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A Cognitive Linguistic Study in Lexical Semantic Relations: Oppositeness as a Case Study

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Abstract

Although most research in Cognitive Linguistics has focused on polysemy and metaphor, the study of Lexical Semantic Relations has not received much interest in cognitive linguistics. However, the current study attempts to investigate how a cognitive linguistic approach can account for different sense relations such as antonymy, complementaries, synonymy and hyponymy from both cognitive and corpus-driven perspectives.

The term lexical semantic relations and sense relations are used interchangeably. In addition to the main theoretical principles of Cognitive Linguistics, the Dynamic Construal approach to sense relations of Croft and Cruse (2004) and Paradis's (2005) model of Lexical Meaning as Ontologies and Construals are applied in the current study to investigate the cognitive-semantic properties of sense relations. In addition, a corpus-driven approach is used in the current study to analyze the occurrences and frequencies of sense relations of oppositeness in large corpora to analyze their occurrences and frequencies.

The current study shows that words do not contain fixed meanings, as largely claimed in Cognitive Linguistics, instead, words are used as instructions to construct the meaning. The relations are not between words but between the construals of words.

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1. Introduction

The current study attempts to study lexical semantic relations from both cognitive-linguistic and corpus-driven perspectives. Lexical semantic relations may include antonymy, synonymy, hyponymy or meronymy. Lexical semantic relations or sense relations, when studied from the viewpoint of cognitive linguistics, offer more insights into the meaning and use of a lexical item.

The term lexical relation is used when the relation is between words (lexical items) and the term sense relation is used when the relation is between concepts (senses). However, this distinction is not clear-cut and overlap between them is present. The term lexical semantic relations and sense relations are used interchangeably in this study.

Research on lexical semantics relations has primarily been influenced by structural linguistic approaches, and is centered on paradigmatic and syntagmatic relations. The of structuralists focused on the structures on which words operate neglecting social, cultural and psychological dimension that affect the meaning of lexical items.

The topic of oppositeness was studied from different perspectives. Lyons (1977), investigated different types of opposites based on native speaker intuitions and logical relations. Murphy (2003) studied lexical semantic relations from a pragmatic perspective, showing that relations of oppositeness are relations between concepts that are influenced by pragmatic constraints. A

psycholinguistic study by Herrmann et al., (1979) found that canonical opposite pairs are recognized faster than non-canonical ones.

When applying the views of the Cognitive approach to meaning blended with much use of experiments, and making use of statistical techniques lead to more understanding of the nature and linguistic, social and communicative properties of sense relations. Different kinds of psycho- and neurolinguistic experiments are used to describe and explain word meanings and to establish links between language and cognition (Storjohann, 2010).

It is a major claim in Cognitive Linguistics that words do not contain meanings. Instead, we use words as instructions to construct the meaning of a linguistic expression (Croft and Cruse 2004).

In addition, one main claim in Cognitive Linguistics is that polysemy is the norm. It is natural that most words have more than one related sense with different related meanings. These different meanings stem from different contexts in which a specific word occur. The context is intended here to be linguistic, social, cultural, psychological context. Interestingly, what is considered extralinguistic features in other approaches is of the main components that shape meaning in Cognitive Linguistics.

The idea of different senses primarily results from the existence and organization of various categories to which words or various senses of a word belong as well as from the creation of connections to any of the senses that already exist in the category. (Geeraerts, 1997; Langacker, 1999, 2001).

The participants' encyclopedic knowledge, their perceptions, and their cognitive abilities are crucial to meaning in cognitive linguistics. In addition, semantics is the mapping of linguistic expressions to conceptual structure and that the meanings of linguistic expressions are mental entities (Langacker, 1999: 91-145).

The topic of lexical semantic relations was one of the most neglected areas of study in the realm of cognitive linguistics. The study of sense relations has not been a main interesting topic in the new semantic approach, "cognitive linguists, for the most part, have

had very little to say on the topic". as Croft and Cruse (2004: 141) indicate.

Research in lexical semantics is increasingly depending on technological corpus analysis, that is, computational analysis of frequencies and discursal occurrences of words in large corpora, even web-as-corpus hoping to reflect the actual usage of lexical items in real situations.

The current study aims at: (1) Investigating lexical sense relations from the perspective of cognitive-linguistic approach. (2) Applying a corpus-driven approach for the analysis of lexical sense relations.

2. Methodology

The main account for the theoretical framework to explore the cognitive nature of the semantics of the lexical semantic relations such as antonymy, synonymy, and hyponymy is of Croft and Cruse (2004). In addition, Paradis's (2005) model of Lexical Meaning as Ontologies and Construals will be referred to.

As previously mentioned, the use of corpora in Cognitive Linguistics is essential to the approach. Indeed, many argue that the employment of corpora is crucial to the advancement of the field (Geeraerts 2006). Corpus-based approaches to sense relations can provide insights into how these sense relations are employed in real language use.

I adopt a corpus-driven approach. In particular, I consulted a large electronic corpus to retrieve instances of the actual use of the terms under study, and then identified their frequency of occurrences, their preferred combinational patterns and their genre preferences, if any.

The corpora I use is English Web Corpus (enTenTen20) which is made up of 36 billion words. The English Web Corpus (enTenTen) is an English corpus made up of texts collected from the Internet. The texts were downloaded between 2019 and 2021. The corpus is accessible through the Sketch Engine platform (<https://www.sketchengine.eu/>). I randomly selected 300

concordances of each term to carefully find and analyze collocational patterns of the selected terms

2.1 Croft and Cruse's Dynamic Construal of Meaning

Croft and Cruse (2004, p.97) assert that a very important requirement of a reasonable account of the relation between lexical items and their meanings is to have a link between structural properties in the lexicon and the infinite options of meaning, i.e., the polysemous nature of words, in context. The semantic properties, therefore, of a word and its infinite pragmatic meanings or interpretations must be integrated and cannot be interpreted in isolation from each other.

Croft and Cruse (2004) suggest an alternative approach that neither meanings nor structural relations are specified in the lexicon, but are construed **on-line**, and these can be called **ad hoc concepts** because they are created at the moment of speaking. The ad hoc concepts are result of the negotiation of meaning between the interlocutors of the communicative event. Meanings are something that we construe applying both of the properties of linguistic elements, and non-linguistic knowledge whether this knowledge is social, psychological or cultural.

Croft and Cruse's (2004) account of word meaning will have the basic insights of the dynamic construal model that has the following components:

1. contextualized interpretation
2. purport
3. Constraints
4. construal

Contextualized interpretation

It is the initial step of gathering mentally the impression of the hearer or reader about the communicated meaning. In this stage, the hearer, for example, attempts to interwoven the different parts that may lead to complete the picture of understanding the utterance, or as Croft and Cruse (2004) put it, "a kind of crystallization of the

perception of meaning”. The processing of inferences to get the meaning through different contextual cues can continue endlessly.

Purport

Conceptual content that are linked to lexical item can be named **purport**. Purport is part of the raw material contributed by the word to processes of construal of an interpretation. A purport does not entail any specified interpretation. Purport may contain a body of content that is largely consistent. Because the Purport of a given lexical item combines several pieces of inferred knowledge, it cannot be regarded as having a single construed meaning (Croft & Cruse, 2004).

Purport includes previous experiences of occurrences of the word in specific situations. Purport is continuously changing as every experience of the use of a lexical item add to word purport to in a way or another.

Purport can be understood here as the conventional meaning of word stored in the memory of a person that can be used as a starting step to get the desired meaning communicated. The same idea of purport expressed by Paradis his model of **Lexical Ontologies and Construals** (LOC). Table 1 summarizes Paradis’s types of information needed to process the meaning of a lexical item. Table 1 lists the two different categories of ontological pre-meaning structures as well as the various main categories of construals that work with the conceptual structures to produce meaning in language use.

As the same idea of purport in Croft and Cruse’s model (2004), the conceptual ontologies are not stable lexical item meanings. It is pre-meaning structures, and as such they contribute to the final discursive interpretations of words in context.

Furthermore, according to Paradis (2005, p. 543), conceptual ontologies are produced by processing conceptual organization in preparation for use in communicative events rather than being full meanings themselves. Conceptual Ontologies serve as the material upon which Construals construct discursive meanings that are consistent with the viewpoints and points of salience required in actual communication.

Constraints

The construal of interpretations needs to be constrained because there are diverse number of construals that needed to limited. In addition, the constraints themselves are varied. The strength of constraints is not the same and may reinforce one another so as to be intensified and one of the most salient one is selected.

Construal

Construal is considered as the main component when studying lexical semantics. It is by means of a series of processes of construal that an essentially non-semantic purport is transformed into fully contextualized meanings.

Croft and Wood proposed construal operations and image schemas as follows:

1. The choice of Gestalt,
2. Attention, salience,
3. Making judgements, comparisons, and
4. the selection of speaker perspective (Croft and Wood 2000).

In this regard, Croft and Wood (2000, pp. 60- 83) suggest that the construal operations discussed in the linguistics are particular cases of the identified general cognitive processes, which are (i) Gestalt or constitution, (ii) salience or focus of attention, (iii) comparison or judgement, and (iv) situatedness. Croft and Wood match the cognitive processes from psychology and with the construals presented in cognitive linguistics.

2.2 The Model of Paradis (2005) of Lexical Meaning as Ontologies and Construals

The model proposed by Paradis is based generally on Cognitive Linguistics (Langacker 1987; Talmy, 2000). In his model, words or constructions do not have fixed meaning. Words just evoke meaning or acquire their meaning on-line through interaction (Paradis, 2005).

The model proposed by Paradis express similar ideas proposed by Croft and Cruse (2004). In his model, Paradis (2005) indicates that cognitive processes (construals) operate on the conceptual structures. Both conventional and **ad hoc** contextual readings originate from these operations.

According to Paradis (2005) conceptual structures are of two kinds: content structures and schematic structures, and the cognitive processes consist of four main construals as shown in Table 1:

Ontologies (conceptual structures)		Construals (processes)
Contentful pre-meaning structures	Configurational pre-meaning structures	<i>Gestalt</i> : e.g. structural schematization, profiling
(i) CONCRETE SPATIAL MATTERS	BOUNDEDNESS	<i>Saliency</i> : e.g. metonymization, generalization, zone activation
(ii) TEMPORAL EVENTS, PROCESSES AND STATES	SCALE	<i>Comparison</i> : e.g. metaphorization, categorization
(iii) ABSTRACT PHENOMENA	PART-WHOLE	<i>Perspective</i> : e.g. grounding and viewpointing
	THING-RELATION	
	POINT	
	FREQUENCY	
	FOCUS	
	PATH	
	ORDER	

Table 1: Paradis’s lexical ontologies and Construals

The left-most column of Table.1 gives the three most general content ontologies/main categories. These top ontologies, in turn, are made up of more sub-categories. The schematic ontologies in the middle column are free ontologies that apply to various content ontologies

The source of ontologies is based on how people categorize phenomena in the world as they perceive them. Ontologies involve both (i) what things are (content structures) and (ii) their configurational templates (schematic structures). In other words, ontologies concern various configurational templates that apply to content structures and they concern all types of knowledge Paradis (2005).

In actual communicative situations, content structures and schematic structures are interwoven. Content structures are tied to the nature of things in particular knowledge domains such as

PEOPLE, and EVENTS, while schematic structures are free in that they may apply to all kinds of different content structures. They are configurational templates such as THINGS/RELATIONS, PART/WHOLE, BOUNDARIES, SCALES, FOCUS, ORDER, DEGREE, and MODALITY (Paradis, 2005, p.548).

The Paradis's model of lexical meaning has three main advantages. First, the model's components are psychologically real in that ontologies are based on how we perceive the world and construals are based on general cognitive processes. Second, a theoretically independent basis for the specification of lexical meaning is provided by ontologies and construals. Third, the model's adaptability reflects language's dynamic nature (Paradis, 2005, p.566).

To conclude, Paradis model takes a further step to discuss and explain the conceptual elements from the viewpoint of cognitive linguistics and both models of Cruse and Croft (2004) and Paradis (2005) provide a comprehensive view on how lexical items are processed by speakers/hearers to get the intended meaning.

1.4 Findings and Discussion

Oppositeness is the most used type of lexical semantic relations in everyday language. It encompasses sense relations of exclusions. The ability to recognize opposites begins from the early years of birth. "Oppositeness is a matter of construal, and is subject to cognitive, conventional and contextual constraints" (Croft and Cruse, 2004, 164)

Both of complementaries and antonyms as major types of oppositeness will be discussed and analyzed in detail, attempting to capture their occurrences in the large corpus of the English Web Corpus (enTenTen20).

Complementaries

The first type of oppositeness is complementaries. The complementaries when used in discourse, they are clear enough for the listener/readers to understand. They divide some domain into two subdomains (Cruse, 1986).

Examples of complementaries which are investigated in the corpus are:

- true/ false
- alive/ dead
- open/ shut
- hit/ miss

The complementaries are a matter of degree. There are intermediate points along two points. (Cruse et al., 1986, 200) Within the cognitive-linguistic approach, the general notion of opposite corresponds to a single image-schema. The principal image-schema in this account of antonymy is SCALE (and sometimes DIRECTION), which construes a property in terms of “it is there or it is not there”. The different types such as complementaries, antonyms, reversives will correspond to more specific image-schemas.

In the following example, the use of lexical item true entail that the second part of the utterance is not false. i.e., the proposition entails the opposite of the other. Complementaries constitute a very basic form of oppositeness and display inherent binarity in perhaps its purest form”, as Croft and Cruse (2004, 163) indicate.

(1) ...of one’s own opinion or inner-feelings and not believe that value judgments are knowledge claims capable of being **true** or **false** (...) and therefore not expressions of moral requirements and normative imperatives emanating from an external

Binarity is a schema in conceptual space. When a dichotomy can be set up and the two opposites are located on either side of the boundary, they are contrasted through comparison in the context where they occur.

The opposite pair true/false represents a goodness-of-exemplar in opposites because of their intrinsic binarity, The ‘purity’ of the opposition, and symmetry i.e., they symmetrically disposed about the reference point (Croft and Cruse, 2004).

They are candidate of **default construal** or **canonical antonyms** because the opposite relation between the two terms is

well established in the mental lexicon and encyclopedic knowledge related to them.

According to Croft and Cruse (2004), to analyze the complementaries, one starts with basic image schemas (basic construal), then one looks at the properties of the two terms of opposite. The properties could be absent or present (in this case, it means the presence of complementaries), or the properties are or more or less of them (so in this case, it means the presence of antonyms).

Therefore, complementarity is a relation between construals and not between lexical items because in many cases, properties of the two lexical items in contrast can be construed either in absolute terms (complementaries) or in gradable terms (antonymy). (Croft and Cruse, 2004, 168). The following example illustrates that the two complementaries **open/shut** are used employing the absolute scale in (2). However, in (3) **open** is used as gradable item.

(2) Is the door shut or open?

(3) The door is very/slightly/totally open

The validity of that complementarity could be diagnosed by the anomalous nature of a sentence denying the two opposites (Cruse et al., 1986, 199) found in the utterance such as the following example:

(4) ?The statement that John has blue eyes is neither true nor false.

The construction **neither true nor false** is searched in the English Web Corpus (enTenTen20) which is large enough to represent real use of the English language, more than 800 hits of the phrase **neither true nor false** are found. Even if the number of its occurrence is 0.02 per million token which is not significantly enough, however, the corpus date indicates the its existence and usage. Consider the following examples:

(5)... or false: perhaps some statements, e.g., certain statements which refer to themselves, lack a truth value, i.e., are **neither true nor false**. This would deprive the

argument which generates the paradox of one of its basic assumptions.

(6)... indicates that the claim does not describe reality. An arbitrary claim is one lacking any evidence, which is therefore **neither true nor false**. Arbitrary claims are, strictly speaking, not part of epistemology since they are not derived from reason.

ality and therefore Capitalism.</s><s>Religion is arbitrary and therefore **neither true nor false** .</s><s>It does not need to be proved false.</s><s>One can not prove i
 i-Liberty because by its nature it is Anti-Reason.</s><s>It is an arbitrary **neither true nor false** concept.</s><s>Faith negates Reason and is not a basis for Knowledge
 i that does not form a meaningful proposition in someone's mind can be **neither true nor false** .</s><s>As Peikoff states:</s><s>A relationship between conceptual co
 i certain statements which refer to themselves, lack a truth value, i.e., are **neither true nor false** .</s><s>This would deprive the argument which generates the paradox i
 ierhoff: "We know now that every assertion is either true or false or else **neither true nor false** ; in the former case the assertion is meaningful, in the latter case cognit
 i s, religion, and even ethical principles are "meaningless", and therefore **neither true nor false** .</s><s>(They failed to notice that their very statement of this verifiability
 i erative is a commanding expression.</s><s>Logically, an imperative is **neither true nor false** , unless it is expressed with special terms such as "ought," or "necessar
 i a retelling, a basic story among many possible basic stories.</s><s>It is **neither true nor false** , but constructed.</s><s>It has meaning because, as the poet Czeslaw I

Figure 1: The construction neither true nor false

6.19) as though they belonged to him alone, and to no one else on earth, **neither opens nor shuts** , nor has the keys at all, unless he occupies himself in turning the hearts of
 open and shut our eyes whenever we like, because basically our eyes are **neither open nor shut** .</s><s>If to be open was the very nature of the eyes, we could never clos
 / a bookmark stuck in the tome of time whereas now is a tomb that can be **neither opened nor shut** , and so she was gone, hopelessly gone, less than dead, non-existent, and
 in at they are in reaction.</s><s>These three degrees, higher and lower, are **neither open nor shut** in man in earliest infancy, for he is then ignorant both of good and truth and

Figure 2: The construction neither open nor shut

In Cairene colloquial Arabic, it is not odd to say “s‘aħ dʒdan” (very right) or “s‘aħ fīwiya” (slightly right). Even for the counterpart of “close” in Cairene colloquial Arabic “maʔfūl” to use it gradably when saying, for instance, “maʔfūl xa:lis” or “maʔfūl ta.ma:.man” (completely shut).

Even though the complementary adjectives cannot be used with the degree modifiers as in gradable antonyms. However, it is possible to use such modifiers such as “very true”, “rather dead”, and “extremely shut” in appropriate contexts.

Of course, opposites which are not complementaries do not yield anomaly under these circumstances as stated by Cruse et al. (1986).

(7) Her exam results were neither good nor bad.

In addition, “complementarity can be given a strict logical definition: F (X) entails and is entailed by not – F (Y).” (Cruse, 2004, p.164). if X and Y are adjective complementaries, then if one

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word is X, then it is not Y, and if it is not X then it is Y. Consider the following example:

- John is dead - John isn't alive

exist in a kind of indeterminate state: that Schrödinger's famous cat is	neither alive nor dead	until observation reveals the outcome.</s><s>This is further suggeste
instead they continue to wander the planet in a state in which they are	neither alive nor dead	.</s><s>They are the zombies of the advanced economy democracie:
ask; there is no authenticity in it.</s><s>Hence, I say Indian culture is	neither alive nor dead	but living in a kind of suspension, in a kind of limbo.</s><s>It is a gho:
l, but he had never seen what he saw that night -- that Thing which is	neither alive nor dead	, that Thing that will abide neither above ground nor in the grave.</s><x
sad and being alive.</s><s>Until we look inside, we have a cat that is	neither alive nor dead	, but half of each.</s><s>There are refinements of the same paradox,
ty.</s><s>This dichotomy is personified in the somnambulist Cesare--	neither alive nor dead	--who has the ability to predict the future, but only when he is awakene

Figure 3: The construction neither alive nor dead

In English, there is also, however, a class of what at first sight appear to be more or less fully gradable complementary adjectives: clean: dirty and safe:dangerous. These complementary adjectives item expressed by Cruse et al. (1986) and Croft and Cruse (2004) have their counterparts in Cairene Colloquial Arabic which do appear fully complementary in different contexts as will be shown.

- moderately safe, very safe, fairly safe, safer
- slightly dangerous, quite dangerous, fairly dangerous, more dangerous

The phrase “neither clean nor dirty” only found three times in the English Web Corpus (enTenTen20), consider the following:

(8) ... energy? Sure, we can have clean uses of energy and dirty uses of energy but we cannot alter the nature of energy. It is neither **clean nor dirty** - just as it cannot be created nor destroyed. I am always saddened seeing influential agencies

Here, the idea of different senses of word come into scene, as polysemy is considered the norm in cognitive linguistics. It can be said that there are two senses of the lexical items, clean: clean1, dead1: dead2, smooth1, smooth2 (Cruse 1986). Murphy indicates that “...the polysemy of words is limitless, and so the full array of word senses cannot be intralexically represented. Thus, the number of possible antonyms [...] for a word is also potentially limitless, and so relations cannot be represented in the lexicon. (2003: 30).

Antonyms (Gradable Opposites)

Antonymy or gradable oppositeness is exemplified by such pairs as long: short, fast: slow, easy: difficult, good: bad, hot: cold. Typically, antonyms are adjective or stative verbs. Antonym “denote degrees of some property that diverge significantly from some reference value” Croft and Cruse (2004, 166). The principal image-schema in this account of antonymy is SCALE, which construes a property in terms of more and less.

Antonyms have some characteristics explained by Cruse et al. (1986), Cruse and Togia (1995), and Croft and Cruse (2004)

- They are fully gradable almost are adjectives.
- Members of a pair represent degrees of some variable property or construed as varying in degree such as length, speed, weight, accuracy, etc.

- When more strongly intensified, the members of a pair move, in opposite directions along the scale representing degrees of the relevant variable property.
- The terms of a pair do not strictly divide a domain.

Antonymy, as stressed in the literature of cognitive linguistics is a relation between construals, not words themselves., A particular word or construction can be construed differently in relation to different contexts.

The different types of antonymous relation will be presented using default readings of words, and in accordance image-schema of SCALE.

Monoscalar Antonyms

A monoscalar system is characterized by two scales one of which is absolute and works as the reference value (or range) for the relative scale. There are two basic ways of construing a quantity of something: Either looking at it in absolute terms, like measuring something in meters or centimeters, for instance, or viewing it as more or less than some reference value like saying something is long, for instance, bearing in mind that thing is long related to what. Croft and Cruse (2004)

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With the polar antonyms like long:short the first item **long** is considered **supra** term and the item short is considered **sub** term (Croft and Cruse, 2004). The supra term has most association with the scale. So, we have the scale of LENGTH, not a scale of SHORTNESS. Consider Table. 2 for summarizing the monoscalar system for some selected antonyms.

Antonymy pair	Supra term	Sub term	Scale
long: short	long	short	Length
Difficult: easy	Difficult	easy	Difficulty
Thick: Thin	Thick	Thin	Thickness
High: low	High	low	Height
Heavy: light	Heavy	light	Heaviness
Wide: narrow	Wide	Narrow	Width
Deep: shallow	Deep	Shallow	Depth

Table.2 Monoscalar system for some selected antonyms

The following examples from the corpus show the frequencies that test properties of scale in the form **what is its(scale)?** -What is its length? -What is its Difficulty? -What is its Height? -What is its Heaviness? Or the test of twice as - twice as long/half as long - ?twice as short

>If you are familiar with C# or C++ you will notice that your code will be at least **twice as short** while performing the same actions (and you won't need the net framework to ru
 tain.</s><s>They always told him 'The candle that burns twice as bright, burns **twice as short** !</s><s>A strange, and rather cruel thing to say to a young child with a brain tu
 .. se Easter falls quite early this year, the season of Epiphany is extremely short, **twice as short** as it sometimes is, and the semi-continuous readings from Paul's epistles and f
 r to adjust effort ratio quickner 2:1 \$150 (makes turning your wheel lock to lock **twice as short** !) Bide Maxis III Carbon Fiber seat Brand New \$1500 (worth over 3k) come on!
 .. strike got Loki down, the power behind the hit too strong for someone who was **twice as short** as the enemy was.</s><s>And what was worse, once Loki was down, instead t
 ..</s><s>In November 1808– Officers' gorgets of a new pattern are confirmed, **twice as short** as the previous ones, with a raised rim all around and an affixed two-headed ex

Figure 5: The occurrences of the phrase twice as short

When consulting the corpus about the phrase “what is its shortness” or “what is its thinness?”, no single utterance is found in the corpus. However, the phrase “twice as short” is found 43 times in the corpus. Consider the following example:

(9) ...Microwave (maybe - Haven't tested this) Upgrade Times (3 Flavors): Use only **ONE** flavor, not all of them. Medium is **twice as short** as the default Maxis/EA times for upgrading the objects. Hard is **twice as long as** the default Maxis/EA times for

Antonyms can be easily modified with degree modifiers or modified by comparative or superlative degrees because their properties of gradability such as very, rather, quite, slightly, extremely, more difficult, cleaner, etc.

- The test is quite easy / difficult
- His marks are not extremely bad

Bi-scalar Antonyms

Biscalar systems of antonymy can be diagnosed by the fact that both terms of an antonymic pair are supras. Essentially, biscalar systems incorporate a pair of counterdirectional monoscalar systems. Croft and Cruse (2004) the supra-supra opposition is the most significant.

Antonymy pair	Supra term	sub terms
good: bad	good or bad	Not applicable
cold: hot	cold or hot	Not applicable

It is noted that normal how-question can be applied to both antonymic pair in question of the pair as in the following examples:

How hot is the weather? How cold is the weather?

The default readings of the pairs **good/bad**, **hot/cold** are all supras: that is why that they are part of biscalar systems.

- a. twice as good/ half as good
- b. twice as bad/ half as bad

c. How good was it?

d. How bad was it?

The mechanism that many antonyms having a **monoscalar** system and those having **biscalar** system is because of the different image-schematic images and different content domains affect the appropriate construal selected for the antonyms pair (Croft and Cruse, 2004).

Conclusion

To conclude, a lexical item can be complementarity or antonym, or even this lexical item can be more or less antonymous rather than antonymous or not antonymous. The reason for multiple meanings of words is because of the construals of the words in question. The discussion so far indicates that different types of oppositeness can be accounted for adopting the cognitive linguistic analysis that encompasses different dimensions for getting the meaning of a lexical item.

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