

CHAPTER II

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

This chapter presents discussion of all literature reviews related to the research. The discussion includes literature review, previous studies, conceptual framework, and analytical construct. The literature review section consists of the literature studies of semantics, semantic relation, entailment, and *The Da Vinci Code*. The previous studies section explains about previous research findings which are used as the reference of approach and method. Meanwhile, conceptual framework presents the mind map of the theories done in this study. In addition, Analytical Construct shows a diagram of the theories used in this research.

A. Literature Review

1. Semantics

Griffiths (2006: 1) defines semantics as one of the two main branches of linguistics, and it is basically the study of meaning. Griffiths also states that semantics is a study of word meaning and sentence meaning. This definition makes clear that semantics is different from pragmatics which relates language and its contexts. Borg (2006: 19) strengthens Griffiths' theory by stating that a semantic theory is focused on sentence meaning, but not in speaker's meaning. Moreover, semantics as the study of meaning in a systematic way is stated by Kreidler (1998: 3). He also adds that when semantics is linked with language, it will concern with how language organizes and expresses meanings. Furthermore, the word 'meaning' has many different senses as stated by Nouwen (2011: 1). He states that the various senses of 'meaning' trigger the linguistics study to be very

explicit in dealing with meanings itself. He gives two examples to strengthen his opinion:

- (1) What is the meaning of natural language expression?
 - a) that to which it refers
 - b) that which the speaker intends to communicate with it
- (Nouwen, 2011: 1)

Nouwen explains that the first answer (1-a) is what is normally concerned with the study of natural language in semantics. Basically, semantics deals with the relationship between a sentence and the actual world. On the other hand, the second answer (1-b) can be identified as typical to pragmatic inquiry because pragmatics deals with a sentence meaning in a particular context. However, practically there are some phenomena in which pragmatic meaning appear to depend on semantic meaning.

Carston (2008: 38) has his own concept in distinguishing semantics and pragmatics. He strongly states that pragmatics, which concerns with speaker's intention, also contributes on determining semantic content. Bach (in Carston, 2008:41) adds that there are two kinds of context to differentiate semantics and pragmatics: narrow and broad. The narrow context belongs to semantics, while the broad context belongs to pragmatics. Yule (1998: 4) differentiates the three terms; semantics, syntax, and pragmatics. According to him, syntax deals with relationship between linguistic forms, and how it is formed. Pragmatics is a relationship between linguistic forms and its users. Meanwhile, semantics is a relationship between linguistic forms and the real things which are exist in the world, and are referred by the linguistic forms.

There are three topics discussed under the study of semantics. Those three are semantic features, semantic roles, and semantic relations. According to Yule (2010: 114), semantic features are elements indicated with sign of plus (+) or minus (-) to differentiate the words meaning in a language. Then, semantic roles are a part played by noun phrases in a sentence. In addition, semantic relations concern with the relation between meanings in sentences (Hjorland, 2007).

2. Semantic Relation

Hjorland (2007) states that relation between concepts or meanings are under the study of semantic relations. In order to find the meaning of lexemes of any language, recognition of two or more lexemes is needed to find the existence of semantic relation (Kreidler, 1998: 86). Fromkin, Rodman and Hyams (2003: 173) divide semantic relations into three types: lexical relation, phrasal relation, sentential relation.

a. Lexical Relation

Yule (2010: 116) explains that words can also have relationship with each other; they are synonymy, antonymy, and hyponymy. He also states that when two or more words are synonymous, their meanings are closely related. The words are substituted for each other in some cases. For example, for expressing that someone is asking for an answer of a message, he may say *What was his answer?* or *What was his reply?*. From these expressions, it can be obtained that the words *answer* and *reply* have the same meaning at the same context.

In contrast with synonymy, Trask (2007: 256) describes antonymy as words relation where the two words have fully different meanings. Antonymy

itself can be divided as two types: gradable antonyms and non-gradable antonyms or complementary pairs (Yule, 2010: 117). Gradable antonym, which is also called as non-binary antonym reveals extreme opposite of series of word, such as *hot* and *cold* or *wide* and *narrow*. Then, the second type of antonym is binary antonym/ binary antonym which happens when the existence of a word triggers the possibilities of the existence of another word, such as *alive* and *dead* or *open* and *shut*. Meanwhile, the words such as *wife* and *husband* or *above* and *below* are the examples of converse antonyms. According to Kreidler (1998: 105), converse antonym is the type of antonym which necessarily has two or more valencies. Accordingly, Kreidler (1998: 101) analogously explains that non binary antonym is portrayed as polar antonym because they are opposite ends with territory between them; just like North and South Poles. Besides, binary antonym can be called as hemispheric antonym as there is no space in between Northern and Southern (or Easter and Western); there is only a line of demarcation.

The other type of a lexical relation is hyponymy. According to Yule, (2010: 118), hyponymy is the relationship between two words or more where the meaning of one word is included in the meaning of another. For example, *rose* is a hyponym of *flower*, means that *rose* is a kind of *flower*. Here, *flower* is called as superordinate or the higher level, while *rose* and/or the other kinds of flower are called co-hyponyms.

b. Phrasal Relation

According to Fromkin, Rodman and Hyams (2003: 189-92), the second semantic relation is located in phrase form which is called as phrasal relations. This kind of meaning relation can be noun-centered meaning or verb-centered meaning. The example of noun-centered meaning relation can be found in adjective-noun combination, such as *good boy*, and in noun compounds, such as *dog house* and *pick pocket*. Then, the verb-centered relation is closely related to thematic roles of verb. Thematic roles in the sentence *The girl found a little pebble* are agent and theme, while in the sentence *The girl put the little pebble on the floor* are agent, theme and goal. The knowledge about *find* and *put* decided the thematic roles. In addition, the final type of semantic relation is sentential relation which deals with relationship among sentences.

c. Sentential Relation

As stated by Fromkin, Rodman and Hyams (2003: 195), the last semantic relation is sentential meaning relation. The meaning of noun phrase and verb phrase in a sentence built its meaning. The other parts of speech like adverb also add and/or affect the sentence meaning. Finally, related to this type, Murphy (2003: 8) argues that there are three main sentential semantic relations. They are contradiction, paraphrase, and entailment.

Fromkin, Rodman and Hyams (2003: 198) define contradiction as a sentence relation where the truth of a sentence means the falseness of another sentence. Kreidler (1998: 299) also adds that contradiction is the relation between two opposite propositions. It means that if one is true, the other must be false.

Fromkin, Rodman and Hyams (2003: 198-9) give an example of contradiction. The sentence *Elizabeth II is Queen of England* contradicts *Elizabeth II is a man*. A queen is always a woman and never be a man. Thus, if the first sentence is true, the second must be false. Another example is if *Scott is a baby* is true, it is false that *Scott is an adult*, because someone is never being a baby and an adult at the same time. In conclusion, if a sentence is said to be the negation of the other then they are in a relation of contradiction.

The two other sentential meaning relations i.e. paraphrase and entailment, and both have similarity. Huford and Heasley (2007: 113) explain that the relationship between these two relations is parallel to the relationship between hyponymy and synonymy. They add that if synonymy is symmetric hyponymy, paraphrase is symmetric entailment. According to Crystal (1998: 350), paraphrase presents some alternative versions of sentences to express the same meaning. She gives examples of paraphrase: *The dog is eating a bone*, *A bone is being eaten by the dog*, *It's the dog who is eating a bone*. The three sentences have a single semantic representation, which is paraphrase.

3. Entailment

Whenever people utter statements, they often convey entailment whether intentionally or unintentionally because the basis of semantic description is the notion of entailment. According to Kreidler (1998: 12) entailment is two statements which may be related in such a way that if one is true, the other must be true. In other words, entailment is a relationship in which the truth of one sentence necessarily implies the truth of the other one. In accordance, Yule (1998:

129) states that entailment is something that follows from what is mentioned before.

Crystal (1998: 169) defines entailment as a term delivered from logic, and has been used as a part of the study of semantics; which is called as entailingness. Entailment refers to a relation between a pair of proposition where the truth of second proposition necessarily follows the truth of the first. For example: *I can see a dog* entails *I can see an animal*. One cannot assert the first sentence and deny the second one.

Nouwen (2011: 2) explains that entailment can be used to establish whether two sentences are semantically independent, semantically related, or semantically identical. Technically, Nouwen portrays entailment as *Sentence S entails sentence S' if and only if S is true, S' is true too*. For instance, *Mary owns a pink sweater* entails *Mary owns a sweater* because if Mary has a pink sweater, she surely has a sweater.

By considering the definition of entailment mixed with the idea that denial of something true is false, it can be concluded that a sentence together with the denial of one of its entailment formulates a contradiction. From the sentences above the contradiction that can be obtained is *Mary owns a pink sweater, but she does not own a sweater*.

a. Types of Entailment

According to some scholars, entailment can be divided into several types. However, every scholar has their own opinion about the types of entailment. Yet, sometimes there are several similarities from each scholar. Griffiths (2006)

divides entailment as one-way entailment and two-way entailment. His theory also tells that entailments are varied in case of its relation from one or two direction.

1) One-way Entailment

Brinton (2000: 131) says that one-way entailment is different from paraphrase. It happens when the second sentence is a consequence of the first sentence. According to Crystal (1998: 169-70), this kind of entailment is a term which refers to a relation between a pair of sentences. He clarifies this by saying that the truth of the second sentence necessarily follows the truth of the first. Pennacchiotti (2005) calls it as 'strict entailment'. He explains that it is when the sentences carry two different facts, but one of them can be inferred from the other. Therefore, in one-way entailment, a sentence does not paraphrase the other sentence. One of them is like the conclusion of the other. It is the entailment that works only in one direction.

Kreidler (1998: 86) provides an illustration of this kind of entailment. It is when two propositions are labeled as 'p' and 'q'. If 'p' is true, 'q' must also be true, but if 'q' is true, it does not necessarily follow that 'p' is also true since it can be false. For example, if the sentence *My jacket is navy* is true, then the sentence *My jacket is blue* is true. However, if the sentence *My jacket is blue* is true, then the sentence *My jacket is navy* is not always true. Thus, one-way entailment or strict entailment is if one sentence is true, the other sentence must also be true; when one sentence is false, the other is also false.

2) Two-way Entailment

Griffiths (2006: 27) defines two-way entailment between sentences as paraphrase. In contrast with one-way entailment, two-way entailment has meaning relationship and the sentences that contain two-way entailment paraphrase each other. A paraphrase carries fact that is expressed differently. Kreidler (1998: 86) adds that a paraphrase is an alternative way in conveying the meaning of a phrase or a sentence. It is the relation between two propositions; when one is true or false, the other one always follows. Meanwhile, Hurford and Heasley (2007: 113) illustrate it as a special symmetric case of semantic relationship.

Fromkin, Rodman and Hyams (2003: 197) say that paraphrase or two-way entailment is sometimes expressed in the term of active-passive pairs. For example, the sentence *The mosquito bites the baby* and *The baby is bitten by the mosquito* are in relation of two-way entailment or paraphrase. The entailment is expressed in active-passive pairs. The second sentence is the passive form of the first sentence, and the first sentence is the active form. However, in some cases, the active-passive pairs are not in the form of paraphrases. The sentence *Every student in the class speaks two languages* is not the paraphrase of the sentence *Two languages are spoken by every in the class*. It is clear that each person in the first sentence speaks two languages. However, it is possible that each individual speaks different languages. In contrast, the two languages in the second sentence are always the same languages for everyone in the room.

Fromkin, Rodman and Hyams (2003: 198) also add that a phrase in a sentence can also be substituted into a single word to create a two-way entailment.

She can go, She may go, She must go may be expressed differently, such as by using this form: *She is able to go, She is permitted to go, She is obliged to go*. The sentence *Alisa saw Ron* can also be expressed in a longer sentence like *Alisa perceived Ron using his eyes*. Thus, if those first sentences are true, it is a must that the second sentences are also true, and vice versa. Rambaud (2012: 70) called this type of entailment as 'equivalent'.

Besides Griffiths, Murphy (2003) also has his own types of entailments. Murphy categorizes the types of entailment into mutual entailment and negative entailment.

1) Mutual Entailment

Mutual entailment is actually the same as Griffiths' two-way entailment/paraphrase. Therefore, Murphy (2003: 248) defines this type of entailment as synonymy among propositions, not words. For instance: *Forget about closing the window* entails *Let the window opened*. The idea of both sentences is the same, but the way of delivering them is different.

2) Negative Entailment

Murphy (2003: 98) also has the idea about negative entailment. Negative entailment is an entailment which is expressed in a negative form. For example, *It's a cat* entails *It's not a cow*. The truth of the first and the second sentence is in semantic relation of entailment although the second sentence is presented in the form of negative expression.

Besides Griffiths and Murphy, Lakoff and Johnsen (2003: 91) state about one more type of entailment; which is metaphorical entailment. They define

metaphorical entailment as the imparting of a characteristic of the source domain to the target domain. The source domain is the metaphorical image, while the target domain is the concept receiving metaphorical treatment. Therefore, the relationship between the source and the target domain is regarded as entailment or specifically called as metaphorical entailment. When the source domain is interpreted to be the target domain, metaphorical entailment happens (Kovesces, 2003: 121). Kovesces gives an example of a rare metaphorical entailment happens on an entire conversation as follow.

Teacher	: You look like a healthy apple.
Kovesces	: I hope it's not rotten inside.
Teacher	: I hope, too, that it will last a long time

(Kovesces, 2003: 123)

In this example, people are portrayed as fruit (apple). An apple could be *rotten inside* although it is healthy-looking outside. Both *healthy apple* and *rotten inside* are the target domain metaphors which are associated with the source domain metaphor or a good person and an evil person. Shortly, *healthy apple* and *rotten inside apple* are associated with human. In this context, *apple* is the illustration of a person, and healthy apple means a good people, while rotten inside apple means a bad people or a person who has evil heart. Moreover, the first speaker added *it will last a long time* which is still associated with the idea of a *rotten inside*. The first speaker hopes that Kovesces will keep being a good person for a long time, and will not change into a person with evil heart.

b. Orders of Entailment

According to Wilson and Sperber (in Horn and Ward, 2006: 390), when people are producing sentences, they will automatically construct an ordered set

of foreground and background entailments. In his pragmatics book, Yule (1998: 33) also argues about the two kinds of entailments which are background entailment and foreground entailment.

1) Background Entailment

Background entailment is indicated when a sentence is true, it is necessarily related to the truth of a number of entailments. The numbers of background entailments following the main sentence is considered as logical concept. Yule (1998: 33) gives an example as follow.

- | | |
|---|------|
| (1) Rover chased three squirrels. | (=p) |
| (a) Something chased three squirrels. | (=q) |
| (b) Rover did something to three squirrels. | (=r) |
| (c) Rover chased three of something. | (=s) |
| (d) Something happened. | (=t) |

When a speaker uttered *Rover chased three squirrels*, he is committed to the truth of those background entailments or the logical concept (=q, =r, =s, =t).

2) Foreground Entailment

The second order of entailment is foreground entailment. While background entailment gives information related to the context, foreground entailment contributes to the main point of the sentence (Blass, 1990: 137). Yule (1998: 33) in his pragmatics book adds that foreground entailment is the main assumption of the speaker. Therefore, the background entailment exists to help the hearer in finding the foreground entailment.

Wilson and Sperber (on Blass, 1990: 137) explain some special linguistic devices which could indicate the foreground entailment. They are clefting and stressing.

a. Clefting

Yule (1998: 34) calls clefting as “it-cleft” construction. Clefting is used to help people to focus on a particular part of the sentence, and to emphasize what people actually want to say. It is performed by adding a new part of the sentence in order to gain the hearer’s attention. The example of clefting is presented as the following sentences.

- (1) It was ROVER that chased the squirrels.
- (2) It wasn’t ME who took your money.

The adding of ‘it was’ and ‘it wasn’t’ are aimed to give more attention to the subjects which are ‘Louis’ and ‘him’.

b. Stressing

Yule (1998: 33) argues that a speaker sometimes will give a stress in their utterances. The stressed part can be assumed as the foreground which is very useful to help the hearer in interpreting the intended meaning of the speaker. Yule (1998: 33) presents the example of stressing in the following sentences.

- (1) Rover chased THREE squirrels.
- (2) ROVER chased three squirrels.

Both sentences share the same grammatical structure. However, the capitalized words indicate the different intentions of the speaker. The capitalized words show that the speaker tries to give stress on that part as those are the most important parts of each sentence.

c. Approach to Detect Entailment

According to Condoravdi ((2002: 5), there are two approaches to detect entailment: contexted clause and context matching.

1) Contexted Clauses

The contexted clauses compromise the actual fact and the fact which is supposed to hold. Some facts are hold in certain context. One context might be derived into several numbers of facts. In this type of approach, Condoravdi (2002: 5) on his journal states that ‘flattening’ of a context plays a significant role to determine whether or not the clauses are concerned in one context. This approach is actually parallel with background of entailment because both are emphasizing the idea of ‘flattening’. The application of this approach is presented in the following.

- (1) Louis ate two mangoes.
 - (a) Something happened.
 - (b) Someone eats two of something.
 - (c) Someone ate two mangoes.
 - (d) Louis ate two of something.
 - (e) Louis did something to two mangoes.

There are a number of facts about what holds in the initial context. The examples indicated by a, b, c, d, and e are holding the idea of *Louis ate two mangoes*. As a result, all those sentences can be considered entail each other. Logically, the more complex the initial sentence is; the more following facts that supposed to hold the complex sentence itself.

2) Context Matching

According to Condoravdi (2002: 6), context matching can be done by comparing at least two texts, and then assuming that both texts describe the same

initial context, locating sub-contexts introduced by the two sentences that have parallel relations to the initial context, and identifying local entailments using first-order reasoning for the contexts which are paired.

Mirkin (2011: 16) explains regarding the goal of context matching which is to identify the compatible contexts for text expressions which are not necessarily substitutable, and are not necessarily lexical. Context matching approach is useful for the phenomena where meaning correspondence is more needed rather than substitution. For instance, the meaning of the term *alien* (which actually means *foreign*, but is associated as *extraterrestrial creature* nowadays) should be matched to the category of *outer space* even though both terms are typically not substitutable. The application context matching can be seen in the following example.

- (1) Nobody certainly knows whether *alien* exists or not.
- (2) The existence of aliens in *outer space* remains a big question.

Those sentences above have similar ideas; in which *alien* is the part of *outer space*. Even though *alien* is not the substitute of the word *outer space*, the word *alien* here cannot be replaced by any random nouns such as *cow*, *fairy*, or *human*. Thus, context matching only happens when two texts share the same understanding.

4. *The Da Vinci Code* Movie



Figure 1. The Cover of *The Da Vinci Code* Movie

The Da Vinci Code is a movie based on Dan Brown's international bestseller novel with the same title written in 2003. It was filmed in 2006, and directed by Ron Howard. *The Da Vinci Code* starred by Tom Hanks (as Robert Longdon), Audrey Tautou (Sophie Neveu), Ian McKellen (as Sir Leigh Teabing), Alfred Molina (Bishop Aringarosa), Jurgen Prochnow (as Andrew Vernet), Jean Reno (as Captain Police Bazu Fache), and Paul Bettany (as Silas).

In accordance to the novel, *The Da Vinci Code* is also a controversy since it was a story of finding the Holy Grail. Rome Catholic Church claimed that this movie was out of context of 2000 years of hidden the Holy Grail, and that Jesus Christ and Maria Magdalena marriage was not true. It was a worldwide debate to

get this movie banned. Meanwhile, Dan Brown said that the description of arts, architectures, documents, and several rituals in the novel are all accurate.

Although, many negative responses arose, this movie has successfully earned US \$224 million in the first week of movie premiere, and \$758 million for total earns. That is why *The Da Vinci Code* became the second highest total earning movie in 2006.

For the achievement, *The Da Vinci Code* movie was nominated in some awards; Golden Globe Awards, 12th Critics' Choice Awards, 49th Annual Grammy Awards, 27th Golden Raspberry Awards, 11th Satellite Awards, Teen Choice Awards, and etc.

As *The Da Vinci Code* is a movie about codes and symbols, it can be observed by semiotic approach. However, the researcher is interested to observe this movie by semantic approach because the researcher is intended to find the elements of entailment applied in the movie.

5. Previous Studies

There have been some conducted researches that deal with entailment. However, those previous researches are different from this research for several reasons. The first previous research is "A Semantic Analysis of Entailment Applied by the Main Character in the Movie *Life of Pi*" by Hilyatus Sa'adah (2014). The research has two different objectives which are identifying the types and orders of entailment the movie *Life of Pi*. There are 35 data obtained from this research, and each of the data is identified according the types and the orders. In the types of entailment, one-way entailment obtains the first rank with 18

occurrences as it is commonly uttered by the main character. Meanwhile, for the second objective, foreground entailment which is expressed by clefting has 17 times ordered the entailments.

Meanwhile, the second previous research is “Entailment, Intentionality and Text Understanding” conducted by Cleo Condoravdi, Dick Crouch, Valeria de Paiva, Reinhard Stolle, Daniel G. Bobrow (2002). The study aims to detect the entailment and contradiction relations between texts. The study describes a contextual clausal representation that permits an extended range of intentional entailments and contradictions to be easily detected.

Both previous studies are conducted under the same scope with this research. On the contrary, they are different from this research since the first study does not explain about how to detect entailment. Meanwhile, the second previous study does not explain about types and orders of entailment. Instead, it discusses the detection of entailment and contradiction between texts. Hence, this research combines the main points of both previous studies to reveal the entailments in *The Da Vinci Code* movie. In fact, *The Da Vinci Code* is a mystery movie which combines fiction and history, thus this type of movie is different from the first previous study which is a fictional movie. As a result, this research covers three objectives which are identifying the types of entailment, describing the orders of entailment, and explaining the approaches to detect the entailment uttered by the characters in *The Da Vinci Code* movie.

B. Conceptual Framework

The research focuses on entailment applied by the character in *The Da Vinci Code* movie. Therefore, the study of entailment is under the scope of semantics, since it explores about the meaning of the language. In semantics, there are some relations of the words, phrases, or sentences related to their meanings; the relations are called semantic relations. Meaning relations between words are called lexical semantic relation. Phrasal relations represent semantic relationships between phrases. Then, entailment is a sentential semantic relation, which is meaning relation between sentences.

Entailment can be described as propositions which are definitely true when a give proposition is true. In other word, it is when the truth of a sentence depends on the truth of another sentence. According to Griffiths (2005), there are two types of entailment: one-way entailment, two-way entailment. Therefore, two others entailment are presented by Murphy (2003), which are mutual entailment and negative entailment. However, mutual entailment shares the same idea with two-way entailment. In addition, Lakoff and Johnsen (2003) present one last type of entailment which is called as metaphorical entailment.

In terms of the order, Yule (1998) classifies entailment as background entailment and foreground entailment. Unlike background entailment, foreground entailment is divided into clefting and stressing. Meanwhile, Condoravdi (2002) presents two approaches to detect entailment: contexted clause and context matching.

In parallel with the literature review of this study, the researcher presents an analytical construct in the following figure.

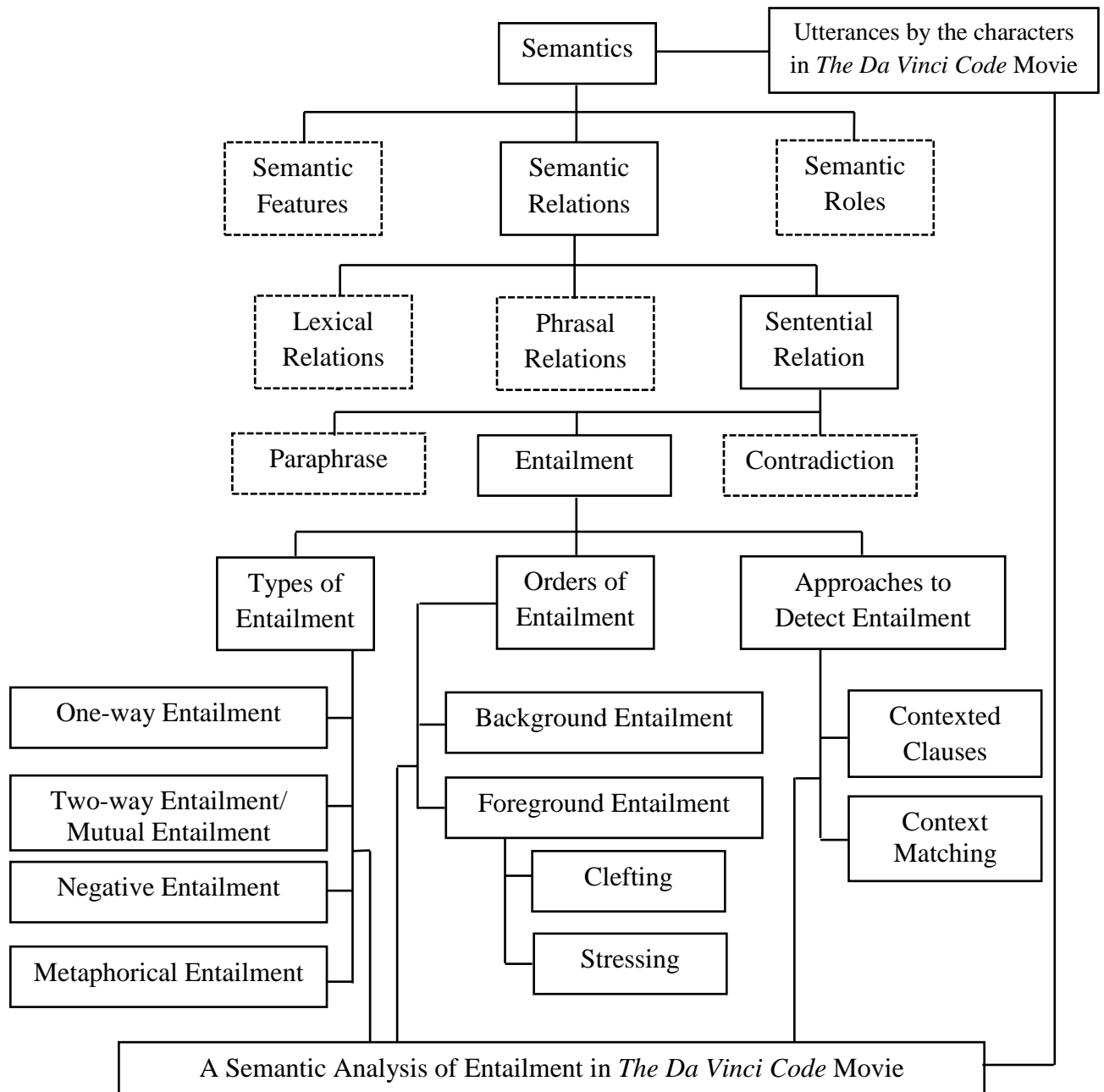


Figure 2. Analytical Construct