (61).

The second sentence is constructed quite differently concerning the mental space theory. The base space is constructed with a definite description of an element ‘Mary’ prompts for as *a*. However, the prepositional phrase ‘from John’ functions as a space builder that constructs an Identification Space. This space identifies precisely the person who gives the book to the element ‘Mary’. This implies that the identification space is linked to the base space via a pragmatic function that spots the GIVER and the RECEIVER as well. Moreover, an indefinite description of the element ‘a book’ is added to this new space, and it is represented by *b* label. The antonym ‘receive’ introduces a relation between the two mentioned elements based on the RECEIVING frame that includes two

participant roles. The RECEIVER role is mapped onto the element ‘Mary’ prompts for as *a1*, whereas the ENTITY RECEIVED is mapped onto the element ‘a book’ and prompts for as *b1*. The mental space construction of the second sentence is depicted in the figure (62). Consequently, the antonyms ‘gave’ and ‘received’ are represented in two different spaces, and they both assign different roles in the mental structure.

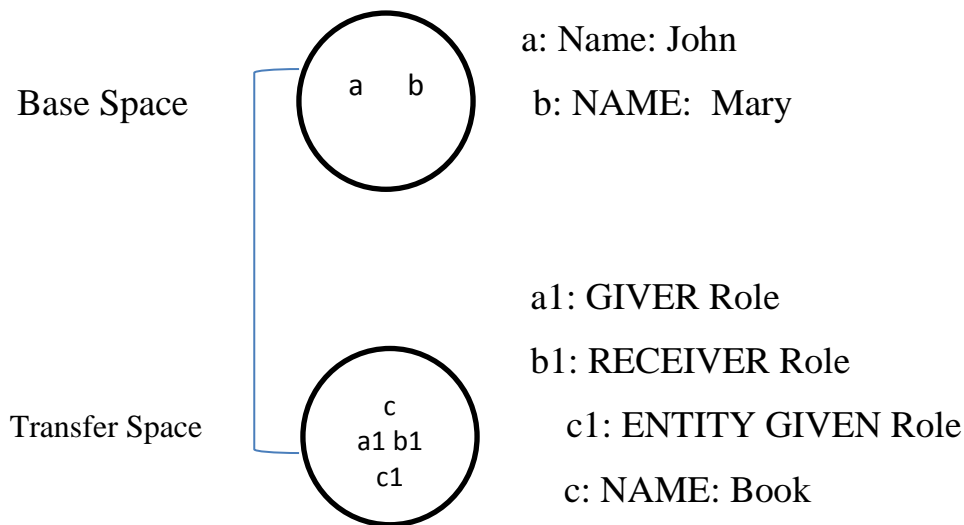


Figure (61) Mental Space of Gave as Antonymy Relation

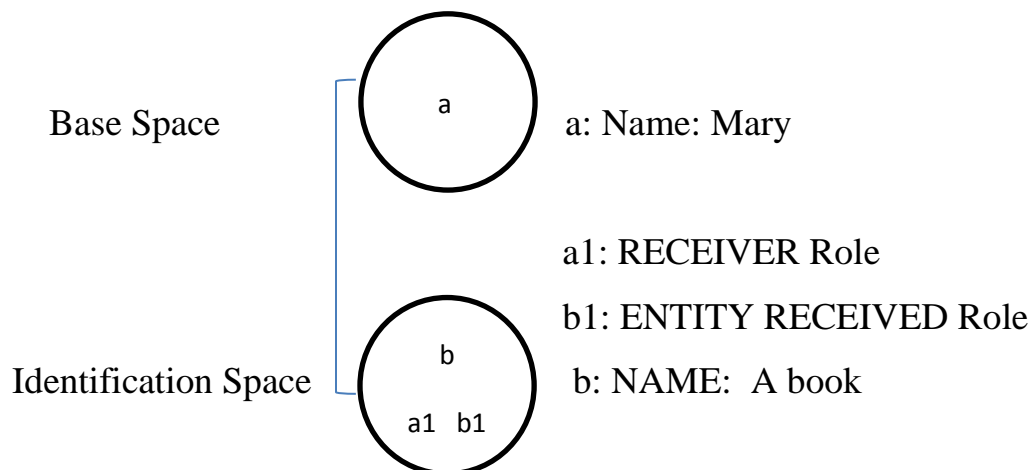


Figure (62) Mental Space Received as Anonymy Relation

V: Polysemy Relation

56: She sat at the **head** of the table

57: The thought never entered my **head**

58: She resigned as **head** of department

The polysemous lexical item ‘head’ is used differently in each proposition, so different mental constructions are involved. In the first sentence, the base space is established in relation to an indefinite element in the form of the pronoun ‘she’. The prepositional phrase ‘at the head of the table’ requires the hearer to set up a new mental space entitled Locative space. The verb ‘sat’ expresses a relation between the base space and the locative space. Therefore, the polysemous word ‘head’ functions as a property that prompts for the exact location of the element ‘she’ in the locative space.

However, the second sentence sets up a base space with presupposed elements ‘the thought’ and ‘my head’ in definite interpretation form. Thus, the polysemous item ‘head’ is realized as an element. The adverb ‘never’ functions as a space builder, and it sets up a Time space. The verb ‘entered’ constructs a relation between the elements in the base space and the time space, so this relation prompts for the ENTERING frame which includes two participant roles: ENTITY ENTERERED and ENTERERD PLACE. The time space ‘never’ construes that the relation between the two elements had not met at all. Consequently, the polysemous item ‘head’ is constructed in the base space, and it holds the relation with the other element via the verb ‘ENTER’.

The third sentence certainly sets up the mental space differently. In the base space, an element is presented as indefinite pronoun in the form of ‘she’. Similarly, the space builder ‘as head of department’ sets up a new mental space that is labeled Domain space. The polysemous item ‘head’ is used to form a new mental space as it acts as a space builder in relation to the phrase ‘as head of department’. The verb

‘resign’ expresses a relation between the base space and the domain space. Consequently, the word ‘head’ prompts for the rank or position of the element ‘she’ in the domain space. The polysemous word ‘head’ in the mental space construction of each sentence is depicted in figures (63), (64), and (65), respectively. Consequently, the polysemous word ‘head’ in each sentence is constructed differently in the mental structure.

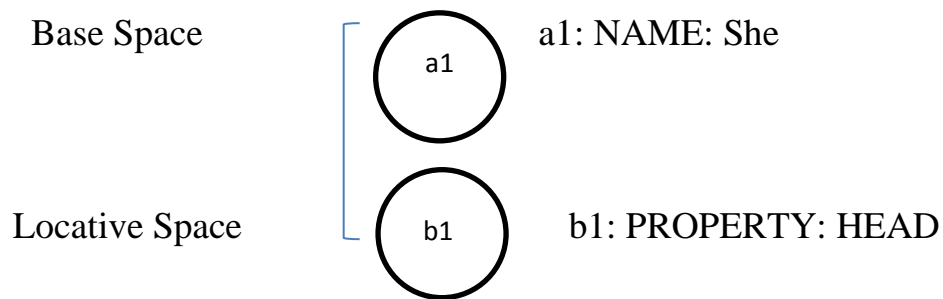


Figure (63) Mental Space of Head as Polysemy Relation

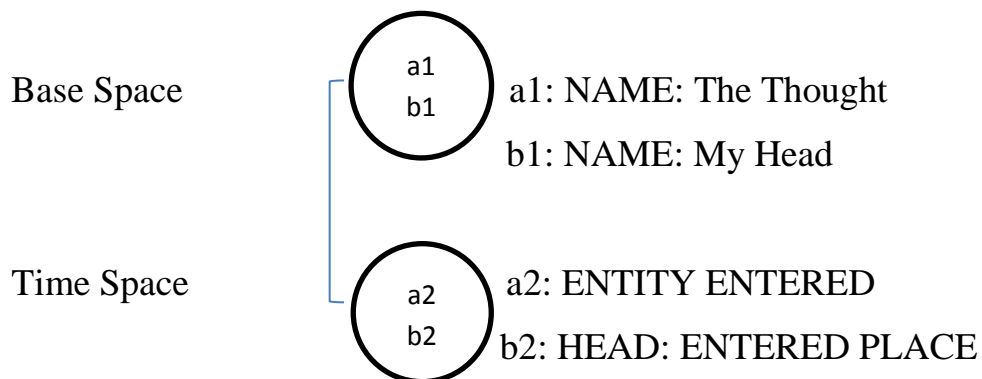


Figure (64) Mental Space of Head as Polysemy Relation

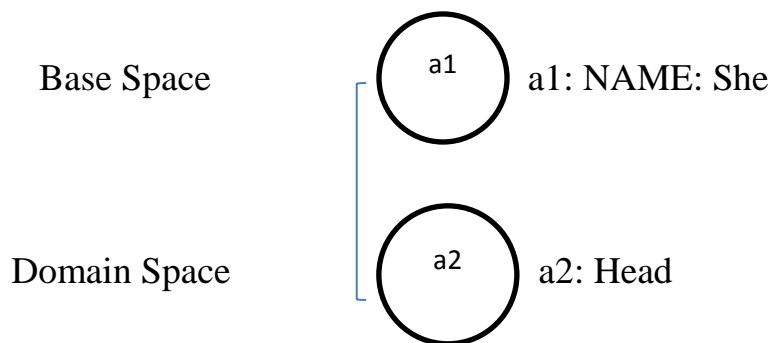


Figure (65) Mental Space of Head as Polysemy Relation

59. Rambo found the **hammer**.

60. Rambo **hammered** the nail into the tree.

The polysemous word ‘hammer’ is conceived and constructed differently in accordance with the mental space theory. In the first sentence, the base space introduces a definite interpretation of the element ‘Rambo’. The verb ‘found’ assigns a relation between the elements ‘Rambo’ and ‘the hammer’, so a new mental space is constructed under the title of Domain Space. In this space, the polysemous lexical item ‘the hammer’ is represented in the form of definite NP. Thus, these two elements are considered as background knowledge, so they are presented in the presuppositional mode. The verb ‘found’ conveys a particular relation between the elements in both spaces. This relation involves two participant roles: FOUNDER role and the ENTITY FOUND role. The FOUNDER role is linked to the element ‘Rambo’ and prompts for as *a1*, whereas the ENTITY FOUND is linked to the polysemous lexical item ‘the hammer’ and prompts for as *b1*. Consequently, the polysemous word ‘hammer’ functions as an element in the Domain space, and it takes a role in the relation between the base space and the Domain space. This mental construction is depicted in the figure (66).

However, the polysemous word ‘hammered’ in the second sentence is situated in a different position, and it functions differently as well. The base space introduces definite description of two elements in the form NP as ‘Rambo’ and ‘the nail’. The polysemous lexical item ‘hammered’ expresses a relation between the elements of the base space. This relation covers two participant roles: HAMMERER role and the ENTITY HAMMERED role. The HAMMERER role is mapped onto the element ‘Rambo’ and prompts for as *a1*, whereas the ENTITY HAMMERED role is mapped onto the element ‘the nail’ and prompts for as *b1*. The prepositional phrase ‘into the tree’ functions as a space builder that sets up a new Space space or Locative space. This new space helps to locate the exact place

of the elements in the locative space. Consequently, the polysemous items in both sentences are constructed in different spaces, and they represented by different elements and assign different relations.

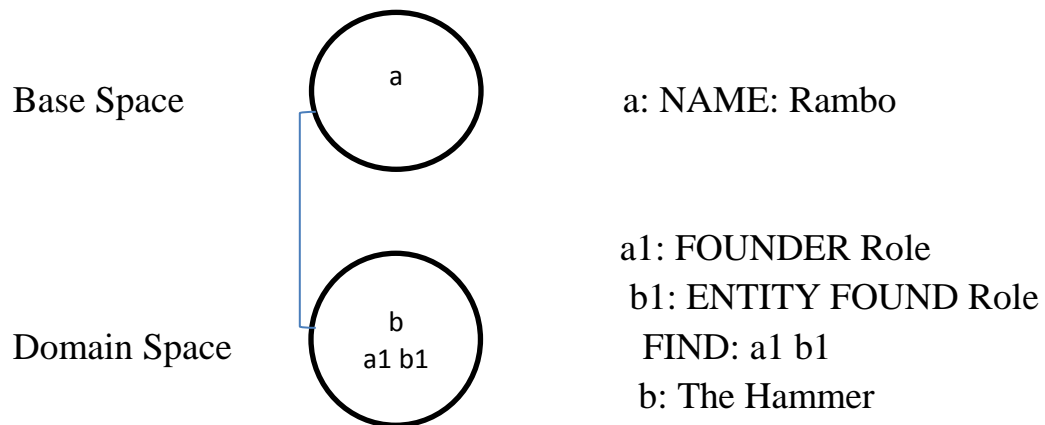


Figure (66) Mental Space of Hammer as Polysemy Relation

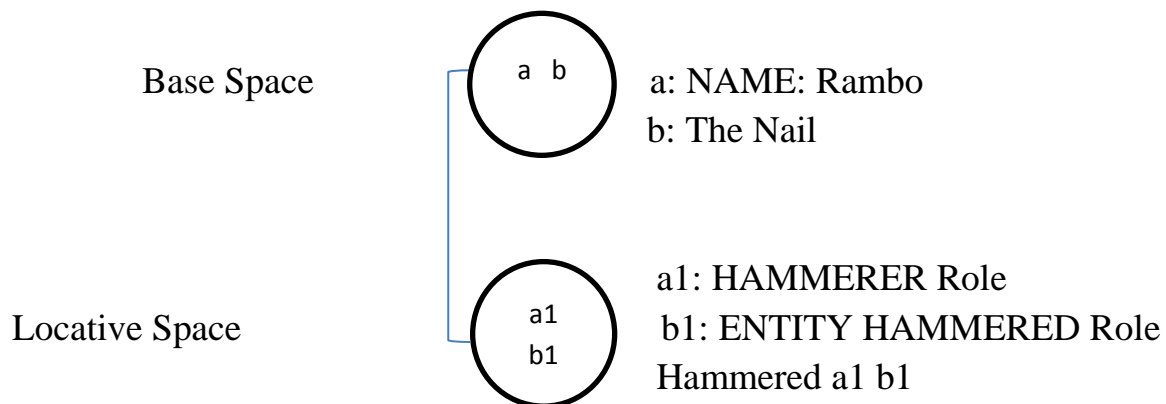


Figure (67) Mental Space of Hammered as Polysemy Relation

VI: Homonymy Relation

61: Rita's favorite color is **blue**.

62: Samuel picked a tissue and **blew** his nose in the cafe.

The base space in the first sentence presupposes that the element ‘Rita’ has a favorite color. Thus, ‘Rita's favorite color’ functions as an element in the base space. The homonymous word ‘blue’ assigns a property of color to the element ‘Rita's favorite color’ in the base space. The verb ‘is’ functions to link a trigger and its target as a connector between favorite color and color blue. The element ‘Rita's favorite color’ receives the trigger role, while the property ‘blue’ receives the target role.

The second sentence presupposes the existence of the definite NP ‘Samuel’ as an element in the base space. The prepositional phrase ‘in the cafe’ functions as a space builder that sets up a locative space. In this locative space, another element is introduced in the form of ‘his nose’ that acts as a counterpart to the element ‘Samuel’ in the base space. Similarly, in the locative space, two relations are introduced. The first relation ‘picked’ introduces a relation between two elements that involves two participant roles: PICKER and ENTITY PICKED. The PICKER role is mapped onto ‘Samuel’ (element *a1*), but the ENTITY PICKED role is mapped onto ‘a tissue’ (element *b1*). The second relation is initiated by the homonymous lexical item ‘blew’ between two elements that involve two participant roles: BLOWER and ENTITY BLOWN. The BLOWER role is mapped onto ‘Samuel’ (element *a1*), whereas the ENTITY BLOWN role is mapped onto ‘his nose’ (element *c1*).

Consequently, the homonyms ‘blue’ in the first sentence and ‘blew’ in the second sentence are constructed differently in terms of mental space theory, as shown in the above clarifications and depicted in the below figures (68) and (69).



Figure (68) Mental Space of Blue as Homonymy Relation

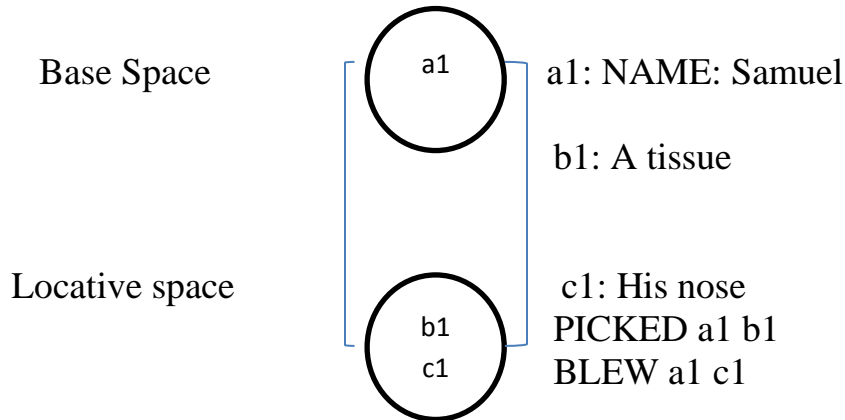


Figure (69) Mental Space of Blew as Homonymy Relation

63: The film got approval from the **sensor** board.

64: The employees found **sensor** water taps and sanitizer disposal in the office building.

The base space of the above first sentence introduces an element as a definite NP in the form of ‘the film’. The homonymous item ‘sensor’ in the prepositional phrase ‘from the sensor board’ sets up a new mental space in the name of locative space. In this locative space, another element is introduced as ‘approval’. The verb ‘got’ initiates a relation between these two elements, which involve two participant roles: GETTER and ENTITY GOT. The GETTER role is mapped onto ‘the film’ (element *a1*), whereas the ENTITY GOT role is mapped onto ‘approval’ (element *b1*).

The base space of the second sentence introduces the definite NP ‘The employees’. The prepositional phrase ‘in the office building’ functions as a space

builder, so a new space is made titled locative space. In this locative space, two elements are introduced. The first element is ‘sensor water tap’. Thus, the homonymous word ‘sensor’ assigns a property to the element ‘water taps’. The second element is ‘sanitizer disposal’. The verb ‘found’ expresses a relation between the elements in both spaces, i.e. the base space and the locative space. This relation involves three participant roles: FOUNDER role and the ENTITY FOUND1 and ENTITY FOUND2. The FOUNDER role is mapped onto ‘The employees’ (element *a1*), and the ENTITY FOUND1 is mapped to ‘sensor water taps’ (element *b1*), whereas the ENTITY FOUND2 is mapped to ‘sanitizer disposal’ (element *c1*). Therefore, the homonyms ‘censor’ and ‘sensor’ are constructed differently in terms of mental space theory. The word ‘censor’ helps to construct a locative space in a prepositional phrase construction, whereas the word ‘sensor’ assigns a property to an element in the locative space.

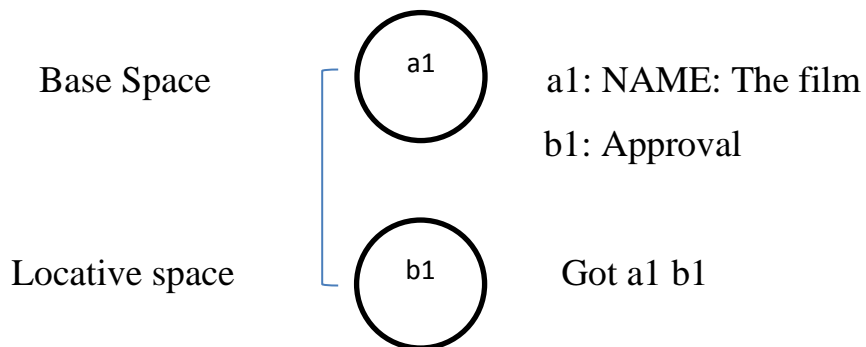


Figure (70) Mental Space of Censor as Homonymy Relation

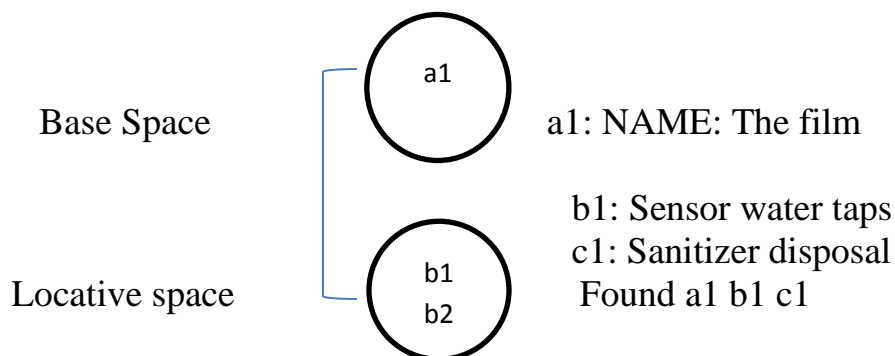


Figure (71) Mental Space of Sensor as Homonymy Relation

65. There is no **right** way to **write** a great novel.

This sentence is constructed with two homonyms, ‘right’ and ‘write’. The base space is formed using a definite description of the element ‘no right way’ in the form of a noun phrase. Thus, the homonymous lexical item ‘right’ is used to refer to an element in the base space. The infinitive verb phrase ‘to write a great novel’ acts as a space builder, so an extended new space is built to show intention or purpose, labelled a Hypothetical space. This new space is projected against the element ‘no right way’ in the base space. Therefore, the homonymous lexical item ‘write’ is used to link the hypothetical space to the base space by the use of the access principle. It provides access to the element ‘no right way’ in the base space. Moreover, the homonymous item ‘write’ provides a relation between two elements. The WRITING frame gives access to two participant roles, one for WRITING METHOD and the other for ENTITY WRITTEN. The WRITING METHOD is mapped onto the element ‘no right way’, and it is represented by (*a2*), whereas the ENTITY WRITTEN is mapped onto the element ‘a great novel’, and it is represented by (*b1*).

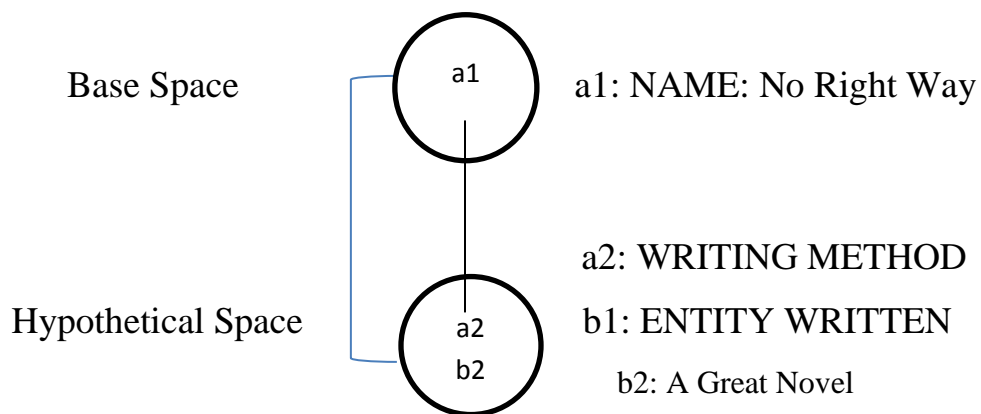


Figure (72) Mental Space of Right/ Write as Homonymy Relation

VII: Metonymy Relation

66: **The White House** has released a statement.

The above sentence introduces a definite description of an element in the base space in the form of the metonym ‘The White House’. This element presents an Identification Principle between two elements or metonyms ‘A building structure’ and ‘Government Authority’. These two elements or metonyms are linked by a pragmatic function. Thus, the element ‘The White House’ takes the trigger role as it refers to the ‘building structure’, and the same element ‘The White House’ takes the target role as it refers to the ‘government authority’ by a pragmatic function connector. These two elements give rise to the Generic space. Another element is introduced in the base space in the form of ‘a statement’. The verb ‘has released’ establishes a relation between the target element ‘The White House’ in the base space and ‘a statement’ element in the Generic Space. This relation brings with it two participant roles, one for the RELEASER and the other ENTITY RELEASED. The RELEASER is mapped onto the target element ‘The White House’, but the RELEASED ENTITY is mapped onto the element ‘a statement’.

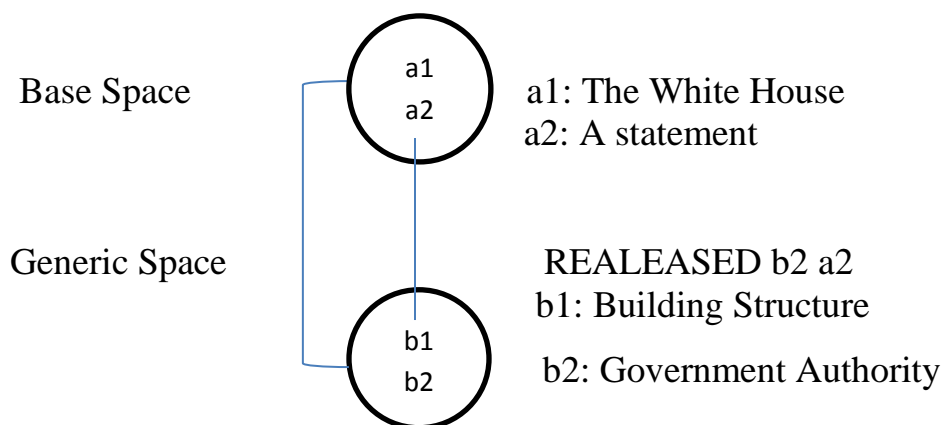


Figure (73) Mental Space of The White House as Metonymy Relation

67: **The ham sandwich** wants his coffee now.

The base space of the above sentence introduces a definite description of a presupposed element in the metonymic form ‘The ham sandwich’. This metonymic element has two roles, so an Identification Principle is used to link them. The first role refers to ‘food’ and prompts for as (*a1*) while the other role refers to ‘customer’ and prompts for as (*a2*). Consequently, these two metonyms or interpretations lead to the construction of the Generic Space. In this case, a pragmatic function links the role element ‘food’ as a trigger to the value element ‘customer’ as a target, so that the appropriate role is considered based on the context of discourse. The adverb ‘now’ sets up another mental space entitled Time Space. In this space, the element ‘his coffee’, prompts for as (*b1*), is linked to the target role element ‘customer’ by an identity connector. Moreover, the verb ‘wants’ initiates a relation between the target element ‘The ham sandwich’ as ‘customer’ and the element ‘his coffee’. This relation provides two participant roles: WANTER and ENTITY WANTED. The WANTER role is mapped onto the target element ‘The ham sandwich’ as ‘customer’, whereas the ENTITY WANTED role is mapped onto the element ‘his coffee’.

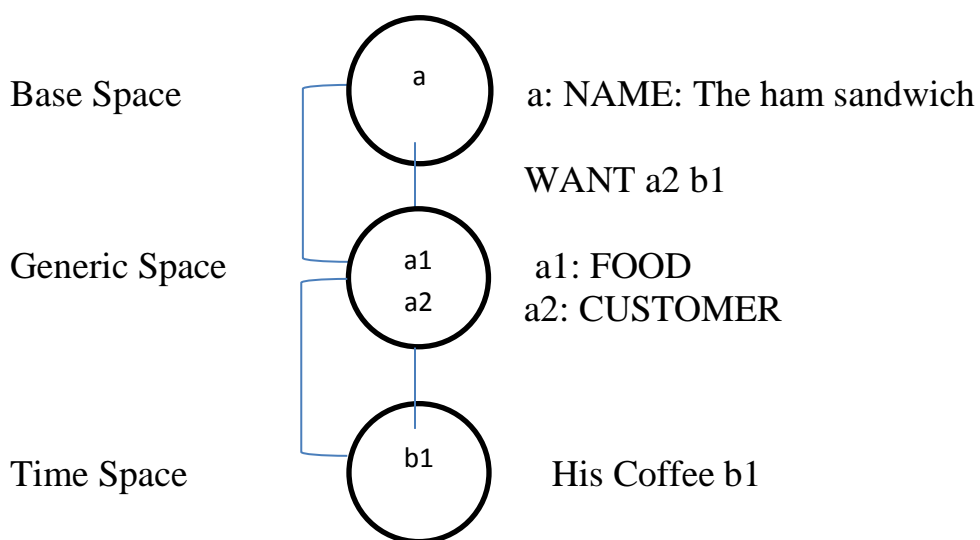


Figure (74) Mental Space of The ham sandwich as Metonymy Relation

68: **The car** in front decided to turn right.

The above sentence presents the definite description of the element ‘the car’ in the base space. This element offers a metonymic relation between two interpretations. The first interpretation is ‘the vehicle’ and prompts for as (*a1*), whereas the other interpretation is ‘the driver’ and prompts for as (*a2*). These two elements or interpretations cause the construction of the Generic Space, so they are linked by the use of Identification Principle. Moreover, a pragmatic function links the role element ‘the vehicle’ as a trigger to the value element ‘the driver’ as a target. The adverb ‘in front’ functions as a space builder, so a new space is built labelled Locative space. This new space introduces the lexical item ‘right’ as an element. However, the verb ‘decided to turn’ reveals a relation between the trigger element ‘the vehicle’ and the target element ‘the driver’. As a result, two participant roles are involved in this relation: the DECIDER role and the DIRECTION DECIDED TO. Here, the verb plays an important role in the study of metronomic relation. So, the DECIDER role is mapped to the target element, whereas the DIRECTION DECIDED TO role is mapped to the element ‘right’ in the locative space.

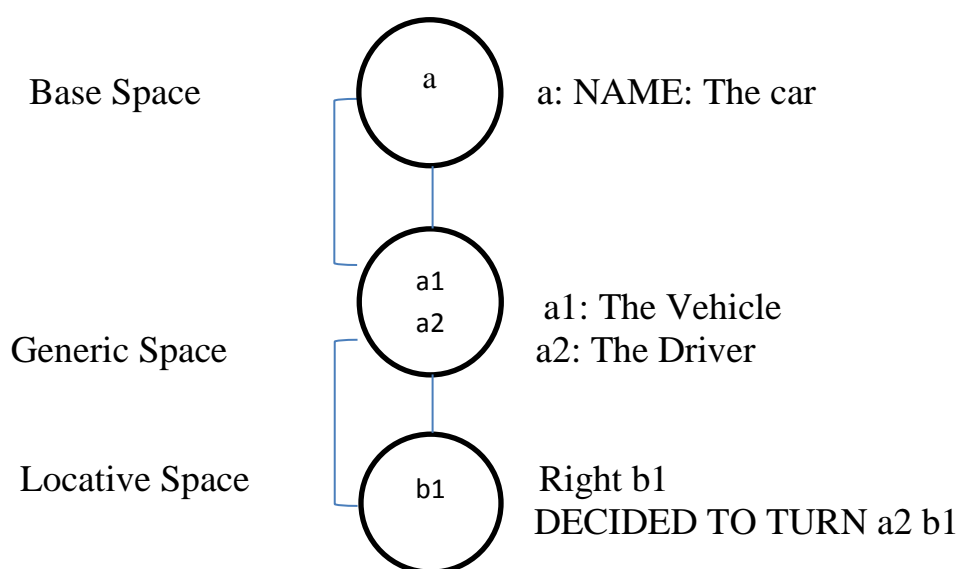


Figure (75) Mental Space of The Car as Metonymy Relation

69: **England** won the World Cup in 1966.

The word ‘England’ sets up a metonymic relation in the base space. It provides two interpretations. One refers to ‘The Country of England’, whereas the other refers to ‘The Team of England’. The metonymic word ‘England’ presents two role elements, so the Generic Space is built. These two roles are linked by a pragmatic function due to the presence of Identification Principle between them in this newly constructed space. The first role element ‘The Country of England’ is referred to as a trigger element and prompts for as ‘*a1*’, whereas the second role element ‘The Team of England’ is referred to as a target element and prompts for as ‘*a2*’. The prepositional phrase ‘in 1966’ assigns a new mental space entitled Time Space. A definite description of a NP element is presented in the time space in the form of ‘the World Cup’ as prompts for ‘*b1*’. The verb ‘won’ is considered a decisive tool to choose between the trigger and the target elements. Therefore, this verb presents a relation between two participant roles: the WINNER role and ENTITY WON role. The WINNER role is mapped onto the target element ‘The Team of England’, whereas the ENTITY WON role is mapped to the element ‘the World Cup’.

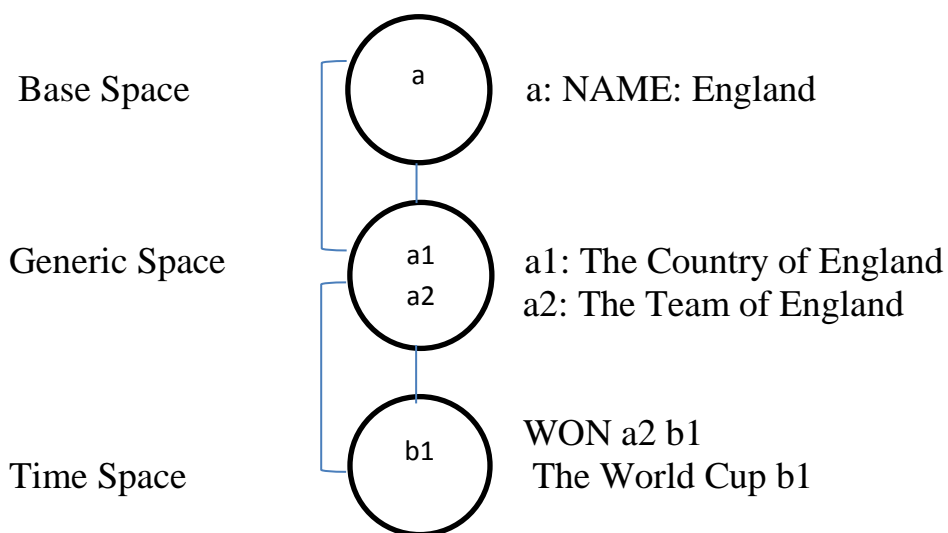


Figure (76) Mental Space of England as Metonymy Relation

70: Jack noticed several new **faces** tonight.

The above sentence identifies the NP ‘Jack’ as an element that is presented in the presuppositional mode and prompts for as ‘a1’ in the base space. The adverb ‘tonight’ constructs a new mental space of time. Hence, it helps the reader to set up a scenario to show the time of the event. In this space, an indefinite NP is presented in the form of ‘several new faces’ and prompts for as ‘b’. The word, ‘faces’, sets up a metonymic relation. It presents two readings. One reading refers to ‘Faces of some people’ while the other refers to the ‘Some People’, so the Generic Space is constructed. These two readings assign two role elements: the trigger and the target. The trigger role takes the ‘Faces of some people’ reading and prompts for as ‘b1’, whereas the target role takes the ‘Some People’ reading and prompts for as ‘b2’. These two readings are linked by a pragmatic function. The verb ‘noticed’ helps to identify the correct used role or reading. This verb identifies two participant roles: NOTICER role and ENTITY NOTICED role. The NOTICER role is mapped onto the element ‘Jack’, whereas the ENTITY NOTICED is mapped onto the target element that refers to the ‘Some People’ reading.

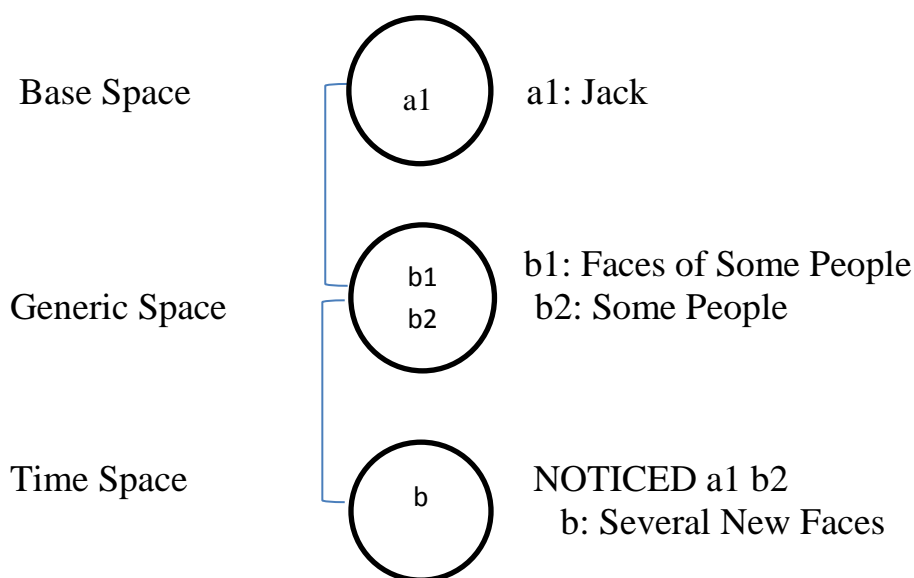


Figure (77) Mental Space of Faces as Metonymy Relation

4.7 Analysis of Lexical (Sense) Relations Using Construal Theory

This theory attempts to analyse lexical (sense) relations adopting Croft and Cruse (2004) model. These relations are analysed using four categories of construal theory: attention/ salience, judgement/ comparison, perspective/ situatedness, and constitution/ gestalt, and each category includes other subcategories. This theory investigates these relations from different cognitive dimensions. However, some subcategories might not be applied in the analysis of a relation. Thus, these sentences are analysed only using adequate subcategories.

I: Synonymy Relation

71a. The shirt is *pale* in colour.

71b. The shirt is *light* in colour.

The first category to start with is attention/ salience. These two synonyms, ‘pale’ and ‘light’, select or profile a concept in the domain of COLOUR. These two synonyms focus the listener’s attention. These two synonyms have different facets, but their use in the domain of COLOUR attends one’s attention or focus. Moreover, the scope of attention employed in construing the synonyms in this pair is accessibility. The article ‘the’ implies that the perceiver is delimiting the scope of selecting a concept to the entity ‘shirt’ among other clothes. This implies that the synonyms are not in the focus of attention of the perceiver, but they are in the scope of attention.

Another attentional element involved in construing these synonyms is scalar adjustment. The two synonyms invite the hearer to attend to the same quality of colour, i.e., the two synonyms are construed as having qualitative scalar adjustment. Thereby, these two synonyms are construed as coarse-grained as they are expressions of lesser specificity. The dynamic attention of the lexical item ‘the

shirt' and the synonyms 'pale' and 'light' in this pair of sentences involves the summary scanning. They are conceived or construed summarily as a holistic conceptualisation of the scene.

Regarding the judgment/ comparison category, the element categorization is involved in construing the synonyms 'pale' and 'light'. This pair of sentences schematizes the same experience as the two synonyms frame the same situation in the same domain of COLOUR. Thereby, these two synonyms assign full sanction in this domain as they are subsumed from the same domain. However, perspective/ situatedness category is manifested in construing these synonyms as well. The shirt is schematised as 'pale' and 'light' from the vantage point of the speaker, i.e. this shirt is construed using these synonyms from the perspective or viewpoint of the speaker. Moreover, the synonyms in this pair of sentences are construed objectively, as the speaker is not involved in the scenes being construed. Thus, these two synonyms are arranged in accordance to optimal viewing arrangement in the conceptual structure.

The category constitution/ Gestalt supports the construal of the synonyms 'pale' and 'light'. The structural schematisation of the synonyms 'pale' and 'light' is individuated by the use of the scale parameter. These synonyms are construed as gradable properties to the domain COLOUR. This implies that the colour of the shirt is construed as having gradable scale of colour, as an increase in salience is equated with a higher degree of the property. Moreover, the synonyms 'pale' and 'light' assign a relational property, as they cannot be construed without reference to the concept COLOUR. This relational property of these synonyms profiles the interconnections between entities, and it introduces a degree of separation between the trait 'colour' and 'the shirt'.

72a. The train travelled **fast**.

72b. The train travelled **rapidly**.

These two synonyms ‘fast’ and ‘rapidly’ involve the construal operations in the cognitive structure. Attention/ salience is the first category to start with. These two synonyms profile or single out the focal point of attention in the conceptual system. So, these two synonyms designate what is expressed in these two sentences. In the SPEED domain, these two synonyms select the high facet, as they both designate high speed. After the concept is selected, the perceiver attempts to delimit the scope of the concept, as it is surrounded by a scope of attention. The referent ‘the train’ delimits the scope of attention of the perceiver as the article ‘the’ functions as accessible point among other means of transportations. Accordingly, these synonyms are construed similarly as they modify the same referent.

The other element employed in this category is scalar adjustment. The profiled concepts, fast and rapidly, in the domain SPEED invite the hearer to attend to the speed of the train. Thus, these two synonyms construe the conceptualised scene and offer a fine-grained speed of the train. The dynamic attention construes that these two synonyms are scanned sequentially as they are conceptualised over time.

The second category to deal within the analysis of the synonyms ‘fast’ and ‘rapidly’ is judgement/ comparison. These synonyms schematise the same scene as they construe high speed, so they assign a full sanction in the domain of SPEED. These two synonyms convey an unproblematic or real subsumption of the new situation, so they are not compared to any other experience. perspective/ situatedness is the third category adopted in construing the synonyms ‘fast’ and ‘rapidly’.

The scenes in these two sentences are construed similarly as the synonyms ‘fast’ and ‘rapidly’ offer the same degree of specificity from the perceiver’s vantage point, i.e., the synonyms are construed from the same focal adjustment. Another category involved in construing these synonyms is subjectivity. These two synonyms are construed objectively in this pair of sentences. The speaker of these sentences excludes himself in the situation being described.

The last category involved in construing the synonyms ‘fast’ and ‘rapidly’ is constitution/ Gestalt. The structural schematization of the synonyms ‘fast’ and ‘rapidly’ is individuated as these synonyms are construed as properties that assign scale to the domain SPEED in the conceptual system. Hence, these two synonyms are conceptualised as measurable entities that provide gradable dimensions to the domain SPEED. The force dynamic subcategory is involved in constituting the construal of these sentences. Thus, the synonyms ‘fast’ and ‘rapidly’ identify the degree and kind of the force acting on the train. This causative force causes the agonist, ‘the train’, to be travelled ‘fast’ and ‘rapidly’ by the antagonist, or the causer, which is the train operator. The last subcategory is relationality. These two synonyms are construed as having relational properties, as they inherently imply the existence of other entities that move ‘fast’ or ‘rapidly’. These two synonyms cannot be construed without reference or relation to the domain SPEED.

73a. Little Billy was so *brave* at the dentist this morning.

73b. Little Billy was so *courageous* at the dentist this morning.

The synonyms ‘brave’ and ‘courageous’ undergo the construal operations, so the first category to start with is attention/ salience. The focal attention of the above sentences resides in the use of these synonyms, as they focus the listener’s attention. These two synonyms profile or select a concept in the domain of

BRAVERY, so they establish a substructure in this domain, as they both designate the same concept. The second subcategory is scope of attention. The prepositional phrase ‘at the dentist’ profiles an entity in the scope, as this locative expression narrows or specifies the scope that the referent ‘little Billy’ occurs in. Thus, this locative expression construes the scope that the referent ‘little Billy’ is accessible to. These two synonyms ‘brave’ and ‘courageous’ present a fine-grained construal in the mental system, as they present specified concepts of the domain BRAVERY. Therefore, these two synonyms are construed as having qualitative scalar adjustment, as the entity ‘little Billy’ is viewed as having a specific trait. The last element in this category is dynamic attention. The two synonyms ‘brave’ and ‘courageous’ are scanned sequentially in these sentences, as they are conceived over a span of time. The mental scanning in these sentences is signaled by the use of the verb (be) and the time expression ‘this morning’, so the scene encodes a dynamic attention.

The first element to start with in the second category is categorisation. The two synonyms ‘brave’ and ‘courageous’ are extracted from the same BRAVERY domain. These two synonyms convey the same concept, as they both assign a full sanction in the BRAVERY domain. They both construe the same scene, as they are both framing the same experience. Figure-ground alignment is another element that involves construal operation. The entity ‘little Billy’ is represented by the figure entity, whereas the prepositional phrase ‘at the dentist’ is represented by the ground entity. The spatial relation in these two sentences is expressed by specifying the position of the figure entity in relation to the ground entity, so these two synonyms are attributed to the figure entity to define its properties.

Perspective/ situatedness is the third category involved in construing the synonyms ‘brave’ and ‘courageous’. The perceiver, ‘little Billy’, is construed from the speaker-centered viewpoint. The entity, ‘little Billy’, is conceptualised as

‘brave’ and ‘courageous’ from the vantage point of the position of the speaker, i.e., the clinic. Thus, the synonyms are attributed to the participant, ‘little Billy’, based on the actual position ‘the dental clinic’ of the speaker. The lexical items ‘little Billy’ is construed as ‘brave’ and ‘courageous’ from the observed scene. Another element in this category is subjectivity. These sentences are construed in relation to the objectivity dimension. The speaker expresses distance from the described scene. The scene is construed from an external vantage point. Consequently, the synonyms ‘brave’ and ‘courageous’ are construed based on the conceptualiser, the speaker, and the conceptualised scene.

The last category that utilises the construal mechanism is constitution/gestalt. The structural schematisation of these two sentences construes the geometric structure of the dental clinic. The prepositional phrase ‘at the dentist’ construes a containment structure that includes the entity ‘little Billy’. The scale parameter is another structural schematisation that provides gradable dimensions of the synonyms ‘brave’ and ‘courageous’. The last element in this category is relationality. The synonyms ‘brave’ and ‘courageous’ are construed as having relational properties. These two synonyms cannot be construed without reference to someone that is brave. These two synonyms are conceived in relation to the BRAVERY domain in the conceptual structure, as they are constituted as Gestalt structure.

74a. Sara is going to play a **violin** concerto.

74b. Sara is going to play a **fiddle** concerto.

Attention/ salience is the first category that maintains construal mechanism. These two synonyms designate the same concept in the conceptual structure, as they profile the listener’s attention, so they single out the same concept in the domain of MUSICAL INSTRUMENT. These synonyms select a substructure that

acts as the focal point of attention in this domain. In the scope of attention, the entity ‘Sara’ is given a reference point or accessibility. Thus, this notion of accessibility construes the referent as being in the focus of attention of the hearer, and it establishes a dominion that selects these two synonyms as its constituents. Moreover, another aspect of attention is scalar adjustment. These two synonyms offer a fine-grained concept in the domain of MUSICAL INSTRUMENT. These two synonyms are construed as qualitative scalar adjustment, as they schematise the scene with more relevant categories of the domain MUSICAL INSTRUMENT. The last element in this category is dynamic attention. The scenes in these two sentences construe that they are sequentially scanned due to the use of the verb phrase ‘is going to play’. The action of playing is conceived in a span of time, and these two synonyms are involved in this action, as they complete the action of playing.

Another category used to maintain construal mechanisms is judgment/comparison. These two synonyms, ‘violin’ and ‘fiddle’, are construed in the mental structure using categorisation subcategory. These two synonyms are complementary to each other. The linguistic element ‘violin’ is construed to a prior linguistic element ‘fiddle’, and ‘fiddle’ is construed to the element ‘violin’. Hence, these two synonyms are construed based on comparison to prior situation or scenes, so they offer full-sanction, as there is no problem in its subsumption.

The third category adopted in the construal analysis of these sentences is perspective/situatedness. The entity, ‘Sara’, is perceived as ‘going to play violin/fiddle’ from the perspective or vantage point of the speaker. Thus, this subcategory involves a relation between the viewer and the situation being viewed. The viewer or the speaker views the scene from their vantage point. Furthermore, the synonyms are construed objectively. The speaker construes the situations and

another person, ‘Sara’, in these scenes. The viewer, ‘the speaker’, is situated outside the scenes being viewed in these sentences.

Constitution/ Gestalt is the last category applied in the construal analysis of these sentences. These two synonyms are construed in the form of individuation. The bounded structural schematisation is applied to these two synonyms as they are distinguished from other MUSICAL INSTRUMENT. The structure of these two synonyms is construed in relation to their parts and geometrical structure. Moreover, these two synonyms are construed in relation to a dynamic force. The antagonist, ‘Sara’, exerts a force of ‘PLAYING’ on the agonist, or the synonyms ‘violin and ‘fiddle’, and causes them to be played. The relation between the causer and the causee is understood as a Gestalt relation. The synonyms, ‘violin’ and ‘fiddle’, are also construed based on the relationality parameter. These two synonyms are perceived as nonrelational entities, as they can be conceptualised without reference to other entities. These two synonyms are construed without any relation to other entities. Instead, they are construed as members of a category of MUSICAL INSTRUMENT.

75. John was *killed*, but I can assure you he was not *murdered*, madam.

The synonyms, ‘killed’ and ‘murdered’ are conceived using construal operations. Attention/ salience is the first category to start with. In this sentence, these synonyms profile a concept in the mental structure to attend one’s attention. These synonyms focus one’s attention on a concept in the KILLING domain. In construing these synonyms, the concept of ENDING ONE’S LIFE involves a subtler and more systematic shift in the KILLING domain. In the scope of attention, two referent points are assigned in this sentence. The dominion is accessible through the use of the referent points ‘John’ and ‘you’. However, the

choice of the proper noun ‘John’ and the construction ‘I can assure you’ construe that the scene is in the hearer’s attention but not in focus. Moreover, the scalar adjustment of these synonyms is conceptualised with different levels of construal granularity. The synonym ‘killed’ offers a coarse-grained construal of the scene as the action is less specified, whereas the synonym ‘murdered’ offers a fine-grained construal of the scene as the action is more specified. Furthermore, the dynamic attentions of these two synonyms are alike as they both construed in a span of time. In other words, the scenes involved in this sentence and the synonyms are scanned sequentially.

The second category involved in the construal analysis of the synonyms ‘killed’ and ‘murdered’ is judgement/ comparison. In this sentence, the synonym ‘murdered’ is used in relation to the synonym ‘killed’. Thus, these two synonyms are construed with partial sanction as the synonym ‘murdered’ involves a more creative extension of the category ‘killed’ in the domain of KILLING. However, as they both involve ENDING ONE’S LIFE, they are schematised under one category. Additionally, figure-ground alignment is adopted in the construal analysis of these synonyms. These two synonyms occur in two different constructions, but they are coextensive. However, the synonym ‘murdered’ is contingent on the synonym ‘killed’. For this reason, the synonym ‘killed’ is construed as a figure element, whereas the synonym ‘murdered’ is construed as a ground element.

Perspective/ situatedness is the third category used in the construal analysis of ‘killed’ and ‘murdered’ synonyms. The perceiver views the scene from different angles as the viewer adapts their viewpoints accordingly. The scene in this sentence is construed from the vantage point of the speaker, so the perceiver attributes the synonym ‘killed’ to the situation rather than the synonym ‘killed’. Similarly, the scenes and the synonyms in this sentence are viewed subjectively as

the viewer expresses his involvement in the situation being construed due to the use of the pronoun 'I' in the sentence. Consequently, the synonym 'killed' is viewed as more salient than the synonym 'murdered' in the conceptual system.

Constitution/ Gestalt is the last category adopted in the construal mechanisms of the synonyms 'killed' and 'murdered'. The structural schematisation of these synonyms is individuation. The synonym 'killed' is construed as having unbounded structural schematisation. It is conceived as a relatively homogenous action without clear boundaries. However, the synonym 'murdered' is construed as having bounded structural schematisation because it provides finer-grained scalar adjustment of the KILLING action. Moreover, these two synonyms undergo relationality mechanism. The synonyms 'killed' and 'murdered' cannot be construed without reference to a killer, as they profile the interconnections between entities and define ENDING ONE'S LIFE concept as well. These synonyms involve relationality as they imply the existence of another entity, i.e., 'killer'.

II: Hyponymy Relation

76a: I bought some **flowers**.

76b: I bought some **roses and tulips**.

Construal operations are involved in the conceptualisation of the superordinate 'flowers' and the hyponyms 'roses' and 'tulips'. Attention/ salience is the first category used to construe the hyponymy relation. The superordinate and the hyponyms profile a concept in the mental structure as they focus one's attention. The superordinate 'flowers' and the hyponyms 'roses' and 'tulips' select a concept in the domain of PLANT. In this domain, different facets can be attributed to the superordinate and the hyponyms, but they select living things because they are more salient than entities formed by figurative language.

Regarding the scope of attention, two scopes are involved in construing the superordinate and the hyponyms. The immediate scope of the superordinate is ‘plants’, whereas the maximal scope of the superordinate is ‘living things’. However, the immediate scope of the hyponyms is ‘flower’, but the maximal scope of the hyponyms is ‘plants’. Thus, these entities are schematised in hierarchical scopes. Moreover, the superordinate and the hyponyms are construed with different levels of scalar adjustment or specificity. The superordinate ‘flowers’ is schematised as a coarse-grained entity in the domain of PLANT, whereas the hyponyms ‘roses’ and ‘tulips’ are conceptualised as a fine-grained entity in the domain of PLANT. Furthermore, these two sentences are construed with the same dynamic attention. The scenes in these sentences are scanned sequentially as the action of buying ‘flowers’, ‘roses’ and ‘tulips’ is conceived over a span of time.

Judgment/ comparison is the second category of construal operations. The superordinate ‘flowers’ and the hyponyms ‘roses’ and ‘tulips’ are categorised under the same concept but with different sanctions. The superordinate is conceived as partial sanction as it provides a broader subsumption of the concept. However, the hyponyms are schematised as full sanction as they provide unproblematic subsumption of the construed entity.

Perspective/ situatedness is the third adopted category in the construal analysis of the superordinate ‘flowers’ and the hyponyms ‘roses’ and ‘tulips’. The superordinate and the hyponyms are viewed from different perspectives. The viewer perceives the superordinate broadly, whereas the hyponyms are perceived specifically. The first sentence is construed as the perceiver buying different types of flowers due to the use of ‘some’, whereas the second sentence is construed as the perceiver buying only two types of flowers. Thus, these sentences are viewed with an egocentric viewing arrangement as the speaker is included in the scenes

being construed, so these sentences are construed subjectively. Therefore, the scenes are construed from the internal vantage point of the speaker.

Constitution/ Gestalt is the last category utilised in the analysis of hyponymy relation adopting construal theory. The superordinate ‘flowers’ and the hyponyms ‘roses’ and ‘tulips’ undergo the individuation structural schematisation. The perceiver construes the superordinate as one unit with distinct types, so it is schematised as an unbounded entity. However, the perceiver construes the hyponyms as two different units, so they are schematised as bounded entities. The superordinate ‘flowers’ and the hyponyms ‘roses’ and ‘tulips’ are considered a nonrelational entities. These entities are construed without reference to other entities. Thereby, these entities are conceived as regions or set of interconnected entities as they profile the entities that are interconnected.

77a. If all *cars* are forbidden, I shan’t go.

77b. If all *vehicles* are forbidden, I shan’t go.

The hyponym ‘cars’ and the superordinate ‘vehicles’ are analysed using construal operations. Attention/ salience is the first category to start with. The hyponym and the superordinate select a concept in the domain of TRANSPORTATION MEANS. These two entities focus the perceiver’s attention, and a concept is profiled among other facets of this domain. Hence, the relation between the hyponym and the superordinate is salient as it requires less cognitive effort to bring it to the center of attention. However, the hyponym and the superordinate are construed with different scopes of attention. The immediate scope of the hyponym is ‘motorized vehicles’, whereas the maximal scope of the hyponym is ‘wheeled vehicle’. On the other hand, the immediate scope of the superordinate is ‘conveyance’, whereas the maximal scope of the superordinate is ‘moving machine’. Furthermore, scalar adjustment is another aspect of attention used to

construe the superordinate ‘vehicles’ and the hyponym ‘cars’. Thus, the superordinate is construed with coarse-grained view, whereas the hyponym is construed with fine-grained view. In other words, the hyponym is viewed as highly specific item while the superordinate is viewed as less specific item. However, these two sentences are construed in the same dynamic attention. The scenes are scanned sequentially as the scenes are conceived over time. As a result, the hyponym and the superordinate are involved in this dynamic scanning of the scenes.

Judgment/ comparison is the second category of the construal operations used to construe the hyponym ‘cars’ and the superordinate ‘vehicles’. These two entities are categorised under one concept, but they assign different levels of sanctions. The hyponym is construed with full sanction as an unproblematic subsumption of the category that is being viewed, whereas the superordinate is construed with partial sanction as a more creative extension of the category that is being viewed. So, categorisation of these two entities involves schematising them to attend to some characteristics and ignore others. These two sentences are formed from two clauses. Each clause designates an event, so the independent clause is represented by the figure element, whereas the dependent clause is represented by the ground element. The figure-ground relation is found between the events as they are construed asymmetrically.

Perspective/ situatedness is also used to construe the relation between the hyponym ‘cars’ and the superordinate ‘vehicles’. These two sentences are perceived from the speaker’s perspective. Thus, the viewing arrangement between the speaker and the situation is egocentric, as the speaker includes himself or herself as part of the scene being described. In other words, the speaker perceives the scene in the first sentence with only one motorised-vehicle, i.e., the car. However, the speaker construes the scene in the second sentence with different

motorised-vehicles. Furthermore, the scenes in these sentences are construed subjectively as the speaker uses a deictic personal pronoun defining his/her identity relative to the speech act situation.

Constitution/ Gestalt is the last construal category involved in the analysis of the hyponym ‘cars’ and the superordinate ‘vehicles’. The structural schematisation of these two entities involves individuation. However, the hyponym is construed as bounded entity as it is perceived as a specific unit, whereas the superordinate is construed as unbounded entity as it is perceived as multiplicity. Furthermore, the hyponym and the superordinate are considered nonrelational entities. These two entities are construed without any relation to other entities.

78a. There’s a *palomino* in that field.

78b. There’s a *horse* in that field.

The relation between the hyponym ‘palomino’ and the superordinate ‘horse’ is construed using four categories. Attention/salience is the first category contributed in construing these two entities. The hyponym and the superordinate select a concept in the mental structure. This concept is profiled in the domain of ANIMAL. These two entities focus the perceiver’s attention in this domain. Although this domain has different facets, these two entities are salient in the scenes being construed in these sentences. Moreover, these two entities are construed with different scopes of attention as they are arranged in hierarchical relations. The immediate scope of attention of the hyponym is ‘horse’, whereas the maximal scope of attention of the hyponym is ‘hoofed mammal’. However, the immediate scope of attention of the superordinate is ‘hoofed mammal’, whereas the maximal scope of attention of the superordinate is ‘animal’. Furthermore, the hyponym and the superordinate are construed with different quantitative scalar adjustments as well. The hyponym ‘palomino’ is construed as a fine-grained

element, as it is perceived specifically. On the other hand, the superordinate ‘horse’ is construed as a coarse-grained element, as it is perceived broadly. Thus, the attention of the perceiver varies from the hyponym element to the superordinate one. Additionally, the scenes in these sentences are scanned summarily, so a holistic conceptualisation of the scene is being viewed. Therefore, the hyponym and the superordinate are viewed summarily, as they are not predicated.

Judgment/ comparison is the second category employed in construing the hyponym ‘palomino’ and the superordinate ‘horse’. The hyponym and the superordinate are categorised as entities belong to the same class, but each assigns a different sanction. The hyponym is construed as a full sanction entity, for it views an obvious subsumption of the entity being construed. However, the superordinate is construed as a partial sanction entity, for it views a variant creative extension of the entity being construed. Furthermore, the hyponym and the superordinate are construed using figure-ground alignment. Both the hyponym and the superordinate are conceived as a figure element, whereas the prepositional phrase ‘in that field’ is conceived as a ground element. Consequently, the ground element is expressed to specify the position of the hyponym and the superordinate elements.

Perspective/ situatedness is engaged in the construal analysis of the hyponym ‘palomino’ and the superordinate ‘horse’. The viewer perceives the scenes in these two sentences from his/her perspective, so the hyponym ‘palomino’ is perceived from the vantage point of the speaker. However, the superordinate element is perceived as a ‘horse’ from the vantage point of the speaker. Therefore, the scenes are arranged in an optimal viewing arrangement, as the speaker excludes himself or herself from the scene being construed. Consequently, vantage point is an essential category in construing an element in a scene in relation to the position of the viewer. Furthermore, the hyponym and the superordinate are construed

objectively, as these entities are concerned by a general situation shared by or affecting most people, not only the speaker who is describing them.

Constitution/ Gestalt is also employed in the construal analysis of the hyponym ‘palomino’ and the superordinate ‘horse’. The structural schematisation of the hyponym and the superordinate is individuation, i.e., boundedness. Thus, the hyponym is considered as a bounded element, as it is construed as a single specific entity. However, the superordinate is considered as an unbounded element, as it is construed as a single unspecified entity. These two entities are construed in a geometric structure due to the use of the expression ‘in that field’. Relationality subcategory is also employed in construing the hyponym and the superordinate. These two entities are regarded as nonrelational entities, as they can be construed without any reference to other entities. Hence, these two entities are construed as members of animal category without any reference to other entities in other concepts.

79a. The weary soldiers *trudged* forward.

79b. The weary soldiers *moved* forward.

The hyponym ‘trudged’ and the superordinate ‘moved’ are conceptualised using four categories of construal operations. Attention/ salience is the first category adopted in construing these entities. The hyponym and the superordinate select a concept of moving in the mental structure, for they focus the perceiver’s attention. This concept is profiled in the domain of WALKING. Although this domain has various facets, these two elements are selected because they are salient in these two sentences. Thereby, each element, in the hyponym and the superordinate, shifts the attention of the perceiver, and the scene is construed accordingly. Moreover, the hyponym and the superordinate are construed with different scopes of attention. The immediate scope of the hyponym ‘trudged’ is

‘walk’, whereas the maximal scope of the hyponym is ‘move’. However, the immediate scope of the superordinate ‘moved’ is ‘rush’, whereas the maximal scope of the superordinate is ‘run’. As the hyponym and the superordinate employ hierarchical relations, each element is construed in relation to the higher or lower elements. The hyponym and the superordinate are construed with different scalar adjustments. The hyponym is construed with a fine-grained conceptualisation as it is previewed with a more specific element. However, the superordinate is construed with a coarse-grained conceptualisation as it is previewed with a less specific element. Finally, the hyponym and the superordinate are construed with dynamic attention in these sentences. They are scanned sequentially, as they are construed over a span of time.

Judgment/ comparison is also employed in the construal analysis of the hyponym and the superordinate. The hyponym ‘trudged’ and the superordinate ‘moved’ are construed in comparison to previous experiences in the mental structure, so they are categorised as having different sanctions. The hyponym is categorised as an element that assigns an obvious subsumption of the new experience, whereas the superordinate is categorised as an element that assigns a more creative extension of the current experience.

Perspective/ situatedness is also adopted in the construal analysis of the hyponym ‘trudged’ and the superordinate ‘moved’. These two elements are construed from the perceiver’s viewpoint. The perceiver construes the ‘weary soldiers’ in the first sentence as trudging from his/her vantage point, whereas the perceiver construes the ‘weary soldiers’ in the second sentence as moving from his/her vantage point. The hyponym ‘trudged’ and the superordinate ‘moved’ are interpreted from the viewer’s vantage point. Consequently, the hyponym and the superordinate elements are construed objectively. The speaker expresses distance from the scenes being conceptualised, so the scenes are construed from an external

vantage point. The perceiver assigns an optical viewing arrangement to the experience being construed by the hyponym and the superordinate elements, as the viewer excludes himself or herself from the scene.

Constitution/ Gestalt is also employed in the construal analysis of the hyponym ‘trudged’ and the superordinate ‘moved’. The structural schematisation of these elements is individuation. In other words, the hyponym and the superordinate are distinguished from others of the same category. The hyponym is construed as bounded element because a specific concept of moving is construed in the mental structure. By contrast, the superordinate is construed, as an unbounded element, just as the general concept of moving is construed in the mental structure. However, the ‘weary soldiers’ receive a force dynamic in these sentences. The hyponym ‘trudged’ and the superordinate ‘moved’ undergo an external force that leads them to move in a particular way. Thus, the agonist, ‘the weary soldiers’ receives an external force that causes the agonist to ‘trudge’ and ‘move’. The hyponym and the superordinate are regarded as relational elements, for they cannot be construed without reference to other entities such as ‘walker’, i.e., they cannot be conceived without reference to a person who trudges or moves.

80a. The *oak* produces fruit every other year

80b. The *tree* produces fruit every other year.

The hyponym ‘oak’ and the superordinate ‘tree’ in the above sentences undergo construal analysis, and they can be construed using all the categories. Attention/ salience is the first category involved in the construal analysis of these entities. The hyponym and the superordinate select a concept in the mental structure since they attend one’s attention. This concept is profiled in the domain of PLANT. This domain has different facets, but the salient one is attributed to the hyponym and the superordinate in the domain of PLANT. The hyponym and the

superordinate profile the literal meaning of the entities being construed. Although the hyponym and the superordinate entities are extracted from the same domain, they assign different scopes of attention, for they are arranged in hierarchical relations. The immediate scope of attention of the hyponym ‘oak’ is ‘tree’, but the maximal scope of attention of the hyponym is ‘plant’. However, the immediate scope of attention of the superordinate ‘tree’ is ‘plant’, whereas the maximal scope of attention of the superordinate is ‘living things’. Similarly, the hyponym and the superordinate are construed with different quantitative scalar adjustments. The entity represented by the hyponym is specified in the domain of PLANT, so it is construed in a fine grained scene by the sentence being interpreted. However, the entity represented by the superordinate triggers a general concept in the domain of PLANT, so it is construed in a coarse-grained scene by the sentence being interpreted. The hyponym and the superordinate are construed with the same dynamic attention. The scenes in these sentences are scanned sequentially. The conceptualiser moves his mental views successively from one point in the series to another.

Judgement/ comparison is also employed in the construal analysis of the hyponym ‘oak’ and the superordinate ‘tree’. These two entities are construed in comparison to earlier experience that employ these two entities. They are categorised under one domain, but they assign different sanctions in the construal mechanisms. The hyponym ‘oak’ is construed as full sanction since it provides specific subsumption of the scene being construed. However, the superordinate ‘tree’ is construed as a partial sanction since it provides broad subsumption of the scene being construed.

Perspective/ situatedness is also involved in the construal analysis of the hyponym ‘oak’ and the superordinate ‘tree’. The scenes in these sentences are construed from different perspectives. The perceiver construes the entity realised

by the hyponym as an ‘oak’, whereas the perceiver construe the entity realised by the superordinate as a ‘tree’ due to the difference in the vantage point. Thus, the position from which the same objective situation is observed and described results in different construals and different structures. The entity ‘oak’ is attributed to the first sentence from vantage point of the speaker, whereas the entity ‘tree’ is attributed to the second sentence from the vantage point of the speaker. Consequently, the hyponym ‘oak’ and the superordinate ‘tree’ are construed objectively. The scenes in these sentences assign optimal viewing arrangement, as the speaker excludes himself or herself from the scenes being described.

Constitution/ Gestalt is also adopted in the construal analysis of the hyponym ‘oak’ and the superordinate ‘tree’. The structural schematisation of these two entities is individuation. These entities are construed as bounded or unbounded element. The hyponym ‘oak’ is construed as a bounded entity, as its structure involves unity and formed as Gestalt structure. However, the superordinate ‘tree’ is construed as unbounded entity, as its structure involves multiplicity. Finally, the hyponym and the superordinate entities are construed as nonrelational entities because they can be construed without reference to other entities. In other words, they can be construed as members of the PLANT domain or category.

III: Meronymy Relation

81a: Mary hurt her *finger*.

81b: Mary hurt her *hand*.

Meronymy relation is also investigated using construal theory. The meronym ‘finger’ and the holonym ‘hand’ are construed as adopting attention/salience category. These two entities focus one’s attention, so they select a concept in the domain of BODY. The meronym and the holonym profile the attention of

the perceiver to certain part of the body. These two entities have different facets, but they are singled out in this domain, as they are salient to body parts. The meronym and the holonym can be construed using the scope of attention. The scope of these entities comprises the array of conceptual content that it specifically evokes and relies upon for its conceptualisation. Thus, two conceptual scopes of attention are involved in the construal of these entities. The immediate scope of the meronym 'finger' is 'hand', whereas the maximal scope of the meronym is 'arm'. However, the immediate scope of the holonym 'hand' is 'arm', whereas the maximal scope of this holonym is 'body'. Consequently, the immediate scope of the meronym and the holonym assigns the highest degree of prominence and relevance, whereas the maximal scope of these entities is vague and non-delimited in reference. As the meronym and the holonym entities undergo hierarchical relations, they are construed with different scalar adjustments. The meronym provides a fine-grained view of the scene being construed in the sentence since it assigns a specific facet of the domain. However, the holonym provides a coarse-grained view of the scene being construed in the sentence since it assigns a less specific facet of the domain. Moreover, the scenes in these sentences are construed with dynamic attention as they are scanned sequentially or in motion. In this temporal construal, the meronym and the holonym are conceived individually and experienced successively with the passage of time.

Judgment/ comparison category is also engaged in the construal analysis of the meronymy relation. In the categorization category, the meronym and the holonym are construed in comparison to prior experiences in the mental structure. The scenes presented in these examples are construed in relation to earlier, similar events. Therefore, the meronym and the holonym are construed with different sanctions. The meronym assigns a full sanction to the scene being construed and an obvious subsumption of the new situation. However, the holonym assigns a partial

sanction to the scene being construed, as it can provide a creative extension of the entity to the current situation. Furthermore, the meronym and the holonym are construed using figure-ground alignment. The entity ‘Mary’ is represented by the ground element, as it is perceived as containment entity, whereas the entities ‘finger’ and ‘hand’ are represented by the figure element, as they are perceived as entities in the ground element.

Perspective/ situatedness is manifested in the construal analysis of the meronym ‘finger’ and the holonym ‘hand’. The same viewer perceives these two sentences from different perspectives. In the first sentence, the meronym is construed from the vantage point of the perceiver. However, in the second sentence, the holonym ‘hand’ is construed from the vantage point of the perceiver. Thus, the vantage point imposes a foreground-background alignment on the scenes being construed in these sentences. The entity ‘Mary’ is conceived as hurting her finger from the perceiver’s vantage point, whereas the same entity ‘Mary’ is conceived as hurting her hand from another perceiver’s vantage point. Moreover, the meronym and the holonym are construed objectively in these sentences. The perceiver expresses distance from the situation being construed, so there is a distant relationship between the perceiver and the scenes being construed. As a result the meronym and the holonym are construed with optimal viewing arrangement.

The meronym ‘finger’ and the holonym ‘hand’ are construed using constitution/ Gestalt category. The entities represented by the meronym and the holonym are construed with different structural schematisations. They are formed with an individuation structure. The meronym ‘finger’ and the holonym ‘hand’ are categorized under the same concept, yet they are distinguished from one another as they undergo the boundedness property. The meronym is construed as a bounded element, for this element provides the meronym in a unity structure. The holonym,

on the other hand, is construed as an unbounded element because it provides a multiplicity structure of this entity. Relationality property is also used to construe the meronym and the holonym. Although these two entities are interconnected in one structure, they are construed without any reference to other entities in their associated concept. Therefore, these entities are considered nonrelational entities, as they are conceived independently of other references.

82a. John is in the *cockpit*.

82b. John is in the *aeroplane*.

The meronym ‘cockpit’ and the holonym ‘aeroplane’ in the above sentences are conceived using construal theory. Attention/ salience is the first category of construing this meronymy relation. The meronym and holonym entities select a concept of part to whole relation in the domain of AEROPLANE SECTIONS. The position of the entity ‘John’ in the aeroplane focuses the perceiver’s attention, so the meronym and holonym profile the concept of sitting sections in this domain. The meronym ‘cockpit’ shifts the attention of the perceiver that the entity ‘John’ is on the aeroplane. The meronym and the holonym occur in the same dominion, but they have variant scopes of attention. The immediate scope of the meronym ‘cockpit’ is ‘fuselage’, whereas the maximal scope of the meronym is ‘aeroplane’. On the other hand, the immediate scope of the holonym is ‘motorized aircraft’, whereas the maximal scope of the holonym is ‘aircraft’. In conceptualising the meronym, the conception of ‘fuselage’ is most directly relevant, and in conceptualising the holonym, the conception of ‘motorized aircraft’ is directly relevant. Furthermore, the meronym and the holonym are construed with different scalar adjustments. The meronym is conceptualised with highly specific information, so it offers a fine-grained view of the scene being construed. However, the holonym is conceptualised with less specific information about the

position of the entity ‘John’, so it offers a coarse-grained view of the scene being construed. Consequently, the meronym and the holonym are construed with quantitative scalar adjustment, as they are viewed by adjusting the granularity of the scalar dimensions. Finally, the meronym and the holonym are construed with the same dynamic attention. The scenes being construed in these sentences are scanned summarily, i.e. a holistic conceptualisation of the scenes is construed in its entirety.

Judgment/ comparison is adopted in the analysis of the meronym ‘cockpit’ and the holonym ‘aeroplane’. As these two entities evoke hierarchical relations, they are categorized under one concept in the mental structure. The perceiver views the meronym and holonym in these sentences in cognitive comparison to earlier experiences. Thus, the perceiver construes them without having any problem in conceptualising them. Therefore, the meronym assigns a full sanction of the scene being construed, as it provides a subsumption of the new situation. The holonym, on the other hand, assigns a partial sanction of the scene being construed, as it provides a general subsumption of the scene being construed. Figure-ground alignment is also adopted in construing the meronym and holonym. The entity ‘John’ is construed as a figure element as it is mobile and salient, whereas the meronym and the holonym entities are construed as ground elements as they are more stationary and more backgrounded in these sentences. So, the meronym and the holonym in these sentences are backgrounded.

Perspective/ situadeness category is employed in the construal analysis of the meronym ‘cockpit’ and the holonym ‘aeroplane’. These entities are construed from the perceiver’s perspective, so the viewer perceives the scenes in these sentences differently and adapts his/her viewpoint accordingly. Consequently, the meronym and the holonym are construed from different focal adjustments, i.e., vantage points. The meronym and the holonym in these sentences are construed

according to optimal viewing arrangement. The speaker excludes himself/ herself from the scenes he/she describes, so the scenes in these sentences are construed objectively.

The meronym ‘cockpit’ and the holonym ‘aeroplane’ are construed using constitution/ Gestalt category as well. Structural schematisation is used to construe the meronym and the holonym. These two entities are construed with a geometrical structure of containment. ‘John’ is construed as an entity contained in these Gestalt geometrical structures. The spatial configuration of the meronym and holonym construes the existence of the entity ‘John’ in it. Finally, the relationality feature is involved in the construal of these entities. Although the meronym and the holonym are categorized under the same concept and form Gestalt structure in the mental structure, they are construed as nonrelational entities. They can be construed without any reference to other entities or concepts.

83. It’s a *university*, but it doesn’t have a *medical school*.

The meronym ‘medical school’ and the holonym ‘university’ are conceived using construal theory. Attention/ salience is the first category to start with in construing these entities. These two entities select a concept that is shared by the meronym and the holonym in the domain of EDUCATIONAL INSTITUTION. In this domain, the selection process ignores other structures of the university and profiles the meronym and the holonym among other facets of this domain. The meronym is directly related to the holonym, as they assign related scopes of attention. The immediate scope of attention of the meronym is ‘faculty’, whereas the maximal scope of the meronym is ‘university’. The scope of the holonym is vague, as the holonym is considered to have the maximal scope in this domain. Consequently, in the scope of prediction, the domains immediately presupposed by a profiled concept are accessible in the encyclopedic knowledge. The meronym

and the holonym are construed differently in the mental structure, as they assign different granularities of the scalar adjustments. The meronym offers a fine-grained view of the scene being construed. However, the holonym offers a coarse-grained view of the scene being construed. Another attentional dimension is concerned to how a construal unfolds through the perceived time. Thus, the meronym and the holonym in this sentence are scanned summarily, as a holistic conceptualisation of a scene in its entirety is construed.

Judgement/ comparison is also utilised in construing the meronym ‘medical school’ and the holonym ‘university’. These two entities are construed in this category using the act of categorization. This process involves a comparison of the experience of the scenes being construed to prior experiences. The meronym and the holonym are construed as being categorised under one concept, but they assign different levels of sanctions. The meronym assigns a full sanction to the construed entity since it provides a specific subsumption of the new situation. By contrast, the holonym assigns a partial sanction to the construed entity, for it provides a more creative extension of the current situation.

Perspective/ situatedness accounts for the construal of the meronym ‘medical school’ and the holonym ‘university’. This sentence is made up of two independent clauses. The conceptualiser conceives the holonym element in the first clause, whereas the meronym is conceived in the second clause. Hence, the scenes in these two clauses are construed from two vantage points. In the first viewing arrangement, the holonym is evoked in the domain ‘EDUCATIONAL INSTITUTION’ entirely without any reference to its meronyms, whereas the meronym is evoked in the domain in reference to its holonym. Thus, the egocentric viewing arrangement is involved in construing the scenes in this sentence as the speaker involves himself/ herself. The meronym and the holonym in this sentence

are construed objectively, as the speaker is excluded in the situation being construed.

The meronym ‘medical school’ and the holonym ‘university’ are construed using constitution/ Gestalt. These two entities are conceived in the geometric structural schematisation. The spatial configuration of the holonym ‘university’ is construed as a container element. The other meronyms, institutional structures, are construed as contained elements in the container element ‘university’. The meronym and holonym are formed with hierarchical relation in the plain text, whereas they are considered nonrelational elements in the cognitive realms as they require no other references or entities in construing them.

84. The *sleeves* of this *jacket* have no *cuff*.

This sentence is constructed with two meronyms ‘sleeves’ and ‘cuff’ and the holonym ‘jacket’. They are perceived using construal theory. These entities are related as meronyms are parts of the holonym, so they select a shared concept in a domain. The holonym ‘jacket’ has multiple meronyms, but only two meronyms are profiled. These two meronyms attend the perceiver’s attention, as they select a concept in the domain of CLOTHING. In the accessed domain, these entities evoke the extent of their coverages, so different scopes of attention are assigned for each entity. The immediate scope of attention of the meronym ‘cuffs’ is ‘sleeves’, whereas the maximal scope of attention of the meronym ‘cuff’ is ‘jacket’. Similarly, the immediate scope of attention of the meronym ‘sleeves’ is ‘sleeve cap’, whereas the maximal scope of attention of this meronym is ‘jacket’. However, the scope of the holonym ‘jacket’ is unidentified, as it is the maximal scope of the other two meronyms. These entities are construed with different scalar adjustments, as each entity profiles an aspect in the domain of CLOTHING. Thus, each entity is construed with a degree of precision and detail of the situation

being conceived. The holonym 'jacket' is construed with a coarse-grained view of the situation being characterised. However, the meronym 'sleeves' is construed with a higher level of specificity, so it provides a fine-grained view of the situation being conceived. The meronym 'cuffs', by contrast, is construed with the highest degree of precision, so it provides a more fine-grained view of the situation. Conceptualisation is inherently dynamic, and it resides in the mental processing as it occurs over time. Each situation is scanned in the mental structure as it is conceived by the viewer. The holonym and the meronyms are scanned summarily as the entire situation is viewed in a cumulative way.

Judgment/ comparison is adopted in construing the meronymy relation in the above sentence. The meronyms 'cuffs' and 'sleeves' and the holonym 'jacket' are categorized as entities that share the same concept. The perceiver construes them in relation to or comparison to earlier experiences, but they assign different levels of sanctions. The meronyms 'sleeves' and 'cuffs' assign a full sanction to the construed entity since they provide a specific subsumption of the new situation. However, the holonym assigns a partial sanction to the construed entity, as it assigns a more creative extension of the current situation.

Perspective/ situatedness accounts for the overall relationship between the viewer and the situation being viewed or construed. The perceiver can see a visual scene from different angles. The meronyms 'sleeves' and 'cuffs' and the holonym 'jacket' are viewed from one vantage point. In other words, the viewer views these entities from one position, as the same subjective scene of these entities is observed. These entities are construed objectively as the speaker perceives the situations from an optimal viewing arrangements. The meronyms and the holonym are construed using egocentric viewing arrangements as the perceiver is involved in the situation being construed. Moreover, the deictic demonstrative 'this' is

recognised as a construal element that is defined relative to the location and time of the speech event.

The last category to deal with in analysing meronymy relation is constitution/ Gestalt. The meronyms ‘sleeves’ and ‘cuffs’ and the holonym ‘jacket’ are conceived with different structural schematisation. They are construed in the form of individuation structure, i.e., boundedness. These entities are formed in a unified structure, and the holonym is in relation to their parts and their multiplicity, i.e., the meronyms. The holonym is conceived as unbounded entity as it provides different parts of the unit. On the other hand, the meronyms ‘sleeves’ and ‘cuffs’ are conceptualised as bounded elements, as they are viewed in a unified structure. Although these entities are related hierarchically, they are construed as nonrelational entities. They can be construed in the mental structure without any reference to other entities. The conceiver requires no other concepts to construe these entities in the domain of CLOTHING.

85a. The *table-leg* was damaged.

85b. The *table* was damaged.

The meronym ‘table-leg’ and the holonym ‘table’ in these two sentences are analysed using construal theory. In the mental structure, these two entities focus the perceiver’s attention as they contribute to degrees of activation of conceptual structures in a neural model. These two entities select a part-to-whole concept in the domain of FURNITURE. This domain has different facets, but only the meronym ‘table-leg’ and the holonym ‘table’ are profiled, as they are salient to the scenes being construed in these two sentences. After these entities select a concept in the domain, the extent of the coverage of these entities is accessed. In other words, some portions of this domain is evoked and utilised as the basis for its meaning. Thus, these two entities are construed in two different scopes. The

immediate scope of the meronym 'table-leg' is 'table-top', whereas the maximal scope of this meronym is 'table'. However, the scope of the holonym is not quite identified. The maximal scope of the holonym 'table' is 'furniture', but the immediate scope is not quite clear, as its coverage is not characterised. Moreover, these entities are construed at different levels of granularity. These entities may form taxonomic hierarchies and be designated at various levels of specificity. The meronym 'table-leg' is construed in a fine-grained view, as it presents the exact damaged part of the table. However, the holonym 'table' offers a coarse-grained view of the scene, as it presents the holistic view of the damaged table. Furthermore, every conceptualisation requires some span of processing time for its occurrence. Consequently, the scenes in these sentences and the entities are scanned sequentially since the 'damage' that happened to the meronym and holonym is conceived in time.

The judgment/comparison category can also be manifested in the construal analysis of the meronym 'table-leg' and the holonym 'table'. The viewer perceives these entities as they are compared to earlier experiences to which the linguistic expressions have been applied, so the categorization feature is found in construing them. In construing these entities, two levels of sanctions are assigned based on comparison to previous situation frames. The meronym is singled out as a full-sanction entity, for it offers unproblematic subsumption of the scene being construed. On the other hand, the holonym is singled out as a partial sanction entity, for it offers a more creative extension of the scene being construed.

The meronym 'table-leg' and the holonym 'table' can also be construed as adopting the perspective/situatedness category. The scenes in these two sentences assign different degrees of specificity because the perceiver views each scene from a different focal adjustment or perspective. Thus, the meronym and the holonym in these two sentences are conceptualised from two vantage points. The perceiver in

the first sentence views the exact position of the object being construed, whereas the perceiver in the second sentence views the object from a broader vantage point. In other words, the location of the perceiver is changed in these sentences, which leads to construing the same object differently. The scenes in these two sentences are arranged in accordance with the optimal viewing arrangement because the speaker excludes himself or herself from the scenes being construed. Therefore, the meronym and the holonym are construed objectively. The deictic element 'the' in the noun phrases 'the table' and 'the table-leg' offers an epistemic perspective of the scene. Thus, these two noun phrases are construed as common ground entities since they are known by the perceiver.

The last category utilised in the analysis of the meronym 'table-leg' and the holonym 'table' is constitution/ Gestalt. These two entities are conceptualised in a unique structural schematisation. They are conceived as geometric structures. The viewer construes the holonym 'table' as (square, circle, or rectangular) and the meronym 'table-leg' as (long-circled or long-squared). The geometric structure of the table and the table-leg helps the viewer to duly construe the scenes. Moreover, force dynamics is another element used in construing the meronym and the holonym in these two sentences. The notion of causation is met in these sentences because the scenes are conceptualised as involving different kinds of forces acting in different ways on the meronym and the holonym. The agonist 'table' and 'table-leg' undergo a damaging force from an unknown antagonistic source. Furthermore, these two entities are extracted from part-whole relations, but they are construed as nonrelational entities. They can be conceived of without reference to other entities. These entities have no interconnection with other entities, so they can be construed independently.

IV: Antonymy Relation

86. John is a *bad* tennis player, but he is *better* than Tom.

The antonyms ‘bad’ and ‘better’ undergo a construal analysis. These two antonyms focus the perceiver’s attention since they are used to show whether the players are competent or not. These two antonyms select the competence concept in the domain of QUALITY. These two antonyms have different concepts, but the competence concept is profiled as it is salient in this sentence. The scope of attention manifested in construing the scenes in this compound sentence is the notion of accessibility. This sentence is made in an informative form as it declares information about ‘John’ and ‘Tom’. Thus, these details are not in the focus of attention, but they are in the scope of attention. In the dominion, the two entities ‘John’ and ‘Tom’ are construed as two referent points. The scope of attention comprises everything the perceiver is aware of at a given moment to assess the meaning of the sentence. Moreover, the antonyms in this sentence are construed with different degrees of granularity. The antonym ‘bad’ offers a fine-grained view of the scene because it presents a high degree of precision and detail about ‘John’. However, the antonym ‘better’ offers a coarse-grained view of the scene, for it presents a lower degree of specificity and detail about ‘Tom’. Finally, in dynamic attention, these antonyms are unfolded through processing time. The antonyms are scanned summarily as they are conceived collectively and experienced simultaneously in a cumulative fashion.

The second category involved in the analysis of the antonyms ‘bad’ and ‘better’ is judgment/ comparison. These two attributes are categorised as related to the concept of competence. These attributes are extracted from the domain of QUALITY as they involve comparison to prior experiences, and they are judged to belong to the concept of competence in encyclopaedic knowledge. These antonyms are construed with different levels of sanction. The antonym ‘bad’ assigns a full

sanction, as it presents an unproblematic subsumption of the attribute being construed. On the other hand, the antonym ‘better’ assigns a partial sanction, as it presents a more creative extension of the attribute being construed.

The antonyms ‘bad’ and ‘better’ are construed using the perspective/situatedness category as well. In dealing with the sphere of perception, the perceiver views the antonyms in the scenes from a different vantage point. The entity ‘John’ is conceived as a ‘bad’ tennis player from the vantage point of the perceiver, whereas ‘Tom’ is viewed as ‘better’ from the vantage point of the perceiver as well. Moreover, the scenes in this sentence are construed based on the optimal viewing arrangement, for the speaker expresses distance from the scene being construed. Consequently, the antonyms ‘bad’ and ‘better’ are conceived objectively by the viewer.

The last category involved in the construal of the antonyms ‘bad’ and ‘better’ is constitution/ Gestalt. These antonyms are construed with a unique form of structural schematization. They are construed as possessing a scale feature, and they provide a gradable dimension to the domain of QUALITY. These antonyms are construed as having a gradable feature or gradable scale of competence. The final parameter involved in the construal analysis of these antonyms is relationality. These antonyms are interconnected in the domain of QUALITY, so they are construed as relational entities. The antonyms ‘bad’ and ‘better’ cannot be conceived of without reference to someone who embodies these attributes. Thus, the entities ‘John’ and ‘Tom’ are essential in construing the attributes ‘bad’ and ‘better’ in this sentence.

87. If John is *tall*, then he is not *small*.

The antonymy relation between the lexical items ‘tall’ and ‘small’ undergoes a construal analysis. In this sentence, these two antonyms attract the perceiver’s

attention to the purpose at hand and ignore irrelevant aspects on the other hand. In construing these antonyms, the perceiver selects two different concepts of height and size. These two concepts have multiple facets, but they are profiled in the domain of PHYSICAL STATURE. These two concepts are salient in this domain since they direct one's attention to the scenes being construed in this sentence. The scope of attention given to these antonyms is not clear, as they have no clear boundaries. However, the scope of attention to this sentence can be identified due to the use of the referents 'John' and 'he'. This entity, 'John', is conceived as an accessible referent to determine the scope of attention. Thus, the use of the proper noun 'John' construes that this entity is not in the hearer's scope of attention. These two antonyms are construed with different scalar adjustments or different levels of granularity. The antonym 'tall' is construed with a fine-grained view of the scene as it views the entity 'John' from the vertical measurement views. On the other hand, the antonym 'small' is construed with a coarse-grained view as it perceives the entity 'John' from the stature measurement views. However, these two antonyms offer different views as they are construed with different degrees of precision and detail about 'John'. These two antonyms unfold through the process of time in this sentence. The antonyms are analysed to see whether they are construed in motion or not. The perceiver construes these two antonyms in this sentence in a summarily mode of scanning, i.e. a holistic conceptualisation of the scenes is being construed.

The second construal operation involved in analysing the antonyms 'tall' and 'small' is judgment/ comparison. These two antonyms undergo the act of categorization. The perceiver views them in relation to earlier experiences, as he faces no obstacle in construing them. The perceiver makes a comparison to these antonyms based on encyclopaedic knowledge since they are abstracted from earlier events in the mental structure. Consequently, different levels of sanctions are

assigned to these antonyms. A full sanction is assigned to the antonym ‘tall’ as it presents a clear comparison to earlier scenes. However, a partial sanction is assigned to the antonym ‘small’ as it presents a more creative extension of the attribute being construed.

The antonymy relation is analysed using construal theory in accordance with the perspective/ situatedness category. The perceiver views the scenes in this sentence from different perspectives. The speaker views the scenes differently and adapts his/her viewpoint accordingly. The entity ‘John’ is construed in two different constructions and with two different attributes. Thus, the antonyms are construed from different vantage points. Furthermore, the perceiver construes the events from the optimal viewing arrangements. The viewer excludes himself or herself from the scenes being construed. Consequently, the antonyms are construed objectively, as the perceiver expresses distance from the situations being described.

The last involved category in the construal analysis of the antonyms ‘tall’ and ‘small’ is constitution/ Gestalt. The structural schematization that is maintained in conceptualizing these two antonyms is scale. The scale imposes a structure which provides a gradable dimension to the domain. The Gestalt scale structure attributed to the antonyms characterises the construal of these two antonyms. Finally, these two antonyms are construed based on relationality which is a fundamental constitutive property of these two antonyms. These two antonyms are conceived as relational entities, as they cannot be construed without reference to the physical stature of an entity.

88. Mr. Adams may be neither *old* nor *young*.

The antonyms ‘old’ and ‘young’ in the above sentence are analysed using construal theory, and the first category to start with is attention/ salience. These two antonyms select concepts in the mental structure to enhance the process of

construing them. These antonyms focus one's attention on parts of the experience that are relevant to the purpose at hand and ignore aspects of our experience that are irrelevant. In the domain of AGE, these two antonyms profile the concepts of youth and old age. This domain has various facets, but only these concepts are salient in this sentence. The scenes in this sentence are restricted to the entity 'Mr. Adams'. Thus, the scope of attention, which characterizes the use of the entity 'Mr. Adams', is the accessibility of a reference. The referents 'Mr. Adams' and 'he' in this sentence are construed as being in the focus of attention of the hearer. The profiled scope is specified as construing the scenes about 'Mr. Adams'. Consequently, the antonyms are construed as properties extracted from the referent 'Mr. Adams'. Moreover, the antonyms are conceptualised as having the same degrees of granularity. They both offer a coarse-grained view of the scene being construed in this sentence. The antonyms present a broad detail about the situations being characterised, for the exact age of the referent 'Mr. Adams' is unspecified. The fourth aspect of attention is represented by the dynamic attention. The antonyms 'young' and 'old' are perceived as a holistic conceptualisation of the scenes in its entirety. The antonyms are scanned summarily as the perceiver construes the entire situation simultaneously in a cumulative fashion.

The antonyms 'young' and 'old' are analysed using judgment/ comparison category of the construal theory. In this category, the antonyms are construed based on categorization characteristics. These two antonyms are construed based on comparison to earlier experiences in the cognitive faculty. These antonyms are judged to see if they belong to the domain of AGE or not based on comparison to earlier situations in the cognition realm. Thus, these two antonyms assign the same level of sanction. They both are construed with the full sanction, for they present unproblematic construal of the new experience.

The subsequent category involved in the construal analysis of the antonyms ‘young’ and ‘old’ is perspective/ situatedness. The scenes in this sentence are perceived from the perspective of the speaker. The perceiver construes the antonyms from the same vantage point, as they are expressed in the same construction. The entity ‘Mr. Adams’ is construed as not ‘young’ and ‘old’ based on the viewer’s point of view. The relationship between the perceiver and the situation being construed is characterised by viewing arrangements. The speaker is the conceptualiser who construes the scenes without being involved in them. The antonyms are construed from the optimal viewing arrangement, for the speaker expresses distance from the scenes being construed. Consequently, the antonyms are construed objectively. The speaker views the scenes objectively without being involved in the scenes.

The last category utilised in the construal analysis of the antonyms ‘young’ and ‘old’ is constitution/ Gestalt. The structural schematisation of the antonyms is not individuation or geometrical structure. Instead, these antonyms are construed based on the scale property attributed to them. These two antonyms assign a gradable dimension to the domain of AGE. These antonyms are conceptualised as attributes whose Gestalt structure is determined by the scale property. Finally, the interconnection of these two antonyms with other entities is also used to construe them in the mental structure. They are construed as relational entities since the antonyms imply the existence of another entity. They cannot be conceived without reference to one’s age.

89. John *gave* Mary a book.

90. Mary *received* a book from John.

The antonyms that have been analysed so far are adjectives, whereas the antonyms in the above two sentences are verbs. The construal mechanisms can also

be applied to antonyms as verbs. The antonyms 'gave' and 'received' are conceived by the speaker, for they select a concept in the encyclopaedic knowledge. These two antonyms trigger a concept in the domain of TRANSFERING POSSESSION. These two antonyms focus the perceiver's attention to the profiled concept in this domain. These two antonyms have different facets in this domain, but only this concept was selected as it is salient in these two sentences. These antonyms are construed as selecting the same concept in this domain. The events in these two sentences are construed due to the use of the referents 'John' and 'Mary'. These referents enhance the process of construing the scenes because they assign the accessibility of a referent. These referents delimit the scope of attention of the perceiver. Consequently, the scope of attention of these two sentences specifies these two antonyms in this domain. Moreover, after these antonyms select a concept in the domain, they adjust a scale of attention to visualize the process of construing them. Hence, to describe the conceptualisation involved in construing these antonyms, the notion of granularity is used. These antonyms present a fine-grained view of the scenes being construed since they offer a highly specific detail about the scenes. The final process of construing the antonyms in these two sentences involves the dynamic attention. The conceptualisation of these two antonyms unfolds through processing time. In other words, the attention implied by these two antonyms is construed as being in motion. As a result, these antonyms are scanned sequentially, as the perceiver construes the situation serially through time.

Judgment/ comparison category contributes to the construal process of the antonyms 'gave' and 'received'. In the categorization category, these two antonyms are conceptualised in comparison to previous experiences. These two antonyms are construed based on comparing them to the actions of granting and getting something from someone. The perceiver construes the antonyms based on

previous related categories. This category categorizes the antonyms and judging whether they belong to previous experiences or not. Hence, these two antonyms assign a full sanction, as they present an unproblematic subsumption of the new situation.

Perspective/ situatedness category accounts for the mechanism by which the perceiver visualises a scene from different angles. It is a particular way of viewing a situation, and it can be shifted according to one's intention. The actions of granting and getting a book in these sentences are construed by the perceiver from different vantage points. In the first sentence, the scene is construed as 'a book was given' from the vantage point of the speaker, whereas in the second sentence, the scene is construed as 'a book was received' from another vantage point. Moreover, the antonyms 'gave' and 'received' are construed objectively because the speaker conceptualises them without getting involved in the scenes. Therefore, these antonyms are perceived from the optimal viewing arrangement, as the speaker expresses distance from the construed scenes.

Constitution/ Gestalt refers to the mechanisms of constituting experience and giving it structure to enhance the action of construal analysis. The entity 'book' is construed as a structure that can be given and received. The entity 'book' in these sentences is construed in the form of a geometrical structural schematisation. These antonyms are construed as providing Gestalt structure to the entity 'book'. Similarly, the antonyms 'gave' and 'received' can also be construed as dynamic forces that undergoes on the entity 'book'. The process of construal is understood on the basis of causation. The entity 'John' in these sentences is perceived as an antagonist, whereas the entity 'book' is perceived as an agonist. In other words, the antagonist 'John' forces the agonist 'book' through the actions of 'giving' and 'receiving'. Finally, these two antonyms are construed as relational actions. They

cannot be construed without reference to other entities such ‘giver’ or ‘receiver’. Thereby, these two antonyms are interconnected.

V: Polysemy Relation

91. She sat at the *head* of the table.
92. The thought never entered my *head*.
93. She resigned as *head* of department.

The polysemy relation in these three sentences is analysed using the construal theory to see how the lexical item ‘head’ is conceptualised. The lexical item ‘head’ in these sentences is construed differently, for it selects a different concept in each domain. The lexical item ‘head’ is polysemous, but the cognitive ability of the perceiver selects a different contextually salient concept profiled in a domain. The verbs ‘sat’, ‘entered’, and ‘resigned’ shift the profiled concept ‘head’ into the active zone of each sentence. The verb in each sentence adjusts its meaning to accommodate its semantic argument to the meaning of the concept ‘head’ in the active zone. The lexical item ‘head’ in the first example selects a concept in the LOCATION domain due to the use of the verb ‘sat’. The lexical item ‘head’ in the second example selects a concept in the BRAIN domain, for the verb ‘entered’ is being used. Additionally, the lexical item ‘head’ in the third example selects a concept in the RANK domain, as the verb ‘resigned’ is being used in this sentence. Consequently, the polysemous item ‘head’ is construed differently in each sentence due to the use of the other lexical items in the sentences.

Furthermore, the lexical item ‘head’ in each sentence activates a portion of the domain that it evokes and relies upon for its characterisation. Thus, a scope of attention is selected by the lexical item ‘head’ in each sentence to better construe

this lexical item in these sentences. The immediate scope of the lexical item ‘head’ in the first sentence is the front part of the table, but the maximal scope of this item is the table itself. In the second sentence, the word ‘head’ evokes a different scope of attention. The immediate scope of the word ‘head’ in the second sentence is the actual head, i.e., the upper part of the body, whereas the maximal scope of this item in this sentence is the human body. Similarly, the polysemous word ‘head’ in the third sentence is construed as characterising a different scope of attention. The immediate scope of this item is being in charge of a department, whereas the maximal scope of this item is being in charge of an organisation or institution. Consequently, based on the conceptualising boundaries of the domain, the perceiver construes the lexical item ‘head’ in each sentence differently, as each profiles a different aspect of the domain that it provokes.

The scalar adjustment of the lexical item ‘head’ assigns the view of the construed scenes. In the first sentence, the lexical item ‘head’ invites the hearer to attend to the position of the entity ‘she’ in front of the table, which is typically considered a position of authority or prominence. The word ‘head’ in the first sentence offers a fine-grained view of the construed scene. Similarly, in the second sentence, the lexical item ‘head’ invites the perceiver to attend to the position where the lexical item ‘though’ is being moved to. Therefore, the lexical item ‘head’ offers a coarse-grained view of the scene being construed, as it presents less specific detail about the construed scene. Finally, the lexical item ‘head’ in the third sentence invites the perceiver to focus on the rank or position which the entity ‘she’ resigned from. The lexical item ‘head’ in the last sentence offers a fine-grained view of the scene being construed because a highly specific detail about the situation is being presented. Consequently, the lexical item ‘head’ in each sentence assigns a different scalar adjustment, so this item is construed differently as well.

Furthermore, dynamic attention is another aspect of construal theory that unfolds the conceived scenes through processing time. The verbs ‘sat’, ‘entered’ and ‘resigned’ in the above three sentences profile a process that comprises a series of events distributed through a span of conceived time. The actions of ‘sitting’, ‘entering’, and ‘resigning’ are scanned sequentially, i.e., the scenes in these three sentences are construed in a conceived time.

The lexical item ‘head’ in the above three sentences is construed using the judgement/ comparison category. This lexical item is construed using the categorization aspect. In this aspect, the lexical item ‘head’ in each sentence is conceived in comparison to prior experiences to which the lexical item ‘head’ has been applied. The lexical item ‘head’ is categorized in the first sentence in comparison to the lexical item ‘front’. The lexical item ‘head’ in the first sentence assigns a partial sanction, as this lexical item is conceived in a more creative extension. Similarly, the lexical item ‘head’ in the second sentence is categorized in comparison to the lexical item ‘mind’. Thus, ‘head’ in this sentence assigns a partial sanction because it is construed in a more creative form. Finally, the lexical item ‘head’ in the third sentence is categorized in comparison to the lexical item ‘chief’. Accordingly, ‘head’ in this sentence assigns a partial sanction because it is conceptualised in a more creative manner. All in all, the polysemous item ‘head’ assigns a partial sanction in the three sentences.

Moreover, the lexical item ‘head’ in these sentences can also be construed using the figure-ground alignment. The entities ‘she’ in the first sentence, ‘the thought’ in the second sentence, and ‘she’ in the third sentence are construed as figure entities that take a position in the ground entities. In the first sentence, the figure entity ‘she’ is construed as an entity that takes place at the ground entity ‘table’. Hence, ‘head’ is construed as part of the ground element in the first sentence. In the second sentence, however, the figure entity ‘the thought’ is

construed as occupying a place in the ground element 'head'. Finally, the figure entity 'she' in the third sentence is construed as an entity that takes position in the ground entity 'department'. The lexical item 'head' in the third sentence is represented by the figure element. Consequently, the spatial relation between the figure entities and the ground entities contributes to the construal analysis of the above three sentences.

Perspective/ situatedness is also utilised in construing the lexical item 'head' in the above three sentences. Consequently, 'head' is construed from different viewpoints, as the perceiver views this lexical item differently in each sentence. In the first sentence, the lexical item 'head' is viewed as expressing initial position from the vantage point of the perceiver. Similarly, the lexical item 'head' is construed by the perceiver as referring to an abstract entity, i.e., the brain. However, the lexical item 'head' in the third sentence is viewed as a chief from the vantage point of the perceiver. Consequently, 'head' in each sentence is construed from the perspective or vantage point of the perceiver. The perceiver views the lexical item 'head' as location in the first sentence, and as brain in the second sentence, and as rank or position in the third sentence. Another construal property involved in the analysis of the lexical item 'head' in these sentences is subjectivity and objectivity mechanisms. The perceiver construes 'head' in the first sentence objectively, and the scenes are construed as optimal viewing arrangement since the perceiver keeps distance from the construed scenes in the first sentence. In the second sentence, the perceiver construes 'head' subjectively, as the perceiver is involved in the construed scenes. Thereby, the scenes in the second sentence are construed using an egocentric viewing arrangement. However, the perceiver in the third sentence construes 'head' objectively, so the scenes are construed using optimal viewing arrangement, as the perceiver expresses distance from the construed scenes.

Finally, the lexical item ‘head’ in the above three sentences is analysed using constitution/ Gestalt category of construal theory. Different structural schematizations are assigned when construing ‘head’ in these sentences. In the first sentence, the lexical item ‘head’ is construed using geometric structural schematization. The table is conceived as a square or rectangular structure, and the entity ‘she’ is conceptualised as sitting at the front part. In this sentence, ‘head’ is construed as part of the geometric structure. Similarly, in the second sentence, the lexical item ‘head’ is construed as a geometrical container structure. In other words, ‘head’ is conceived as a container structure, as the lexical item ‘thought’ is entered into. The word ‘head’ in the third example is conceptualised using the individuation structure. It is construed as a bounded individual entity since it offers a fine-grained view of the aspect being construed. The construal aspect used to analyse the word ‘head’ in these sentences is relationality. The word ‘head’ in the first sentence is construed as a relational entity because it cannot be conceived of without reference to entities that denote locations around a table. In the second example, ‘head’ is conceptualised as a nonrelational entity because it can be conceived of without reference to any other entities. However, ‘head’ in the third example is construed as relational entity, for it cannot be conceived of without reference to entities that denote position or rank.

94. Rambo found the *hammer*.

95. Rambo *hammered* the nail into the tree.

The polysemous lexical items ‘hammer’ and ‘hammered’ in the above two examples are analysed using construal theory. The lexical item ‘hammer’ in each sentence focuses the attention of the perceiver. Thus, the perceiver selects a concept that is relevant to the construed entity and ignores the irrelevant aspects of the construed entity. The lexical item ‘hammer’ has different facets, but only two

facets are being used in construing these sentences. In the first example, the perceiver construes the entity ‘hammer’ throughout the process of selecting a concept related to tools in the domain of PHYSICAL OBJECT. However, in the second example, the perceiver construes the entity ‘hammered’ by selecting a concept related to hitting a nail with the hammer in the domain APPLYING FORCE. Consequently, the cognitive ability enables the perceiver to select a salient concept profiled in a unique domain.

These two examples are construed using different scopes of attention. Scope contains the profiled concept and represents the general focus of attention. The scene in the first sentence is construed using the notion of accessibility of reference. In the first sentence, the scene is being construed using the referent, i.e., ‘hammer’ since the scope is limited to this referent. Furthermore, the elements ‘found’ and ‘the’ construe the referent ‘hammer’ as being in the perceiver’s scope of attention. However, in the second example, the scope of attention is accessed using the locative expression ‘into the tree’. This expression represents a grammatical constraint that makes reference to the scope of attention as it specifies a location. Thus, the element ‘hammered’ is construed in the scope defined by the locative expression ‘into the tree’.

Moreover, the polysemous entities ‘hammer’ and ‘hammered’ in the above two sentences are construed with different scalar adjustments. The scene in the first sentence invites the hearer to construe ‘hammer’ as a tool, so this entity offers a fine-grained view of the scene as it provides a highly specific detail about the entity being construed. However, the scene in the second sentence invites the hearer to construe ‘hammered’ as an action, so this element offers a coarse-grained view of the scene as it provides a less specific detail about the entity being construed. Additionally, the scenes in these two sentences can be construed using dynamic attention strategy. The perceiver in the first sentence conceptualises the

scene using sequential scanning. That is to say, the entity ‘hammer’ is conceived in time. Likewise, the scene in the second sentence is conceived using sequential scanning. To be more precise, the element ‘hammered’ offers a temporal dimension to the scene being construed, so the scenes are conceived successively with the passage of time.

The construal analysis of the polysemous terms ‘hammer’ and ‘hammered’ requires the exercise of judgement/ comparison. The concept of categorization is usually found in every lexical item. Here, the terms ‘hammer’ and ‘hammered’ are categorized based on comparison to related concepts and experiences. After a concept has been selected for each item, it is categorized under this concept in comparison to earlier related items. Thus, the polysemous item ‘hammer’ in the first sentence is categorized in comparison to other hand tools such as screwdrivers, pliers, wrenches, etc. However, ‘hammered’ in the second sentence is categorized in comparison to the action of physically ‘beating’ or ‘shaping’ with a hammer or woodworking projects that involve hammering nails into place. Consequently, the lexical item ‘hammer’ in the first sentence assigns a full sanction to the item being construed as it effortlessly fits into the new situation without any complications. On the other hand, the lexical item ‘hammered’ in the second sentence assigns a partial sanction to the item being construed as it presents a broader application to the current situation, leading to a more inventive extension.

Perspective/ situatedness is also involved in the analysis of the polysemous relations ‘hammer’ and ‘hammered’. These two polysemous items are construed differently based on the perspective of the viewer. From the viewpoint of the perceiver, the lexical item ‘hammer’ in the first sentence is construed as a tool from the vantage point of the perceiver. In contrast, the lexical item ‘hammered’ in the second sentence is construed as an action from the vantage point of the

perceiver. Consequently, these two polysemous items are experienced differently as they being experienced from different locations and use. Moreover, deixis is another element that designates the existence of an entity in a scene. In the first sentence, the article ‘the’ represents an epistemic perspective as it construes the entity ‘hammer’ as part of the perceiver’s common ground. Additionally, the scenes in the above two sentences are construed objectively, as the perceiver expresses distance from the scenes being construed. Consequently, the scenes are arranged based on the optimal viewing arrangement since the speaker is not involved in the construed situations.

Finally, the polysemous items ‘hammer’ and ‘hammered’ are analysed using constitution/ Gestalt. According to this category, these two items are construed with different structural schematizations. The structure of these two entities are conceptualised in accordance with their component parts. These two polysemous items are construed based on the individuation category, i.e., whether the items are bounded or unbounded. The structure of the polysemous item ‘hammer’ is conceptualised as a bounded individual with internal structure. It is spatiotemporally bounded, as it assigns a spatial or material property. However, the structure of the polysemous item ‘hammered’ is conceived as an unbounded individual. The simple tense/ aspect construe Rambo’s behavior as a temporally unbounded behavioral trait. Additionally, the force dynamic is another feature involved in the construal analysis of the polysemous term ‘hammered’ in the second sentence. In this aspect, the process of ‘hammering’ is conceptualised as involving force acting upon a participant in the scene. In the second sentence, the antagonist ‘Rambo’ exercises a force of ‘hammering’ against the agonist ‘the nail’ in the construed scene. Finally, the polysemous items ‘hammer’ and ‘hammered’ can also be construed using relationality feature. In the first example, ‘hammer’ is conceived as a nonrelational lexical item since it can be construed with any

reference to other entities in other concepts. By contrast, in the second example, ‘hammered’ is construed as a relational entity, as it cannot be conceived of without reference to other entities. In other words, the item ‘hammered’ cannot be conceived of without reference to the hammerer ‘Rambo’ and the entity being hammered ‘the nail’.

VII: Homonymy Relation

96: Rita’s favorite color is *blue*.

97: Samuel picked a tissue and *blew* his nose in the café.

The construal analysis can also be applied to the homonymy relation. Attention/ salience is the first category involved in the construal analysis of the homonymous items ‘blue’ and ‘blew’. The homonymous item ‘blue’ in the first sentence focuses the perceiver’s attention, so it profiles a concept in the domain of COLOUR. The perceiver selects this concept based on the context that the scene being construed in. This item has different facets, but the perceiver selects ‘a specific shade within the spectrum of colours’ concept. By contrast, the homonymous item ‘blew’ in the second sentence invites the perceiver’s attention to a profiled concept of ‘exhaling air through the nose’ in the domain of ‘BODILY FUNCTION’. Although the homonymous item ‘blew’ has different facets, it selects this concept with the assistance of the context that the scene is being construed in.

In dealing with the scope of attention, the scenes in these two sentences are construed with different scopes of attention. In the first sentence, the perceiver delimits the scope of attention based on the accessibility notion. The referents ‘Rita’ and ‘blue’ are accessible to the perceiver in the scenes being construed. The accessibility of these referents allows the perceiver to quickly and efficiently parse

the sentence and build a mental representation of its meaning. The sentence creates a mental scene in which ‘Rita’ is associated with the property of having a favourite colour, and that property is associated with the specific colour ‘blue’. Consequently, this mental scene is constructed based on the accessibility of the referents and the perceiver's previous experiences and knowledge. However, in the second sentence, the homonymous item ‘blew’ is observed from a different scope of attention. The locative expression ‘in the cafe’ profiles the entity ‘Samuel’ in the scope of attention as it narrows the domain search process. The action of ‘blowing’ is experienced by the perceiver in this location. Another concept that limits the scope of attention is accessibility, which employs the referents ‘Samuel’ and ‘tissue’. These two referents narrow the perceiver’s scope of attention.

The homonymous item ‘blue’ and ‘blew’ are construed with different scalar adjustments as they are being employed in two different sentences, i.e., contexts. In the first sentence, the item ‘blue’ invites the hearer to attend to the exact colour in the scene being construed. The first homonymous item offers a fine-grained view of the sentence, so a qualitative scalar adjustment is being viewed in the first sentence. In the second sentence, by contrast, the homonymous item ‘blew’ invites the hearer to attend to the action of ‘blowing’ in the scene being construed. As a result, ‘blew’ provides a coarse-grained view of the sentence because it provides less specific detail, so a qualitative scalar adjustment is seen in the second sentence. Unlike the previous static construals of the scenes, dynamic attention is concerned with one’s attention as it might move across the scene. The scene in the first sentence is being construed with summary scanning. The scene is scanned summarily, so a holistic conceptualisation of the scene in its entirety is being construed. The homonymous item ‘blue’ is being scanned summarily along with the scene in the sentence. On the other hand, the scenes in the second sentence are

being construed with sequential scanning. The scenes are scanned sequentially, as the scenes are being conceived in time.

Another category employed in construing the homonymous items ‘blue’ and ‘blew’ is judgement/ comparison. In each sentence, the homonymous item is construed in comparison to other earlier concepts in the mental repository. The categorization process is maintained in classifying these items based on earlier experiences. The homonymous item ‘blue’ is categorized in comparison to the blue colour in the spectrum or other items such sky or oceans. Therefore, ‘blue’ assigns a full sanction as it provides a clear subsumption of the earlier scene. The homonymous item ‘blew’, on the other hand, is categorized in comparison to the action of air moving or being forced through a space. Hence, ‘blew’ assigns a partial sanction as it provides a more creative extension of the item in relation to the item ‘blue’.

In analysing the homonymous words ‘blue’ and ‘blew’, the subcategory of perspective/ situatedness is also taken into account. The location of the perceiver is also important in construing a scene. In the first sentence, Rita's personal preference for the colour blue is perceived from the viewpoint of the perceiver. From the perceiver’s perspective or viewpoint, Rita’s preferred colour is conceived as blue. Thus, the viewing arrangements of the scenes are based on optimal view since the speaker excludes himself/herself from the scenes being construed. Consequently, the homonymous item ‘blue’ is construed objectively, as the speaker keeps distance from the construed scenes. However, the scenes and the action of blowing are being perceived from the perceiver’s viewpoint. The entity ‘Samuel’ is viewed as blowing his nose from the perceiver’s perspective or viewpoint. Accordingly, the scenes are viewed based on optimal viewing arrangements since the speaker expresses distance from the presented scenes, so

the homonymous item 'blew' is construed objectively as the speaker excludes himself/herself from the presented scenes.

Finally, the homonymous items are construed in the above two sentences using the constitution/ Gestalt category. The structural schematization of the lexical item 'blue' in the first sentence is individuation, i.e., whether the lexical item is bounded or not. The word 'blue' has a bounded structure, as it refers to a specific colour that is distinct from other colours. The boundedness of the word "blue" is also reflected in how it is perceived and categorised by the listener, as they mentally segment the colour blue from other colours in their perceptual experience. However, the structure of the lexical item 'blew' in the second sentence is unbounded, as the action of blowing can be seen as a continuous and ongoing process, especially if Samuel blew his nose several times, which indicates unboundedness. Moreover, the lexical item 'blew' is analysed according to the force dynamic. This item is construed as a force that produces the action of blowing by the antagonist 'Samuel', whereas the action of blowing is acted upon Samuel's nose as it is represented as the agonist element. Finally, these homonymous items can be construed using the relationality notion. The lexical item 'blue' is construed as a relational entity since it cannot be conceived without reference to a blue entity. Besides, the lexical item 'blew' in the second sentence is also construed as a relational item as it cannot be conceived without reference to the BLOWER entity and the entity BLOWN.

98. The film got approval from the *sensor* board.

99. The employees found *sensor* water taps and sanitizer disposal in the office building.

The homonymous items 'censor' and 'sensor' in the above two sentences are analysed using different categories of the construal theory to see how these items

are conceptualised. As these two homonymous entities occur in different structures, different attentional processes are conceived. The item ‘censor’ in the first example captures the perceiver’s attention by triggering a relevant experience. Consequently, the perceiver selects a mental concept to better conceive this entity. The item ‘censor’ activates the concept of evaluating in the domain of MONITORING. This lexical item has different facets, but the context shifts the profile to the designated concept in the domain. The homonymous item ‘sensor’, by contrast, focuses one’s attention on a concept in the mental structure, so it selects the concept of technology in the domain of AUTOMATION. As this concept has different facets, it shifts the profile due to the context of the sentence.

The scope of attention of the lexical item ‘censor’ is conceived after the concept has been selected in the domain of MONITORING. The scope of the term is then limited by the perceiver’s understanding of the accessibility of the referent within the discourse. In this way, the perceiver narrows the scope of the term ‘censor’ as it is applied to the specific referent of ‘board’ within the current sentence. The term ‘censor’ is a broad concept, but by considering the context and referent, the perceiver can effectively narrow their scope of attention to better understand the intended meaning. Likewise, the scope of attention of the lexical item ‘sensor’ is construed in the second sentence in relation to the accessibility of the referent. The lexical item ‘sensor’ is identified as a referent point that is defined in relation to the referent ‘water tap’. Hence, the perceiver conceives of the referent ‘sensor’ that is connected to the referent ‘water tap’ in this context. Similarly, the lexical item ‘found’ in the second sentence construes that the referent ‘sensor water taps’ as being in the focus of attention of the conceiver.

The homonymous items ‘censor’ and ‘sensor’ offer different scalar adjustments or granularity. These two criteria refer to the degree of specificity or detail in the meaning of the homonymous words. These two lexical items present

different scalar adjustments as their meanings are adjusted depending on the context in which they are construed. The word ‘censor’ in the first sentence offers a fine-grained view of the scene, as it refers to a specific board that reviews films and approves their contents. Similarly, the homonymous item ‘sensor’ also offers a fine-grained view of the scene being construed, as it refers to a specific device that detects or measures something, such as water flow or sanitizer levels. Finally, the dynamic attention strategy is also involved in construing the scenes in the above two sentences. The scenes in both sentences are scanned sequentially due to the use of the verbs ‘got’ in the first sentence and ‘found’ in the second sentence. In other words, the scenes in these two sentences are conceived through a passage of time.

The homonymous items ‘censor’ and ‘sensor’ are also construed using Judgement/ comparison category as they are categorized in comparison to related concepts. The item ‘censor’ in the first sentence is categorized in comparison to related concepts such as ‘evaluator’, ‘editor’, or a group of individuals who are responsible for evaluating the film and granting approval for it to be shown. Thus, this lexical item offers unproblematic subsumption of the new situation, so it assigns full sanction to the compared items. By contrast, the homonymous item ‘sensor’ in the second sentence is categorized in comparison to related concepts such as ‘detector’, or electronic or mechanical devices that use various technologies to detect changes in the environment. Therefore, ‘sensor’ offers a more creative extension of the current situation, so it assigns partial sanction to the compared items.

Perspective/ situatedness is another category involved in the construal analysis of the homonymous items ‘censor’ and ‘sensor’. These two homonymous items are perceived from different perspectives by the perceiver as they are used in different linguistic structures. From the perceiver’s vantage point, the lexical item

‘censor’ is construed as an act of examining and removing objectionable content from a piece of media, such as a film, book, or article. Therefore, the perceiver relates the word ‘censor’ to a person or a board who reviews and approves content for public viewing. On the other hand, the perceiver construes the word ‘sensor’ as a device that detects or measures physical changes in the environment, such as light, heat, or motion. Therefore, the word ‘sensor’ is construed as an object that detects and responds to changes in the physical environment from the vantage point of the perceiver. Moreover, the homonymous item ‘censor’ is construed as known to the hearer due to the use of the deictic element ‘the’ which presents this homonymous item in the focus of attention of the perceiver. The last element involved in construing these two homonymous items in this category is subjectivity. Both homonymous items are construed objectively by the perceiver, as the scenes are being arranged using the egocentric view, so the perceiver excludes himself/herself from the scenes being construed.

Constitution/ Gestalt is also involved in the construal analysis of the homonymous items ‘censor’ and ‘sensor’. The structural schematization of the lexical item ‘censor’ is individuation, i.e., boundedness. Bounded lexical items are perceived as having clear boundaries and distinct roles, while unbounded lexical items are perceived as being more fluid and flexible in their roles and meanings. The item ‘censor’ in the phrase ‘the censor board’ is construed as a bounded item, as the perceiver construes this phrase as a unit with distinct roles. Thus, ‘censor’ can be considered a bounded lexical item in this sentence. It is perceived as a single, cohesive unit with distinct roles, and is perceived by the listener as a distinct entity. This boundedness helps the listener to understand the specific nature of the approval process for the film and to distinguish it from other types of approval processes. However, the item ‘sensor’ in the second sentence is construed as an unbounded item, as its structure is fluid and unidentified. Therefore, ‘sensor’

can be considered an unbounded lexical item in this sentence, as it is not perceived as having a clear boundary or distinct role within the context of the sentence. Finally, the lexical item ‘censor’ is construed as a nonrelational item, so it can be conceived of without any reference to other entities to define its boundaries. The item ‘sensor’, by contrast, is construed as a relation item, as it cannot be conceived of without reference to a sensorial object.

100. There is no **right** way to **write** a great novel.

The homonymous words ‘right’ and ‘write’ undergo the construal analysis, and attention/ salience is the first category involved in conceiving them. Both lexical items capture the perceiver’s attention as they select a concept in their respective domains. ‘Right’ belongs to the domain of CORRECTNESS and selects the concept of appropriateness. While ‘right’ has different facets, the context of the sentence emphasizes the idea of appropriateness. On the other hand, ‘write’ belongs to the domain of COMPOSING and selects the concept of producing written text. The word ‘write’ invites the reader's attention, and it is perceived as a process of creating a great novel. This analysis shows the complex interplay between language form and meaning, and how our mental processes contribute to construing and understanding language. Moreover, the second aspect of attention is scope of attention. The concepts that have been selected in the domain are now surrounded by a scope of attention. The perceiver assigns the scope of construing the scenes that delimits only to the act of writing novels. The perceiver delimits the scope of perceiving the scenes to the process of writing novels. Similarly, the statement ‘no right way’ identifies the scope of attention of the perceiver to delimit the process of writing to no existing way.

Scalar adjustment is another aspect involved in the construal analysis of the lexical items ‘right’ and ‘write’. The item ‘right’ in the phrase ‘no right way’ invites the hearer to attend to the appropriateness act. So, ‘right’ offers a coarse-grained view of the scene, so it presents less specific detail, as it ranges from ‘wrong’ to ‘right’. However, the other homonymous item, ‘write’, offers a fine-grained view of the scene, as it presents the scenes in more detail, so this homonymous item, ‘write’, invites the hearer to the action of writing a great novel. The last attentional aspect in construing the homonymous items ‘right’ and ‘write’ is dynamic attention. The scenes being construed in this sentence offer a summary scanning view of the sentence. Thus, the homonymous items are both scanned summarily, as a holistic view of the presented scenes is being conceived.

Moreover, the homonymous items ‘right’ and ‘write’ are construed using the judgment/ comparison category. According to the categorization concept, one’s understanding of language and meaning is shaped by how information is categorized and interpreted based on prior experiences and cultural frameworks. The lexical item ‘right’ is categorized in comparison to the concept of correctness or appropriateness, whereas the lexical item ‘write’ is categorized in comparison to the act of composing or putting words together to make a piece of writing such as a novel. Consequently, both homonymous items assign a full sanction, as they both are compared to unproblematic concepts of the prior experiences in the mental cognition.

The perceiver’s perspective is considered an important aspect in construing the lexical items ‘right’ and ‘write’. In this category, the viewpoint or vantage point refers to the perspective from which these lexical items are conceived by a perceiver. It is influenced by a variety of factors, including personal experiences, cultural background, and context. The scenes in this sentence are conceived from the perspective of the speaker, who is offering an opinion or evaluation of the

process of writing a great novel. The words 'right' and 'write' are both construed from the perspective of the speaker, who is offering an opinion or evaluation of the process of writing a great novel. However, it is important to note that the speaker's viewpoint in this sentence is objective, as understanding of the words 'right' and 'write' may vary depending on the individual's personal experiences and cultural background. Thus, the viewing arrangements of the scenes are optimal since the speaker excludes himself or herself from the scenes being construed.

The last category involved in the construal analysis of the lexical items 'right' and 'write' is constitution/ Gestalt. In this category, the structural schematization of both lexical items is examined to see how they are conceived in the mental structure. These two lexical items are conceptualised as individuated concepts that are distinct from each other. Hence, they are both construed as bounded concepts that have clear boundaries and are self-contained. The lexical item 'right' is bounded in the sense that it refers specifically to the quality or nature of the 'way' of writing, and does not extend beyond this context. Similarly, the homonymous item 'write' is bounded in the sense that it refers specifically to the action of composing a great novel, and does not extend beyond this context. Moreover, these homonymous items can also be construed in terms of the relationality property. Both items 'right' and 'write' are construed as relational entities. The lexical item 'right' cannot be conceived of without reference to something that can be 'right' or 'wrong'. Similarly, the lexical item 'write' cannot be conceived of without reference to writer or the entity being written. Accordingly, these two entities are considered relational entities, as they are interconnected to other concepts.

VII: Metonymy Relation

101. *The White House* has released a statement.

The metonymy relation undergoes the construal analysis using all the categories. The metonymic expression ‘The White House’ in this sentence is used to denote a concept other than its literal denotation. The perceiver selects a different contextually salient concept profile in the domain. Specifically, the perceiver selects the concept of government authority within the domain of ‘AUTHORITY’ instead of the physical building. The perceiver makes a mapping between the target domain and the source domain. The source domain refers to the physical building of ‘The White House’, whereas the target domain refers a governmental office or department. The perceiver establishes a connection of association between these domains to construe the metonymic expression. Although the expression ‘The White House’ has many facets, the government authority is being selected by the perceiver. The selected concept is framed as an active zone in the domain of ‘AUTHORITY’. Consequently, the metonymic expression ‘The White House’ shifts its literal meaning to an active zone within the domain of ‘AUTHORITY’.

After the perceiver has selected a concept, a scope of attention narrows the selected concept. The metonymic expression ‘The White House’ is profiled in the scope of the perceiver, so the perceiver narrows the search domains process, as this metonymic expression is in the focus of attention of the perceiver. The concept of government authority is given to the metonymic expression, so the scope of attention narrows the selected concept to the government of the United States, not any government authority.

Scalar adjustment is another aspect of construal theory that is involved in the analysis of the metonymic expression ‘The White House’. This metonymic expression invites the perceiver to construe ‘the white house’ as a governmental

department. Thus, this metonymic expression offers a coarse-grained view of the scene being construed, as this expression does not convey its literal meaning, which might lead to potential confusion or misinterpretation. As a result, it is important for readers to carefully consider the context of the expression to fully understand its intended meaning. Dynamic attention is the last attentional aspect involved in construing the metonymic expression in this sentence. This refers to the way in which language can draw attention to the changing and evolving nature of events and concepts. In this sentence, dynamic attention is important for understanding the action of releasing a statement, which occurs over a span of time and involves sequential events. The scenes are scanned sequentially, and the action of releasing a statement is construed in conceived time.

Judgment/ comparison category is also involved in the construal analysis of the metonymic expression ‘The White House’. The use of the metonymic expression implies a sense of authority and power, so this metonymic expression is categorized in comparison to the highest executive office in the government of the United States. The expression ‘The White House’ is associated with a governmental office that is responsible for issuing such statements, so it is categorized as an office that has the authority to issue statements. Consequently, this metonymic expression is judged to offer a partial sanction of the construed concept, so a creative extension of the scene is being conceptualised.

Perspective/ situatedness is another category involved in the construal analysis of this metonymic expression. In this sentence, the perceiver views the physical building ‘white house’ as a place where decisions are taken and statements are released. From the perceiver’s perspective, ‘The White House’ is construed as an executive branch of the U.S. government, which is headquartered in the White House. Moreover, the definite article ‘the’ construes the ‘white house’ as known to the hearer based on common ground. This deictic expression offers an

epistemic perspective on the metonymic expression, as it is based on shared knowledge between the interlocutors. Subjectivity also plays a role in construing scenes. In this sentence, the speaker expresses a certain distance from the situation being construed, resulting in an objective construal of the scenes. As a result, the scenes are arranged based on optimal viewing arrangements, excluding the perceiver from the scenes being construed.

The metonymic expression ‘The White House’ can also be analysed through the lens of the constitution/Gestalt category, which refers to how a whole entity is perceived as greater than the sum of its parts. When perceiving this expression, the individual uses the structural schematization of individuation to mentally bound and structure the entity. Essentially, the perceiver conceptualizes the metonymic expression ‘The White House’ as a cohesive and bounded entity, consisting of various parts such as the physical building, the staff, and the political institution that it represents. Moreover, the process of construing the scenes in this sentence undergoes a force dynamic as well. The metonymic expression ‘The White House’ is construed as an entity with fictive motion force that causes another entity to be moved. The metonymic expression is viewed as an antagonist that forces the agonist ‘a statement’ to be released. Additionally, relationality is the construal aspect involved in the construal analysis of this metonymic expression. This expression is construed as a relational entity, as it cannot be conceived of without reference to the entity that represents. This means that the identity and existence of the metonymic entity is perceived as dependent on its relationships with other entities.

102. *The ham sandwich* wants his coffee now.

In this sentence, the phrase ‘the ham sandwich’ represents a metonymic expression. The construal theory is used to analyse this expression. Attention/

salience is the first category to start with. This metonymic expression triggers two different concepts or facets in the mind, but only one is profiled due to the context of this sentence. Thus, the speaker selects a concept in association with the metonymic expression and the context. The analysis correctly identifies that the literal denotation of “the ham sandwich” prompts the concept of sandwich in the domain of FOOD, which is the source domain, whereas the metonymic denotation prompts the concept of customer in the domain of RESTURANT, which is the target domain. The concept of customer activates an active zone in the target domain to construct a mental representation of the scene being construed. After the relevant concept has been selected, a scope of attention is assigned to delineate the focus of attention. The metonymic expression is covered by the extent of the conceptual content evoked for its characterization. Accordingly, the selected concept is mentally covered by two scopes: immediate and maximal. The immediate scope of attention covers an extent of the table that the customer is sitting on, whereas the maximal scope of attention covers an extent of the restaurant that the customer is sitting in.

The metonymic expression ‘the ham sandwich’ is construed using the scalar adjustment aspect. In this case, the level of specificity of the construed expression is perceived based on its granularity level. This aspect conceptualises the level of detail while construing the metonymic expression. Hence, ‘the ham sandwich’ offers a coarse-grained view of the construed scene, as it provides relatively less detail or specific information about the scene being construed in this sentence. However, dynamic attention is another construal operation involved in construing the scenes in this sentence. The scenes are scanned sequentially, as the perceiver conceptualises the scenes in conceived time. In other words, the perceiver construes the scenes in this sentence through a sequence of events.

The second construal category that is involved in the construal analysis of the metonymic expression ‘the ham sandwich’ is judgment/ comparison. The expression ‘the ham sandwich’ refers to the concept of a customer in a restaurant. Thereby, ‘the ham sandwich’ is categorized in comparison to a person who has ordered ‘the ham sandwich’. Therefore, this metonymic expression is judged to offer a partial sanction to the expression being construed, as it provides a creative situation for the construed scene.

The metonymic expression ‘the ham sandwich’ is further analysed using the construal category perspective/ situatedness. The scenes are construed based on the speaker’s perspective. The perceiver construes the customer who has ordered coffee as ‘the ham sandwich’. From the perspective or vantage point of the perceiver, the customer is construed as a ‘ham sandwich’. The perceiver uses the metonymy relation to stand for the customer by the use of the expression ‘the ham sandwich’. Moreover, the definite article ‘the’ in the phrase ‘the ham sandwich’ shows that the perceiver is in relation to the participant ‘the ham sandwich’ in terms of time and place. From the situatedness aspect, ‘the ham sandwich’ is known to the perceiver in this context. Consequently, the use of the metonymic expression ‘the ham sandwich’ and the definite article ‘the’ highlight the way in which language is construed based on context that can be used creatively to convey different conceptualisations. Furthermore, the perceiver conceives the scenes in this sentence objectively. The perceiver construes the scenes without getting involved. Thereby, the scenes are arranged in the form of optimal viewing arrangement, as the perceiver excludes himself/ herself from the scenes being construed.

Another way of analysing the metonymic expression ‘the ham sandwich’ is to construe its conceptual structure. This analysis represents the conceptualisation of ‘the ham sandwich’ as a structure and gives it a constituting experience. The

structural schematization of this metonymic expression involves individuation. Thus, to construe the unity of its structure, the boundedness concept is utilized in the analysis of this expression. The expression ‘the ham sandwich’ is conceived as a bounded entity, as its structure is bounded by well-defined spatiotemporal boundaries, so it is construed as a whole unit. The schematic structure of this expression is construed as a whole unit that has clear limitations. The last construal mechanism is relationality. The metonymic expression is construed as a relational entity, as it cannot be conceived of without reference to the entity that it represents. So, the literal denotation of this expression is considered a nonrelational entity, but its metonymic denotation is conceived a relational entity.

103. **The car** in front decided to turn right.

In this sentence, the metonymy relation is being used in the form of ‘the car’. The phrase ‘the car’ does not represent its literal meaning. Instead, it represents a metonymic representation that refers to the person who drives the car. As there are two concepts involved in the interpretation of this metonymic expression, the perceiver has to select a salient concept in relation to the context. This expression involves two concepts: one refers to ‘the physical car’, and the other refers to ‘the driver’ who drives the car. Therefore, the perceiver selects the profiled concept that refers to ‘the driver’ concept instead of ‘the physical car’ concept. To construe this concept, a mental mapping is made between the target domain, which is referred to as ‘the driver’ and the source domain, which is referred to as ‘the physical car’ by the perceiver. Although the domain of AUTOMOTIVE has many facets, the perceiver selects ‘the driver’ facet in association with other facets. The concept ‘the driver’ shifts the literal meaning of the phrase ‘the car’ as it occurs in the active zone in the domain of AUTOMOTIVE.

During the scope of attention process, the perceiver focuses on the selected concept. Two domains are involved in the denotation of this metonymic expression, but only the salient concept, i.e., the target domain, is used. This metonymic expression is construed using two levels of attention. On the first level, the metonymic expression is construed in relation to its immediate scope of attention. This metonymic expression is construed in relation to its immediate scope, which is referred to as the driver who is turning the car. On the other hand, the metonymic expression is construed broadly in relation to its maximal scope of attention, which is represented by the physical car in front of the perceiver.

Another attentional aspect of construing the metonymic expression ‘the car’ is scalar adjustment. The expression ‘the car’ in this sentence invites the hearer to attend to the driver who turned the car in front of the speaker’s car. This expression offers a coarse-grained view of the scene being construed, as it provides less detail. This metonymic expression serves as a general and convenient way to refer to the car that is directly in front of the speaker's car without the need to provide further information. The last construal aspect in this category is dynamic attention. This aspect refers to the perceiver’s attention that can be moved across a scene, i.e., the way the perceiver conceptualises the fictive motion of an action in a scene. The item ‘the car’ is scanned sequentially by the perceiver due to the use of the expressions ‘decided to turn’ and ‘to turn right’, which indicate the dynamic movement and maneuverability of the car in a conceived time.

The metonymic expression ‘the car’ is analysed further by employing the judgement/ comparison category. This category involves the process of forming an opinion or examining similarities or differences based on a careful evaluation of this metonymic expression. The perceiver categorizes the metonymic expression and compares it to other lexical referents. In other words, ‘the car’ is categorized and compared to the driver of the car, as the driver is closely associated with the

car itself. Therefore, this metonymic expression is judged and evaluated to refer to the driver rather than to the physical car, so this metonymic expression assigns a partial sanction since it provides a more unconventional extension of the phrase ‘the car’ in the scene being construed.

Another category involved in the construal analysis of the metonymic phrase ‘the car’ is perspective/situatedness. This category refers to the idea that one’s construal of the world is always relative to one’s perspective on the scene in a given context. In the previous construal aspects, the metonymic expression ‘the car’ is construed as a driver who has decided to turn right, but the concept of the driver is construed from the speaker’s perspective as a car. Consequently, the perceiver construes the phrase ‘the car’ as ‘the driver’ from his/her vantage point. Moreover, the deictic article ‘the’ in this sentence is used to designate ‘the car’ in the scene. Due to the use of this deictic article, the perceiver construes the metonymic expression in relation to the speaker’s current location and perspective. Furthermore, the perceiver construes the scenes in this sentence objectively, so the scenes are arranged in an optimal viewing arrangement. The perceiver excludes themselves from the scenes being construed. As a result, the metonymic expression ‘the car’ is construed from the speaker’s objective point of view.

The last construal category involved in the analysis of the metonymic phrase ‘the car’ is constitution/ Gestalt. These two concepts examine the perceiver’s cognitive organization and the mental structure employed in construing a scene. The metonymic expression is construed by analysing its schematic structure. Thus, the perceiver construes this metonymic expression as a bounded entity that has clear boundaries, and its structure is construed as a whole unit. The cohesive units of the metonymic phrase are conceived as a bounded entity that has clear spatiotemporal boundaries. Finally, the metonymic expression is construed employing relationality concept. This expression is construed as a relational entity

that inherently implies the existence of another entity. Consequently, this metonymic expression cannot be conceived of without reference to the entity that it represents. In other words, the concept ‘the driver’ cannot be conceived of independently without reference to the concept ‘the car’.

104. **England** won the World Cup in 1966.

The metonymic expression ‘England’ in the above sentence is analysed using construal theory. The first category to start with is attention/ salience. This metonymic expression triggers two concepts in the mind. The first concept is represented by ‘Country of England’, but the other is represented by ‘Team of England’. However, the perceiver selects the salient concept due to the context being used, i.e., the perceiver selects the concept of ‘Team of England’. The metonymic expression activates two domains in the mental structure. The literal denotation of the word ‘England’ prompts the concept of ‘Country of England’ in the domain of GEOGRAPHICAL AREA, which is referred to as a source domain. However, the metonymic denotation prompts the concept of ‘Team of England’ in the domain of SPORT, which is referred to as a target domain. Although the expression ‘England’ has many facets, the concept ‘Team of England’ is being selected by the perceiver, so the word ‘England’ is framed as an active zone in the domain of ‘SPORT’.

The second attentional process involved in construing the metonymic expression ‘England’ is the scope of attention. The selected concept is delineated to attract more attention from the perceiver. This metonymic expression is profiled in the scope of the perceiver, so the perceiver delimits the search of domain processes. Thus, the selected concept is mentally covered by two scopes: immediate and maximal. The immediate scope of attention of the metonymic expression ‘England’ covers the extent of the England team. However, the

maximal scope covered by the perceiver in construing this metonymic expression is the 1966 FIFA World Cup tournament.

Moreover, the adjustment of the scale of attention helps the perceiver to construe the event with a sufficient amount of detail, i.e., a sufficient level of granularity. The metonymic expression ‘England’ in this context invites the perceiver to attend to the ‘England Team’ that won the World Cup in 1966. Therefore, as this metonymic expression provides less detail, it offers a coarse-grained view of the scene being construed. The last attentional aspect of construing the metonymic expression is dynamic attention or dynamicity. The scene in the sentence is scanned sequentially. The perceiver scanned the scene in conceived time due to the use of the verb ‘won’, which indicates the dynamic events of the football match. The scenes of winning the World Cup occurred over a span of time and involved sequential events.

Using another construal aspect, the metonymic item ‘England’ is further analysed based on judgment/ comparison category. This metonymic expression is construed in comparison to similar earlier events in the encyclopedic knowledge of the perceiver. Hence, categorization aspect is involved in construing this metonymic item. The metonymic expression ‘England’ is categorized in comparison to earlier teams of football that won the World Cup by the perceiver, as this metonymic expression represents ‘the England Team’. This metonymic expression is judged to offer a partial sanction to this sentence since it assigns a unique scene to the construed event.

Furthermore, the metonymic word ‘England’ is analysed using another construal category, i.e., perspective and situatedness. The word ‘England’ can be analysed from different perspectives based on background knowledge and the cultural context of the speaker. The perceiver uses this metonymic expression in this sentence to construe or represent ‘The English National Team’. The

metonymic word ‘England’ is being construed as a football team based on the perceiver's point of view. The selection of the word ‘England’ reflects the perceiver’s perspective in relation to the situation being construed. Moreover, the perceiver isn’t involved in the scenes being construed in this sentence, so the scenes are conceptualised objectively by the perceiver. Thereby, the scenes are construed based on optimal viewing arrangements as the speaker expresses distance from the situation being construed.

Beside attentional, judgmental, and perspectival construal categories, constitution Gestalt is also involved in the construal analysis of the metonymic expression ‘England’ to identify its conceptual structure. Accordingly, the structural schematization of this metonymic expression is individuation, i.e., boundedness. Consequently, ‘England’ is construed as a bounded entity, as it refers to a specific and well-defined entity rather than a more abstract or general concept. The perceiver construes the structure of this metonymic expression as a team rather than as a broader geographical location or cultural concept. The last construal mechanism is relationality. The metonymic expression ‘England’ is construed as a nonrelational entity as it can be construed without reference to or relation to other entities.

105. Jack noticed several new **faces** tonight.

The metonymic expression ‘faces’ in the above sentence is analysed by adopting the construal theory. Attention/ salience is the first construal category involved in the analysis of this metonymic expression. The word ‘faces’ has many facets, but only one of them is salient in this context. This metonymic expression denotes two different concepts: one of them refers to new people in the domain of INDIVIDUALS, or people whom ‘Jack’ had not met or seen before, whereas the other concept refers to the faces of some people, i.e., their facial features. Hence,

different concepts are attributed to the meaning of the word ‘faces’, but only one concept is selected as it is profiled due to the context of this sentence. In the mental structure of the perceiver, a conceptual mapping is processed to construe this metonymic expression between target domain and source domain. The target domain is represented by the concept of new people, whereas the source domain is represented by the concept of the faces of some people or facial features. Therefore, the ‘new people’ concept shifts the literal meaning of ‘faces’ as it occurs in the active zone of the INDIVIDUALS domain.

Another construal mechanism is employed in analysing the metonymic expression in the form of the scope of attention after the perceiver has selected a concept. The scope of attention for this metonymic expression is narrowed as the concept of new people is profiled among other facets. Two attentional levels are determined to construe this metonymic expression. The metonymic expression ‘faces’ is construed in relation to its immediate scope of attention at the first level, which is referred to as the facial features or faces of some people. Moreover, the metonymic expression is construed in relation to its maximal scope of attention, which is represented by the physical identity of an individual. In other words, when using this metonymic expression, the perceiver adopts a specific focus of attention. They might focus exclusively on the facial features of some people (the immediate scope of attention) or on the physical identity of an individual (the maximal scope of attention).

Moreover, the metonymic expression ‘faces’ is further analysed using another construal mechanism, i.e., scalar adjustment. This metonymic expression, in this context, invites the perceiver to attend to a group of people rather than a number of faces. Thus, ‘faces’ is construed employing the granularity concept. The general meaning of ‘faces’ or the concept of ‘faces of some people’ in the domain of INDIVIDUALS offers a fine-grained view of the scene being construed,

whereas the metonymic form of ‘faces’ or the concept of ‘new people’ in the domain of INDIVIDUALS offers a coarse-grained view of the scene being construed in this context. The metonymic form of ‘faces’ offers less specific detail, so it is construed with a coarse-grained view. The last attentional category involved in construing this metonymic expression is dynamic attention. Here, the perceiver’s attention is moved across the construed scene. In other words, the scenes being construed in this sentence are scanned sequentially due to the use of the verb ‘noticed’, which indicates the dynamic movement of the perceiver’s eyes during that night.

The metonymic expression ‘faces’ is also construed in relation to other earlier concepts in the encyclopedic knowledge using judgment/ comparison category. Based on the categorization concept, ‘faces’ is categorized in comparison to ‘people’, who are identified by their facial features. So, the metonymic word ‘faces’ is judged by the perceiver to be a representative of the category ‘people’ to create a sense of newness and unfamiliarity, implying that Jack is not familiar with these individuals. Therefore, the metonymic expression assigns a partial sanction as it is construed with a more creative denotation.

The perceiver’s perspective is also crucial in construing the metonymic expression ‘faces’. This expression ‘faces’ is perceived to stand for the people who were present at the event and have been noticed by Jack. The perceiver ‘Jack’ construes the group of people who were at the event from the vantage point of their facial features. This group of people was construed as ‘faces’ from the perceiver’s viewpoint of the scene being construed. Furthermore, the scenes in this context are arranged with optimal viewing, as the speaker excludes himself or herself from the construed scenes. Thereby, the scenes are construed objectively, as there is a distant relationship between the speaker and the content of the situation.

The conceptualization of the conceptual structure is also involved in the construal analysis of the metonymic expression ‘faces’, as it is represented by the constitution/ Gestalt category. The structural schematization of ‘faces’ is formed in the mind due to its individuation structure, i.e., boundedness. The metonymic word ‘faces’ is construed as a bounded entity. As this metonymic expression refers to the physical appearance of different people, it is construed as a bounded entity. In other words, each person has a clear and definite boundary that allows us to identify them, so the metonymic word ‘faces’ is conceived as a bounded entity with discrete units. The last construal operation engaged in construing ‘faces’ is relationality. This metonymic expression is construed as a nonrelational entity, as it can be conceived of without reference to other entities. In conceiving the metonymic word ‘faces’, no other entities are required to construe its relations to this entity.

4.8 Result Discussions

After conducting a thorough analysis of the data presented in this chapter, the following key findings were obtained:

1. In the adopted data, the prepositional phrases that refer to a place are represented by the CONTAINER image schema. This schematic pattern is made up mainly of two elements: the trajector (the entity in a place) and the landmark (the place the entity occupies). Consequently, the synonyms in examples 3a and b embody the properties of the trajector in the landmark.
2. It is true that the pairs of synonyms can be applied in the same linguistic context in this study, but this does not mean that they have the same focal action properties in the theory of image schema.
3. The hyponymy relation involves the inclusion of one entity in another and is mainly embodied by employing the LINK image schema. In the structure of

this pattern, three schematic elements are involved: *A*, *B*, and a *LINK*. Element *A* represents the superordinate entity, while element *B* represents the hyponym entity. However, the *LINK* between these lexical items signifies that the meaning of entity *B* is included in the meaning of entity *A*. The meaning of *B* helps to conceptualize the meaning of *A*, or vice versa.

4. The meronymy relation involves hierarchical structures and is mainly embodied using the PART-WHOLE image schema. This image schema consists of three schematic structures: WHOLE, PART, and CONFIGURATION. The WHOLE element is embodied by the holonym entity, while the PART element is embodied by the meronym entity. Therefore, the CONFIGURATION between the holonym item and the meronym item signifies that the meaning of the meronym entity or PART element is included in the meaning of the holonym entity or WHOLE element. The meronym entity or PART element is conceived in relation to the holonym entity or WHOLE element.
5. The antonymy relation involves the verticality property and is mainly embodied by employing the SCALE image schema. This schematic pattern accounts for the qualitative or quantitative aspects of an object or a person. From this perspective, the schematic structure of this pattern involves the SCALARITY property, which refers to the object or person having less or more of a certain quality or quantity. Thus, two antonyms are conceptualized with varying degrees of intensity.
6. The polysemy relation involves the relation of multiple but related meanings with different senses. Therefore, there is no specific image schema pattern to represent this sense relation in the mental structure. In other words, each polysemous sense evokes a distinct image schema pattern in each sentence. However, the polysemous senses of any lexical item can be embodied using

the CENTER-PERIPHERY image schema. Each individual sense radiates out from the center to the peripheral boundaries. Consequently, polysemous items are arranged in the conceptual structure in a prototypical and peripheral manner, from the most related to the least related. The most related polysemous word occurs in the center, while the least related polysemous word occurs at the boundaries.

7. The last two sense relations, homonymy and metonymy, are embodied by employing various image schema patterns, as there are no specific patterns to represent them. The schematic structure of these two sense relations highly depends on the use of the sense in the sentence. Hence, these two relations are embodied by employing different image schema patterns in this study based on the meaning that the sense denotes in the sentence.
8. In the mental space theory, the synonymy relation is conceived as an element that assigns a property to another element, i.e., it denotes the role-value relationship to modify another element. Thus, it can be represented by the role element in the constructed mental space, whereas the modified entity is represented by the value element.
9. In the mental construction, the synonymy relation can be conceptualized as having different functions in the mental space. It can be represented as a space builder that assigns another mental space if it is employed as an adverb, as in the examples (37a & b). However, it can be represented as an element in the mental space if it is employed as a noun in the linguistic context, as in the examples (39a & b).
10. If two synonyms are used in two different clauses in one complex sentence, they are conceptualized in two different mental spaces in the mental structure, as in the example (40). Although the synonyms occur in two different spaces, they assign the same relation.

11. The hyponymy relation is consistent in constructing a mental space if the hyponym and the superordinate occur in similar linguistic contexts. Both the hyponym entity and the superordinate entity are mapped to the same role and reside in the same constructed mental spaces, as demonstrated in examples (41a & b), (42a & b), and (43a & b). Similarly, the hyponym and the superordinate establish similar relations between the base space and the constructed space in examples (44a & b) and (45a & b).
12. In the meronymy relation, both the meronym and the holonym undergo the same process of mental space construction. They can both be represented as elements in the base space and hold the same relation, as shown in examples (46a & b) and (50a & b). Furthermore, they both function as space builders, aiding in the construction of another mental space. However, they assign two different locative spaces in the mind, as demonstrated in examples (47a & b).
13. The meronym and the holonym can be established in two distinct spaces. The element represented by the holonym entity can propagate or spread to the connected spaces through the lattice of spaces, as illustrated in example (48). Similarly, the meronym and holonym entities can be represented in separate spaces, but they are linked by the access principle, connecting these two elements using the inclusion connector, as demonstrated in example (49).
14. The antonymy relation, like other relations, is represented in the mind using mental space theory. The antonyms can function alike and occur in the same space if they occur in two similar linguistic contexts. The antonyms can assign different properties and function as role elements to complete the role-value relations, as in the examples (52, 53, 54, and 55). However, in

example (51), one antonym assigns a property to an entity, whereas the other functions as a space builder.

15. The polysemy relation is represented in the mind, embodying different structures of the Mental Space Theory as each polysemous item has a different linguistic function. The polysemous item 'head' in the examples (56, 57, and 58) is represented in the mind with different functions. This polysemous item functions as a space builder to prompt for the exact location of another element in another space or to prompt for the rank or position of another element in another space. However, it can be represented as an element in the base space and has a relation with another entity.
16. Similarly, in the examples (59 and 60), the polysemous item 'hammer' is conceived and structured differently according to the mental space theory. In one case, it is represented as an element as it plays a role in the relation between the elements in the base space. In the other case, it initiates a relation between the elements in the base space.
17. Certainly, the homonymy relation is structured differently when employing the Mental Space Theory, as it assigns different linguistic forms. In examples (61 and 62), one of the homonymous items is represented as a property to describe another element in the base space, while the other homonymous item initiates a relation between two elements in another space. The homonymy relation can also function as a space builder, constructing a new mental space to conceive other elements and initiate different relations, as shown in examples (64 and 65).
18. The metonymy relation assigns mappings between attributed senses in the Mental Space Theory. The metonymic element provides an Identification Principle between the assigned elements or metonyms, establishing a relationship between the target element and the trigger element. The target

element plays the role of the represented entity, while the trigger element plays the role of the real entity. These two elements are linked by a pragmatic function.

19. All lexical (sense) relations are construed by selecting a concept in the mental structure. The perceiver profiles a concept in a specific domain to conceptualize the Lexical (sense) relations. These lexical (sense) relations have different facets, but one relevant facet is selected based on the domain and the context of use. In this study, synonymy, hyponymy, meronymy, and antonymy each select one concept within a relevant domain to conceptualize a scene in the examples used. However, polysemy, homonymy, and metonymy each involve selecting two concepts from two different domains to conceptualize the scene in the examples provided.
20. All the lexical (sense) relations are construed based on their scope within the attributed domain. The scope of these relations evokes the coverage of these relations as an array of conceptual content that it specifically relies upon for its conceptualisation or involves the idea of accessibility to a referent, which may be the focus of attention for the hearer or associated with a locative expression. Thus, the hyponymy and meronymy relations are construed employing immediate scope and maximal scope, respectively, as they assign hierarchical relations. On the other hand, the remaining relations are construed using the accessibility notion with reference to a referent point or a locative expression in the context of the adopted examples.
21. All the lexical (sense) relations are construed by the perceiver based on another attentional category, which is scalar adjustment. Based on this aspect, these relations are construed with different levels of construal granularity or specificity. Each relation in the employed examples is construed with the precision and detail of the situation being construed.

Hyponymy and meronymy always assign two degrees of attention, so they are always construed with a fine-grained view, whereas superordinates and holonyms are always construed with a coarse-grained view of the scenes being conceptualised. However, the metonymy relation is always construed with a coarse-grained view. The other relations vary in their use of the fine-grained view of the scene or the coarse-grained view of the scene.

22. All the lexical (sense) relations undergo dynamic attention. Conceptualization is inherently dynamic, as it resides in the mental processing as it occurs over time. These scenes in the adopted examples are scanned in the mental structure as it is conceived by the perceiver. Thus, the relations are analyzed to see whether they are construed in motion or not, i.e., summarily or sequentially. The relations are scanned by the perceiver either over a span of time or as a holistic conceptualization.
23. All lexical (sense) relations undergo the process of categorization, i.e., they are construed in comparison to earlier experiences that employ these entities in encyclopedic knowledge. The relations are construed either with partial sanctions or with full sanctions. Hyponyms and meronyms are construed with full sanctions as a problematic subsumption of the categories being viewed, whereas superordinates, holonyms, and metonyms are construed with partial sanctions as a more creative extension of the category being viewed. Consequently, categorization involves schematizing some characteristics of certain elements while ignoring others.
24. Perspective or viewpoint is employed in the construal analysis of all the adopted lexical (sense) relations in this study. These relations are analyzed in relation to the vantage point of the perceiver. Hence, the position of the perceiver is essential for conceptualizing these relations cognitively.

25. The lexical (sense) relations are construed subjectively or objectively in the scenes being construed in the adopted examples as the speaker expresses his involvement or distance in the scenes being construed. The speaker construes these relations with optimal viewing arrangement or egocentric viewing arrangements.
26. All the lexical (sense) relations are construed in the mental structure because they all possess mental structures and undergo the process of structural schematization. Synonymy and antonymy are mostly conceptualized employing scale structure. Hyponyms and meronyms are structured using bounded individuation mental structure, whereas superordinates and holonyms are structured using unbounded individuation mental structure. Other relations employ boundedness and geometrical structures to schematize these relations in the mind.
27. Force dynamics is employed when the verb represents an action, where different forces are involved in the process of causation. In the adopted examples, the scenes construe the antagonist forcing the agonist to perform certain actions.
28. All the lexical (sense) relations are construed based on the concept of relationality. Some of the entities representing the adopted lexical (sense) relations are conceptualized in relation to other concepts because they are relational entities. On the other hand, some entities are nonrelational, as they do not require other entities to be construed in the mind.

CHAPTER FIVE

CONCLUSIONS & SUGGESTIONS FOR FURTHER RESEARCH

5.1 Conclusions

Following the discussion and analysis of the data, this study comes up with the following concluding points:

1. The adopted cognitive semantic theories, Image Schema, Mental Space, and Construal, can all be successfully employed in studying the lexical (sense) relations. Image schema embodies the lexical (sense) relations to be conceptualized in the mind in the form of schematic structures, whereas mental space theory affords partitions for every single lexical item in the sentence, so these partitions are linked or mapped conceptually to construct meaning. Lexical (sense) relations are represented in this theory to fill a space in the mental structure. However, construal theory is regarded as the most widely applied theory in this study, as all its categories can be employed in analysing the lexical (sense) relations. Therefore, not only the text is involved but also the speaker and situations, i.e., the context.
2. The cognitive semantic theories adopted in this study offer distinct perspectives on the selected data. While image schema offers schematic patterns of lexical (sense) relations, mental space theory focuses solely on partitioning lexical (sense) relations without invoking mental images. In contrast, construal theory employs attentional concepts to conceptualize lexical (sense) relations, involving judgements and comparisons based on prior experiences, accounting for the speaker's perspective or the situation, and constructing a conceptual structure for these relations.

3. Unlike traditional lexical semantics, in cognitive semantics, the study of lexical (sense) relations cannot be confined to individual lexical items alone. Cognitive semantic theories analyse the lexical (sense) relations within a context rather than isolating them.
4. Image schema theory demonstrates its capacity to encompass multiple schematic patterns within a single sentence. In this study, complex image schemas that are intricately woven together to conceptualize the various ideas conveyed within a sentence are unveiled. It can present varying degrees of schematicity among lexical items in similar lexical (sense) relations, such as hyponymy, meronymy, antonymy, polysemy, homonymy, and metonymy. However, the degree of schematicity in synonymy remains the same.
5. Since Mental Space Theory is highly context-dependent, the mechanisms of constructing spaces vary from one example to another. Nevertheless, the overall process of constructing mental spaces for all lexical (sense) relations has very slight differences, as they all go through the same process.
6. Construal theory revolves around the fundamental idea that meaning is derived from conceptualization. While certain lexical items may appear similar or identical in meaning, this theory aims to explain how these seemingly equivalent items are construed differently. This mental process involves several stages. First, the perceiver selects a concept to represent the item being conceptualized. Then, the meaning of the concept is refined and defined through the scope of attention and dynamic attention. Once the concept is chosen, it is categorized in relation to prior experiences. The perspective of the perceiver plays a crucial role in construing these lexical (sense) relations. To fully grasp these relations, a schematic structure is

developed within the mental framework, allowing the entities to be perceived as a cohesive Gestalt structure.

5.2 Suggestions for Further Research

Cognitive Semantics is an extensive field of knowledge encompassing numerous theories. However, for the purpose of this study, only three theories have been employed due to its vast scope. Therefore, the followings are suggestions for further study:

1. A Cognitive Semantic Study of lexical (sense) relations Adopting Conceptual Metaphor.
2. A Cognitive Semantic Study of lexical (sense) relations Adopting Frame Semantics.
3. A Cognitive Semantic Study of lexical (sense) relations in Kurdish Media Discourse.
4. It is recommended to apply cognitive semantics and other branches of cognitive linguistics to investigate pre-cognitive linguistic concepts that have not been previously studied from a cognitive perspective.

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خلاصة

تبحث هذه الدراسة في التمثيلات والتصورات الذهنية لعلاقات المعاني المعجمية من خلال تبني النظريات الدلالات الإدراكية. المشكلة التي تناولتها هذه الدراسة هي أنه من غير الواضح كيف ترتبط، وتتجسد، وتبنى، وتُفسر هذه العلاقات ذهنياً في البنية العقلية. تهدف هذه الدراسة إلى تبني مزايا النظرية الإدراكية في تحليل علاقات المعاني المعجمية ، وإقامة روابط ومقارنات بين اثنين أو أكثر من علاقات المعنى المعجمية في العقل.

تسعى هذه الدراسة إلى الإجابة عن أسئلة البحث التالية: إلى أي مدى يمكن إستخدام النظريات الدلالية المعرفية في دراسة العلاقات المعجمية الكلاسيكية؟ هل يمكن استخدام نظرية مخطط الصورة ونظرية الفضاء الذهني و نظرية التأويل في التحقيق في العلاقات المعجمية؟ هل نظرية مخطط الصورة، و نظرية الفضاء الذهني، و النظرية التأويلية تصور إدراكياً البيانات المختارة بنفس الوسائل؟ هل أزواج الجمل، المكونة من علاقات معجمية متشابهة ولكن من عناصر معجمية مختلفة (مثل المرادفات والمتضادات أو غيرها)، تخضع لتحليل معرفي يستخدم نظرية مخطط الصورة و نظرية الفضاء الذهني و نظرية التأويل بنفس الطريقة؟ وهل العناصر المعجمية وحدها كافية لتحليلها معرفياً، أم أن المتحدث والسياق مطلوبان أيضاً؟

بناءً على أسئلة البحث، تفترض الدراسة أنه يمكن استخدام الدلالات المعرفية في تحليل علاقات المعنى المعجمي بين عنصرين معجميين أو أكثر. تخضع جميع العلاقات المعجمية لتحليل دلالي معرفي، لكن كل علاقة تتضمن آليات معرفية مختلفة ؛ تُبنى معاني العلاقات المعجمية في شكل فضاءات في البنية العقلية من خلال الخطاب المستمر على أساس الاستراتيجيات اللغوية والتداولية المعممة؛ تتجسد العلاقات المعجمية معرفياً من خلال التجارب اللغوية والإدراكية في شكل أنماط تخطيطية في الهيكل المفاهيمي؛ ويتم تفسير العلاقات المعاني المعجمية من خلال جوانب متميزة ومختلفة للقدرة البصرية.

تستخدم الدراسة الحالية أسلوب التحليل الوصفي النوعي ، باعتماد نموذج انتقائي يتكون من ثلاث نظريات دلالية معرفية: مخطط الصورة ، والفضاء الذهني ، و التأويل. تم اعتماد سبع علاقات معجمية (معنى) للتحليل (المترادفات، انضواء، الجزء من الكل، التضاد، المشتركات الدلالية، المشتركات اللفظية، و الكناية). تحتوي كل علاقة على خمسة أمثلة ، مما ينتج عنه مجموعه من خمسة وثلاثين مثلاً تم تحليلها في كل من النظريات الدلالية الإدراكية الثلاث.

توصلت الدراسة الحالية إلى الاستنتاج بأن النظريات الدلالية الإدراكية المعتمدة يمكن استخدامها جميعاً بشكل فعال في دراسة علاقات المعنى المعجمي. تقدم هذه النظريات وجهات نظر متميزة حول البيانات المختارة. بينما يقدم مخطط الصورة أنماطاً تخطيطية لعلاقات المعنى المعجمية، تركز نظرية الفضاء الذهني فقط على تقسيم العلاقات المعجمية دون استدعاء الصور الذهنية. في المقابل، تستخدم النظرية التأويلية مفاهيم الانتباه لتصور العلاقات المعجمية ، بما في ذلك الأحكام والمقارنات على أساس الخبرات السابقة ، والاعتماد على منظور المتحدث أو الموقف، وبناء هيكل مفاهيمي لهذه العلاقات.



جمهورية العراق الفيدرالي
حكومة إقليم كردستان
وزارة التعليم العالي والبحث العلمي
جامعة كوية

النهج الدلالي الإدراكي للعلاقات المعجمية (اللغوية) في اللغة الإنجليزية

أطروحة مقدمة الى مجلس كلية علوم الإنسانية و الإجتماعية في جامعة كوية
كجزء من متطلبات نيل درجة دكتوراه فلسفة في اللغة الإنجليزية و علم اللغة

مريوان ظاهر طاهر

بكالوريوس في اللغة الإنجليزية والادب الانجليزي (٢٠١١) جامعة كويه

ماجستير في اللغة الإنجليزية و علم اللغة (٢٠١٦) جامعة سليمانية

بإشراف :

أ.م. د. صلاح محمد صالح

پوخته

ئەم توپزىنەمويە لىكۆلىنەمويە لە نواندن و ويناكردنى ھزرى پەيوەندىيى واتايى وشەيەكان دەكات لە رىگەي بەكارھىنانى تيۆرەكانى واتاسازىيى (سىمانتىكى) ھۆشەكى. ئەو كىشەيەي لەم توپزىنەمويەدا باسكراوہ ئەمويە كە روون نىيە چۆن ئەم پەيوەندىيانە لە مېشكدا پىكەوہ دەبەستىنەمويە، بەرجەستە دەكرىن، دروستدەكرىن، و لىكەدەرىنەمويە لە پىكەتەي عەقلى و ھزرىدا. ئامانجى ئەم توپزىنەمويە برىتىيە لە بەكارھىنانى تايبەتمەندى باشى واتاسازىيى زانىنى بۆ شىكردەمويە پەيوەندىيى واتايى وشەيەكان، و بنىاتنانى پەيوەندى و نەخشەكىشان لەنيۆەن دوو پەيوەندىيى واتايى وشەيەكان يان زياتر لە مېشكدا.

ئەم توپزىنەمويە ھەولەدات وەلامى ئەم پرسىارانەي خوارمويە بداتەوہ: تا چ رادەيەك دەتوانىت تيۆرەكانى واتاسازىيى زانىنى بەكاربەئىزىن بۆ لىكۆلىنەمويە لە پەيوەندىيە واتايى وشەيە كلاسىكىيەكاندا؟ ئايا دەتوانىت تيۆرى ھىلكارىيى وىنە، تيۆرى بۆشايى ھزرى، و تيۆرى لىكدانەمويە و اتا بەكاربەئىزىن بۆ لىكۆلىنەمويە لە پەيوەندىيى واتايى وشەيەكان؟ ئايا تيۆرەكانى ھىلكارىيى وىنە، بۆشايى ھزرى، لىكدانەمويە و اتا لە رووى درككردن و زانىنەمويە بە ھەمان شىوہ بىر لە داتا ھەلبۇزىر دراوہكان دەكەنەمويە و وىنايان دەكەن؟ ئايا ئەگەر دوو رستە، كە لە پەيوەندىيى واتايى وشەيى ھاوشىوہ پىكەتەين بەلام وشەكان جىاواز بن (ومكو ھاوواتاكان، دژمواتاكان يان ئەوانى تر) دەچنە ژىربارى شىكارى ھۆشەكەمويە بە بەكارھىنانى تيۆرەكانى ھىلكارىيى وىنە، بۆشايى ھزرى، لىكدانەمويە و اتا بە ھەمان شىواز؟ ھەروەھا، ئايا وشەكان بە تەنھا بەسن بۆ ئەمويە لە رووى دركپىكردن و ھۆشەكەمويە شىبىكرىنەمويە، ياخود ئاخىوہر و چوارچىوہش پىويستىن بۆ شىكردەمويە وشەكان؟

لەسەر بنەماي پرسىارەكانى توپزىنەمويەكە، ئەم توپزىنەمويە گریمانەي ئەمويە دەكات كە دەكرىت واتاسازى زانىنى بەكاربەئىزىت بۆ شىكردەمويە پەيوەندىيى واتايى وشەيەكان لەنيۆان دوو وشە يان زياتر؛ ھەموو پەيوەندىيى واتايى وشەيەكان بە شىكارى واتاسازىيى ھۆشەكەمويە تىپەردەبن، بەلام ھەر يەكەي لە پەيوەندىيەكان چەندىن مىكانىزمى دركپىكردن و زانىنى لەخۆدەگرىت؛ و اتاكانى پەيوەندىيى واتايى وشەيەكان لە شىوہي بۆشايى لە پىكەتەي عەقلى و ھزرىدا بنىات دەندرىن و دادەرىژرىن لە رىگەي ئاخاوتتى بەردەوام لەسەر بنەماي ستراتىژىيە پراگماتىكى و زمانەوانىيە گشتگىر كراوہكاندا؛ پەيوەندىيى واتايى وشەيەكان لە رووى ھۆشەكەمويە لە رىگەي ھەستەمويەكان و ئەزمونەكانى پەي بىيردن و تىگەيشتنەمويە بەرجەستە دەكرىن لە شىوہي ھىلكارىيى گشتى نمونەكان لە پىكەتەي وىناكارىدا؛ و بەم شىوہيە پەيوەندىيى واتايى وشەيەكان لە رىگەي لايەنە ديار و جىاوازەكانى تواناي بىنەمويە لىكەدەرىنەمويە.

ئەم توپۇزىنەمۇھىيە رېيازىكى وەسفىي چۆنايەتى شىكارى بەكار دەھىننىت، شىوازىكى ھەمەچەش دەگرىتەبەر كە پىكھاتووھ لە سى تىۋرى واتاسازى زاننى: ھىلكارى وىنە، بۆشايى ھزرى و لىكدانەمۇھى واتا. ھەوت پەيۋەندىيى واتايى وشەيەكان بۆ شىكار كىردن ھەلبۇزىردىراون (ھاوواتا، ژىرناو (ھىيۋنىمى)، بەشەناو (مىرۋنىمى)، دژھواتا، فرھواتا، ھاودەنگى واتا جىاواز، و (مىتۋنىمى) وەشەى مەجازى). ھەر پەيۋەندىيەكى واتايى پىنج نمونەى لەخۇگرتووھ، كە لە ئەنجامدا بەگشتى سى و پىنج نمونەى شىكاراۋە لە ھەرىكە لە سى تىۋرەكەى واتاسازىيى زاننىدا ھەيە.

ئەم توپۇزىنەمۇھىيە ئىستا گەشتووھتە ئەمۇ ئەنجامەى كە تىۋرە واتاسازىيەكانى دركىپىكردن و زاننى كە بەكھىنراون دەتوانرىت بە شىۋەيەكى كارىگەر بەكار بەھىنرىن بۆ لىكۋلىنەمۇھ لە پەيۋەندىيە واتايەكانى وشەكان. ئەم تىۋرە تىروانىنى جىاواز دەربارەى داتاي ھەلبۇزىردىراو دەخەنەر و. لە كاتىكدا ھىلكارى وىنە شىوازى ھىلكارى گشتى نمونەكانى پەيۋەندىيە واتايەكانى وشەكان پىشكەش دەكات، بىردۆزى بۆشايى ھزرى تەنھا جەخت دەكاتەھ لەسەر دابەشكردنى پەيۋەندىيە واتايەكانى وشەكان بەيى بەكار ھىنانى وىنەى ھزرى. بە پىچەوانەمۇھ، تىۋرى لىكدانەمۇھى واتا چەمكەكانى سەرنجدان بەكار دەھىننىت بۆ وىناكردن و دارشتنى چەمكى پەيۋەندىيى واتايى وشەيەكان، كە بىرلەسەردان و بەراوردىكردن لەخۇ دەگرىت لەسەر بىنەمى ئەزمونەكانى پىشوو، كە ھۆكارىكە بۆ تىروانىنى ئاخىۋەر يان بارودۇخەكە، و بىناتنانى پىكھاتەيەكى چەمكى و ھزرى بۆ ئەم پەيۋەندىيانە.



كۆماری فیدرالی عیراق
حكومەتی هەریمی كوردستان
وەزارەتی خویندنی بالا و تووژینهوهی زانستی
زانكۆی كۆیه

ریبازی واتاسازی هۆشهکی بو پهیوهندی (واتایی) وشهیهکان له زمانی ئینگلیزیدا

تیزیکی دکتورایه پیشکهشکراوه به فاکهلتی زانسته مرقایهتی و کومه لایه تیهکان
له زانکۆی کۆیه وهك بهشیک له پیداو یستیهکانی به دهسته هینانی پروانامه ی دکتورا فهلسه فه
له زمانی ئینگلیزی وزمانهوانی دا

مرویوان ظاهر ظاهر

به کالۆریۆس له زمان و ئه ده بی ئینگلیزی (۲۰۱۱) زانکۆی کۆیه
ماسته ر له زمانی ئینگلیزی و زمانهوانی (۲۰۱۶) زانکۆی سلیمان

به سه ر په ر شتی:

پ. ی. د. صلاح محمد صالح

(ك) ۱۴۴۴

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