Componential Analysis of Meaning

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Abstract
This study aims to give an account for the subject of componential analysis of meaning as it is considered to be an important approach to the study of meaning. The first section acts as an introduction to the subject of componential analysis, and what is meant by this term. The second section deals with componential theory and also its relation with the theory of conceptualism. The third section is devoted to the componential analysis as a device and the components of meaning and the advantages of adopting such approach to the study of meaning.
Section One
Preliminary Discussion

A comparatively new way to study lexical meaning, is by analyzing lexemes into series of semantic features of components. For example, "man", can be analyzed as ADULT, HUMAN and MALE. This approach was originally devised by anthropologists as a means of comparing vocabulary from different cultures and has been developed by semanticists as a general framework for the analysis of meaning. (Crystal, 1987:701)

Furthermore, the term componential analysis could be explained by considering the example stated below:

<table>
<thead>
<tr>
<th>Man</th>
<th>woman</th>
<th>child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bull</td>
<td>cow</td>
<td>calf</td>
</tr>
<tr>
<td>Rooster</td>
<td>hen</td>
<td>chicken</td>
</tr>
<tr>
<td>Drake</td>
<td>duck</td>
<td>duckling</td>
</tr>
<tr>
<td>Stallion</td>
<td>mare</td>
<td>foal</td>
</tr>
<tr>
<td>Ram</td>
<td>ewe</td>
<td>lamb</td>
</tr>
</tbody>
</table>

By examining the meaning of those words, we can set up the following proportional equation:

Man : woman : child, Bull : cow : calf

From the semantic point of view, this equation displays the fact that the words man, woman and child on one hand and bull, cow and calf, on the other hand share something in common. (Lyons, 1968:470)

In addition, we can see that man and bull have something in common which is not shared by the other two pairs, and woman and cow have also something in common which is not shared by either man and bull or woman and cow. The factor that is shared by...
these different groups of words, is called a semantic component, also called (plereme), (sememe), (semantic marker), (semantic category). (ibid: 174)

Matthews (702; 603), defines plereme as: "Hjelmslev's term for a unit of content". He further defines sememe as: "Term used by various scholars for a basic unit of meaning." He adds that "for Bloomfield a sememe was the meaning of a morpheme". (367)

Moreover, the equation mentioned above can be introduced by using numerical proportion:

\[ \frac{a}{b} = \frac{c}{d} \]

This means that where the first element is divided by the second, is equal to the third divided by the fourth. From this proportion, man : woman :: bull : cow, we can get four components of meaning and they are: (male), (female), (adult–human), (adult–bovine). Furthermore, we can extract the components (adult) and (non-adult). We can factorize other components and eventually we can describe a word as "man" as the product of the components: (male), (adult) and (human). This componential approach to semantics has a long history in logic, philosophy and linguistics. (Lyons, 1968: 74)

Section Two
Componential Theory

There are a number of important assumptions that the componential theories of semantics are based upon.

The most important assumption suggests that the semantic components are language–independent or in other words, universal components.

In many instances, it has been suggested that the vocabularies of all human languages can be analyzed partially or totally in terms of
a limited set of semantic components and these components, themselves are independent of the particular semantic structure of any given language. According to this point of view, the semantic components might be identified as the same components in analyzing the vocabularies of all languages. (Lyons, 1968:474)

Without regarding the linguistic model which any linguist prefers to use in describing the facts of language, the role of semantic components is almost universally regarded as being fundamental to any analysis of semantic structure. Semantic components are structurally essential if a linguist deals with semantic problems, in terms of domains, also if one prefers to deal with structure in terms of generative "trees". (Nida, 1971:341)

7.1 Componenial Analysis and Conceptualism

It is clear that the value of componential analysis in the description of particular language, is not affected by the status of the semantic components in universal terms. It must also be realized that componential theories of semantics are not necessarily "conceptual" or "mentalistic". This point should be emphasized because not only Katz and Chomsky, but also many other linguists have defended a componential approach to semantics within a philosophical and psychological framework which takes it for granted that the meaning of the lexical item, is the "concept", associated with this item in the minds of the speakers of a particular language. (Lyons, 1968:474)

As an example, Katz presents the notion of semantic component or markers by considering for example the idea, each one thinks as part of the meaning of words "chair", "stone", "man", "
building " , etc… , but not part of the meaning of words as " truth " , " togetherness " , " felling " , etc…

The idea that we adopt to express what is common to the meaning of words in the first set and that we use to conceptually distinguish them from the words in the second set . The semantic marker ( physical object ) is introduced to indicate that notion .

It has been suggested that the semantic theory should avoid commitment with respect to the philosophical and psychological status of " concepts " , " ideas " and " mind " . Thus the first set represents things which are related to the acceptability of or unacceptability of sentences or to the relation which holds between the sentences , which can be described by assigning to the words of the first set , a distinctive semantic component which is called " physical object " . ( ibid )

Section Three

Componental Analysis of Meaning

Leech ( : ٨٦١ ) defines the term , componental analysis as " The method of reducing a word's meaning to its ultimate contrastive elements ".

Within modern linguistics, the componental analysis of meaning was adapted from distinctive feature analysis in morphosyntax.

Allan ( : ٨٦١ ) points out that " Anthropologists had for many years been comparing widely differing kinship systems in culturally distinct societies by interpreting them in terms of universal constituents that we might reasonably equate with semantic components."
In analyzing kin terms, a comparison is made for instance, between the set of English terms and Spanish terms and we note that in Spanish there is a regular marking for the sex of kin and there is no such marking in English.

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncle</td>
<td>tio</td>
</tr>
<tr>
<td>Son</td>
<td>hijo</td>
</tr>
<tr>
<td>Grandfather</td>
<td>abuelo</td>
</tr>
<tr>
<td>Brother</td>
<td>hermano</td>
</tr>
</tbody>
</table>

From this example, we have also obtained a single atom of meaning, male as opposed to female with which we can define the difference between uncle, son, grand father and brother as a set opposed to aunt, daughter, grand, mother, and sister as a set.

Such descriptions of meaning are done by feature analysis. The starting point is the notion that components can be taken out as a group of defining features providing critical information about the qualities by which such terms are recognized within its field. (Kess, ٦٧٩١:٨٦١)

The early writers who wrote on componential analysis in morphosyntax and kinship systems had changed contemporary linguistic opinion on semantic analysis by showing that it can be carried out by using structural analysis, such as that method by which we can compare and contrast father, uncle and aunt. These kinship terms have in common that they are (ASENDING GENERATION). Father and uncle both have in common, that
they are (MALE), where as aunt is (FEMALE), aunt and uncle are (COLLATERAL), where as father is (LINEAL). So by the semantic components, we can show the meaning of the relationship between father, uncle and aunt. (Allan, 1986: 169)

Analysis of this kind which is called componential analysis allows us to provide definition for a larger set of words in terms of few components. Such labels as (female), (male), (adult) ---etc, are not available as in the two sets of words below:

<table>
<thead>
<tr>
<th>Come</th>
<th>go</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bring</td>
<td>take</td>
</tr>
</tbody>
</table>

We can see that come is to go as bring to take, but it is difficult to name these components. (Palmer, 1976: 87)

Palmer also provides this example to state that "It is unlikely, that components are universal features of language.". He adds that we may think perhaps that all the societies differentiate between (male) and (female), and that thus (male) and (female) are universal components of language, but the come, go, bring, take examples show that, these components are not related to simple physical features such as sex, and it becomes less reasonable to assume that they are universal. (ibid)

If each individual word is seen as having unique dictionary definitions and yet is to be contained within a uniquely restricted lexical field, such definitions will have to be dependant on a sort of componential analysis, which is breaking down the meaning of words by reference to atoms of meaning. These units were termed semantic markers by Katz and Fodor, and appears as selectional
features in Chomsky's discussion. These markers or semantic features denote a characteristic, shared by an entire group of words and set it off from other set of words which presumably are described by similar defining features. (Kess, 1976:171)

In componential analysis, contrasts of features are usually made in terms of (+) or (-) and often drawn in a matrix.

In many instances, the componential analysis becomes interesting, as the lexemes become more complex. The example below, is a possible matrix for some human motion verbs:

<table>
<thead>
<tr>
<th></th>
<th>Natural</th>
<th>Hurried</th>
<th>Forward</th>
<th>One Foot</th>
<th>Always On The Ground</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walk</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>March</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Run</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Limp</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

Sometimes, it is easy to use a system of this kind, in order to see what lexical gaps there are in a language. This matrix suggests that there is no single English lexeme to express the notion of "human using legs to move backwards". (Crystal, 1987:207).

Allan (1986:126), summarizes the assumptions implicit in componential analysis as:

"a – componential analysis seeks to analyze the sense of an expression E into a set of semantic component corresponds to a category of which the category labeled by E is a subset. b – Every expression E in a language L should be analyzable into one or more semantic components. C – there is no one to one correlation
between morphs and semantic components. Expressions that share semantic components reflect the characteristics of prototypical denotation. There is a hierarchy of categories; e.g. FELINE, which is a semantic component of cat, entails the semantic component ANIMAL, which is also therefore a component of cat.

\subsection{Components of Meaning}

Leech (1974:96) defines the analysis of word meaning as "A process of breaking down the sense of a word into its minimal distinctive features, that is into components which contrast with other components."

A simple example is shown by words such as man, woman, boy, girl. These words all belong to the semantic field of the human race and the relations between them may be represented by this diagram:

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|}
\hline
      & man   & Woman \hline
adult     &         &          \hline
Young     & Boy    & Girl    \hline
\end{tabular}
\end{table}

There are two dimensions of meaning, the first is of "sex", the second is of "adulthood", the third dimension is presupposed by the isolation of the whole field and it is between human and non-human species. (ibid)
We can express the meaning of individual items by combinations of their features and they are called "componential definitions", such as woman: + human, + adult, - male. By using such formulate, we can show the synonymy of two items, for example: adult and grown up, can be given the same definitions + human, + adult although they differ in stylistic meaning.

We can use such formulate also in polysemy, where one lexical item has more than one meaning or definition. Man is defined by the features + human, + adult, + male, but also has a wider definition consisting simply of the feature + human as in the sentence "man has lived on this planet for over a million years". (Leech, 1974:490)

In determining the semantic components of any one meaning, it is essential to compare the related meanings of other words. In treating for example "whistle", we must know the different meanings of this word as in:

He will whistle to us
He bought a whistle

And then analyze the two meanings in terms of other words; then one can analyze the ways in which different meanings of one term differ from another. (Nida, 1971:343)

We can see that components are used in analyzing semantic relationships but a very different approach is analyzing the total meaning of a word in terms of a number of distinct elements or components of meaning. The idea of components, does not introduce a new kind of relation but it offers a theoretical frame work for handling kinds of relationships. (Palmer, 1976:85)
Apparent Advantages of The Componential Approach

The most important advantage of the componential approach to semantics is that in terms of the same set of components, we can answer two different questions: the first is about the semantic acceptability or unacceptability of syntagmatic combinations of words or phrases, the second question is "what is the meaning" of a given or particular combination of lexical items?

It has been suggested that the significance of any grammatically well-formed sentence is traditionally accounted for in terms of specific general principles of compatibility between the meanings of their constituent lexical items. If we take the word (pregnant) and assume that it contains a component which restricts it to the modification of nouns which contains the component (female), according to this rule, (a pregnant woman) or (a pregnant mare) would be significant but the phrase (the pregnant man) or (a pregnant stallion), would be meaningless or uninterpretable. (Lyons, 1968: 470)

Componential analysis made considerable contribution to the development of semantics. The most significant thing is that it brought together both the formalization of syntax and the formulization of semantics closer together and linguists are seriously concerned with the relations between syntax and semantics. (Ibid: 480)

Semantic components represent the conceptual constituents of senses in the same phrase markers represent the syntactic constituents of sentences. They represent not only the atomic constituents of meaning (the simplest concept), but also the complex ones. (Katz: 1972: 37)
Attempts have also been made to explain the relatedness of meaning in terms of componential analysis of the senses of lexemes. This approach is also used in the analysis of meaning for the vocabulary as a whole and shows how it can be used not only in relatively clear – cut examples but also in complex ones. (Lyons, 1977: 353)

Ethno linguistic investigations use this device of componential analysis successfully although limit its use to relatively restricted areas of cultural experience like kinship relations or colour categorization. (Kess, 1976: 861)

Here we have to mention that componential analysis does not handle all semantic relations with the same affectivity for on one hand, it is difficult to reduce the relational opposites to components as in parent / child. We could treat this as having the same components but in different direction, that they are relational and not atomic components. On the other hand, the componential analysis can not remove the hierarchical characteristic of hyponymy. (Palmer, 1976: 111-112)

CONCLUSION
A further way to the study of meaning is done by the process of the componential analysis, which is breaking down the meaning of a word into its components which can be contrasted with other components.

This method is first used by anthropologists who compared differing kinship systems in different societies. This device also has a long history in logic, philosophy and linguistics.
The componential analysis has many advantages and that is why it becomes essential for the linguist to use such approach in dealing with different problems of semantics.

The idea of componential analysis does not introduce a new type of relation, but presents a theoretical framework for dealing with such relations.

Its contribution in morphosyntax and kinship systems has changed contemporary linguistic opinion on semantic analysis by showing that it can be carried out easily by using structural analysis. Such analysis provide us with an economical way to treat a set of words in terms of few components.

On one hand, this componential analysis is also beneficial in defining what lexical gaps are there in a given language, and on the other hand is good in handling not only the atomic constituents of meaning but the complex ones also.

Its clear effect in bringing closer both the framework of syntax with the framework of semantics, is considered to be a big step towards the development of semantics in the last few decades.

In the present time, it is widely suggested that semantic components are language-independent or universal, shared by vocabularies of all the languages, thus it gained a great deal of importance.
References


