Chapter-2

Construction Grammar

2. Introduction

The present chapter introduces the Goldberg (1995) approach towards syntactic analysis, commonly known as the 'Cognitive Construction Grammar' (henceforth CCG)[1]. The first section of the chapter deals with the emergence of the theory and the need of such an approach. The second section deals with the initial phase of the Constructionist approach, which grew out of the works of Charles Fillmore. The third section deals with the CCG theory by Adele Goldberg, which is used in the thesis. The remaining sections discuss the CCG's approach towards the Argument Structure and the Frame semantics theory along with a brief discussion about the FrameNet project. The last section deals with the network of the constructions.

Although the development of the constructionist approach is recent, its traces can be found in the Saussurean notion of 'signifier' and 'signified'. Thus, the 'form', in terms of Saussure, the 'signifier', is associated with a 'meaning', the 'signified'. Thus, the contemporary construction grammarians hold the same idea in terms of 'form' and 'meaning', i.e., each form is associated with a meaning. Hence, the 'form-meaning' pair.

2.1. The Componential model

The constructionist approach was a reaction to the mainstream Chomskyan approach towards linguistic knowledge. The dominant Chomskyan model claims that the nature of linguistic knowledge is innate. The nature of the grammar is componential, i.e., it consists of different elements in terms of sounds, words, sentence, etc., which has their own separate components and each of them are combined together to determine meaning in language. For instance, the different sounds of a language are determined by the phonological components which consists of rules and constraints which govern the composition and structure of the combination of different phonemes. Similarly, the syntactic components consist of different rules and constraints that govern the combination of words and phrases to form a grammatical sentence structure of a language. Further, in

[1] The Cognitive Linguistic approach to syntax is referred to also as (CXG).

the generative approach the syntactic component is divided into different tiers such as the deep structure (or D-structure) and the surface structure (S-structure).
The lexicon, which consists of individual words, is further differentiated from this component which again consists of its own phonological, morphological, and syntactic rules that interact with the other components to determine the meaning in language.

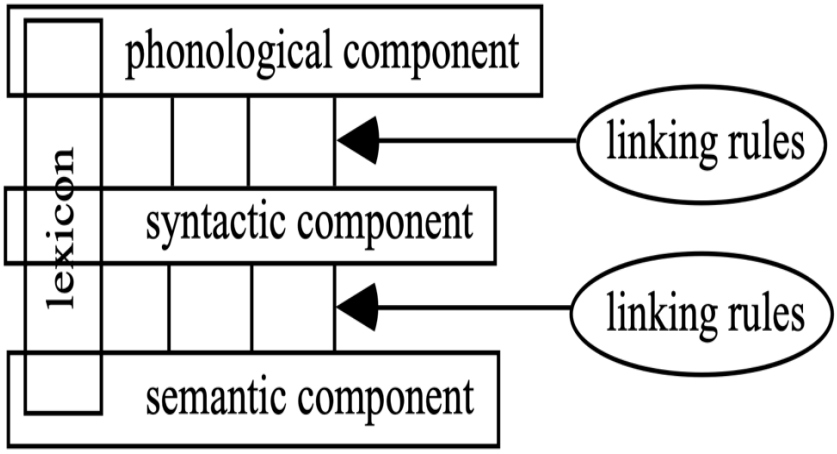

Fig. 2.1. The componential model of the organization of grammar (Croft and Cruse, 2004:227)

The figure 2.1 represents the componential organization of the grammatical knowledge. Here, each linguistic element comprises of its components, i.e., the phonological component consists of phonological rules and constraints, the syntactic component consists of syntactic rules and constraints, and the semantic component consists of semantic rules and constraints governing the meaning of sentences. The three components are organized in a horizontal manner. The lexicon, on the other hand, interacts with the three components, represented in a vertical manner, i.e., the lexical component interacts with the phonological, morphological and the semantic components. The 'linking rules' on the other hand combines or maps the information from one component into the other. Thus, the model claims that all grammatical units larger than words, which are complex in nature, are a result of combinations of various rules and constraints laid by these components. The lexicon contains the arbitrary lexical items which are idiosyncratic in nature.

One of the main components of a sentence is the verb. Verbs are a part of the lexicon in the componential model. Each verb is associated with sub-categorization frames. For instance, a

verb like ‘kick’ is associated with a sub-categorization frame as in (1), which is an underlying representation of example (2):

(1) Kick_V: [NP_NP]

(2) He kicked the ball

2.2. The emergence of the constructionist approach

The emergence of the constructionist approach arose due to the inability of the componential model to analyze ‘*idioms*’. “Idioms are linguistic expressions that are syntactically and/or semantically idiosyncratic in various ways but are larger than words, hence cannot be assigned to the lexicon without some special mechanism” (Croft and Cruse, 2004:230). Idioms are thus those expressions which deviate from the analysis of grammar according to the componential model. Hence, such structures are often regarded as ‘periphery’ or exceptions and largely go unexamined. However, idioms do form a large chunk in the grammar of any language. Some of the properties of idioms are as such, as stated by (Nunberg, Sag and Wasow, 1994: 492-93):

a. The syntax is restricted, not flexible: *shoot the breeze vs *the breeze is hard to shoot* (Croft and Cruse, 2004:230):

b. Figurative meaning: *answer the door, it’s your call, all ears*

c. Mostly abstract in nature: *kick the bucket,* etc.

Further, Fillmore, Kay and O’connor’s (1988), the seminal paper laid the foundation of the constructionist approach. Some of the characteristic features of idioms are, according to Filmore et al. 1988, are as follows.

The first characteristic feature is the distinction between encoding idioms vs decoding idioms, following Makkai (1972). Encoding idioms refers to those idioms which may be interpreted by a speaker without prior experience, and are bound by some standard grammatical rules. Examples include ‘*answer the door*’, ‘*wide awake*’, etc. Whereas, decoding idioms are those

idioms which cannot be understood without prior experience or learning. Examples include, '*kick the bucket*', '*pull a fast one'.*

The second distinction, in Fillmore et. al, is between grammatical idioms vs extragrammatical idioms. Grammatical idioms are those idioms which adhere to the general syntactic rules of the language, but are/might be semantically irregular. Examples include '*kick the bucket*', '*spill the beans*', etc. Whereas extragrammatical idioms are those which do not adhere to the general syntactic rules for the language. Examples include '*all of a sudden*', '*so far so good', 'by and large'.*

The third distinction is between substantive idioms vs formal idioms. A substantive idiom, also known as lexically filled idiom, is the one in which all the linguistic elements are fixed, i.e. fixed expressions. For examples, '*it takes one to know one*', which cannot be subjected to different tense /aspect construal also. A formal idiom, also known as lexically open idiom, is the one in which some parts can be filled with other linguistic elements. For example, *X blows X's nose,* where 'X' can be a variable for a NP, as in, '*I blew my nose*', '*John blew his nose*'. The present work would term substantive idioms as least schematic, whereas formal idioms as the one discussed above as 'partially filled'.

The last distinction is between idioms with pragmatic knowledge and without pragmatic knowledge. The idioms with pragmatic knowledge are associated with special pragmatic purpose. Examples include, '*good morning', 'how do you do?'* etc. The idioms without pragmatic knowledge includes example as '*all of a sudden',* which lacks any specific pragmatic purpose.

Finally, Fillmore, et. al classifies idioms in a three-way categorization; 'unfamiliar pieces unfamiliarly arranged', like '*with might and main'* (with a lot of strength), which is irregular lexically, syntactically and semantically. The second category is 'familiar pieces unfamiliarly arranged', which are lexically regular but syntactically and semantically irregular, like '*all of a sudden', 'in point of fact'.* The third category is 'familiar pieces familiarly arranged', which are lexically and syntactically regular but semantically irregular. Croft and Cruse (2004:236) provides a comparison of the classification of idioms mentioned above with regular expressions, represented in table 2.1 below:

Sl no	Category of idioms	Lexically	Syntactically	Semantically
1.	Regular syntactic expressions	regular	regular	regular
2.	Unfamiliar pieces unfamiliarly arranged	irregular	irregular	irregular
3.	familiar pieces unfamiliarly arranged	regular	irregular	irregular
4.	familiar pieces familiarly arranged	regular	regular	regular

Table 2.1. Comparison of the category of idioms with regular syntactic expressions

Nonetheless, idioms are a special chunk of constructions which differ from regular linguistic elements, which are componential in nature. The componential model in figure 2.1 fails to capture the uniqueness of idioms, as the model is only compatible with regular syntactic expressions which are componential, in contrast to the idioms, which are non-componential, discussed above. In simple words, a sentence like '*he kicked the ball'*, a regular syntactic expression, whose meaning is derived by the combination of all the linguistic components, thus, componential. However, an idiom like '*he kicked the bucket'*, which means '*he died*', is not componential, as the meaning differs from the individual words. Thus, considering the nature of idioms a new, more uniform linguistic model is required which can explain such idioms and at the same time it can include regular syntactic expressions. This gave rise to the emergence of the construction grammar theory, which aims to capture the speaker's knowledge of idioms including, substantive idioms as well as schematic idioms, at the same time including core grammatical structures.

Thus, Fillmore et al., presents the constructionist approach, in relation to the '*let alone*' construction, towards representing the speaker's knowledge of grammar. They argue that the knowledge of the idioms is evidence for the existence of construction. Construction here are defined as syntactic representation consisting of semantic as well as phonological information. Here constructions are treated as lexical items, like the componential model. Whereas the lexical items are atomic and substantive, constructions can be fully schematic, or partially schematic (like the partially filled idioms), or substantive (like *good morning)*. Thus, forming a continuum, i.e., it denies the strict division of various linguistic components. This approach was also followed by researchers such as Wierzbicka (1980, 1982, 1987, 1988), Prince (1978), Lakoff (1987), and so on. The same approach is carried forward by Goldberg (1995), which led to the foundation of Cognitive Construction Grammar, focusing of the Argument Structure Construction, dealing with basic sentence patterns.

2.3 The Cognitive Construction Grammar

The Cognitive Construction Grammar (CCG), by Adele Goldberg (1995), explores the Argument Structure Constructions (ASCs) of the English language. The ASCs corresponds to basic clausal patterns, which again represents humanly relevant scenes; the 'scene encoding' hypothesis (Goldberg, 1995:39). That is different types of basic human experiences like transfer, caused-motion, existence etc. are represented by the ASCs. Thus, ASCs are abstraction over frequently recurring linguistic expressions, with a syntactic '*form*' encoded with '*meaning'*. The semantics (meaning) that is associated with a syntactic (form) that is independently stored in the speaker's knowledge, which is usage-based. That is there is a connection between the ASC and its actual usage, particularly with the type of verbs. Verbs never occur in isolation, but always occurs with other linguistic elements called 'arguments'. For instance, verbs which are force-dynamically high, like 'kill', 'break', etc, typically takes a subject and an object. In other words, verbs tend to occur with particular types of patterns. Thus, after the speaker's exposure to a language, the speaker would gradually categorize such instance of different verb classes along with the syntactic patterns they occur in and then form a generalization of argument structures in his linguistic knowledge. The generalization is based on a bottom-up approach. Thus, Goldberg, Casenhiser and Sethuraman (2004:299) hypothesize that "it is the high frequency of particular verbs in particular constructions that allow children to note a correlation between the meaning of a particular verb and the pattern itself, giving rise to an association between meaning and form".

Thus, the Constructionist approach views the ASCs as form-function pairings that represent the basic ways in which we conceptualize and talk about events. These constructions are not simply syntactic patterns; they also carry semantic content, specifying the roles of the participants in an event and the relationship between them. Thus, the CCG explore the different ASCs which are generalizations with a 'form' encoded with a 'meaning'. Goldberg (2019:35) list eight ASCs in the English language as follows:

Constructions	Form	Meaning	Examples
1.Double-object construction	Subj, V, Obj, Obj2	X causes Y to receive Z	She gave him something.
2.Way construction	Subj, V, way, $Oblique_{(path)}$	X creates a path and moves through it (to) Z	She made her way into the room.
3.Intransitive motion construction	Subj, V, $Oblique_{(path)}$	X moves (to/ from) Y	She went down the street
4.Caused-motion construction	Subj, V, Obj, $Oblique_{(path)}$	X causes Y to move (to/from) Z	She put the ball in the box.
5.Resultative construction	Subj,V,Obj,$Predicate_{AP}$	X causes Y to become Z	She kissed him unconscious.
6. Transitive causative construction	Subj,V,Obj, ($Oblique_{instrument}$)	X directly causes Y to undergo a change of state (using Z)	He broke the plate (with a hammer)
7. Rely-on construction	Subj, V, $Oblique_{on}$	X relies on Y (for physical or psychological nourishment)	She relied on him.
8. Communication conative construction	Subj, V, $Oblique_{at}$	X directs forceful action at Y	She yelled at the duck.

Table 2.2. The English ASC in Goldberg (2019)

As discussed in section 2.2, where idioms can vary in their degrees of schematicity. The ASCs are completely schematic constructions. The open slots can be occupied by verbs and NPs, in the form of arguments.

ASCs are not just abstract representations of events; they also have a significant impact on the way we process and understand language. For example, when we hear a sentence like 'John gave her a cake' we automatically know that 'John' is the agent of the event, the 'cake' is the theme, and the 'her' is the recipient. This information is not explicitly stated in the sentence itself; it is inferred from the ASC that we have associated with the verb 'give' Here, ditransitive construction SVOO, encode fundamental event types that are central to human experience. For example, the ditransitive construction SVOO represents the event type of transfer, i.e. 'X causes Y to receive Z'. This event type can be instantiated with a variety of verbs, such as 'give', 'tell', 'send', and so on. The SVOO being an ASC encodes a certain generalized event based on the actual language usage. Thus, this

approach radically differs from the componential model in terms of the determination of the argument structure (see section 2.3.3 for further discussion).

2.3.1. The CCG and argument structure

The verb denotes an action and how the participants of that action are related to each other or with the action itself. For instance, the act of kicking where an agent applies force into a theme as in:

3. He kicked the ball

Here, '*he*', the subject, is the agent (a participant) is related to '*the ball'*, the theme (another participant) and their relation is expressed by the verb '*kick*'. Traditionally, the verb is the grammatical category that determines the number of arguments in a sentence. For instance, it is the verb '*kick*' determines the syntax. Hence, 'kick' is termed as a two-place argument verb and the associated 'sub-categorized' frame is 'NP_NP'. The term argument structure denotes 'the number of arguments that a predicate takes.' (Carnie, 2006:53). Each verb has different properties in terms of selecting the number of arguments and the basic sentence patterns are determined by the number of argument(s) a verb takes. However, consider the examples below:

4) The horse kicks
5) He kicked at the ball
6) He kicked John the ball
7) He kicked John black and blue
8) He kicked the ball across the goal post

In the examples above, the verb '*kick*' is not restricted in selecting just two arguments. Hence the subcategorization approach which claims that each verb is associated with a fixed number of argument(s) is not able to explain the speaker's ability to creatively use a verb as in the examples above. The CCG takes a different approach in determining the argument structure. Lexicalist approaches solely attribute the verb to determining the meaning and the syntax, but according to the CCG approach the arguments, complements and oblique phrases are not solely determined by the verb. Instead, the ASCs and the verb together determine the meaning, and each grammatical category in the ASC has its own contribution.

One of the hallmark contributions of the constructionist approach is the creative use of verbs, as seen in examples (4-8), whereby a transitive verb like 'kick' can occur in different argument structure.

Similarly, the Ditransitive construction encodes a meaning of, 'X causes Y to receive Z'. Instances of actions as 'give', 'pass', 'hand' etc. are usually associated with the construction. However, considering the example '*John baked Sue a cake*', a recipient argument, '*Sue*' is added, which is typically not associated with the semantics of the verb '*bake*'. Here the di-transitive construction adds an extra recipient argument as the recipient role. The verbs '*bake*' is, hence, said to be 'coerced' (see section 2.3.4) into the Ditransitive construction which gives the meaning of transfer. 'Since constructions are themselves meaningful, they can also contribute aspects of meaning to the clause that are not normally associated with the verb' (Perek, 2015: 25). In other words, the 'form-meaning' pairing claims that each form is associated with a meaning of its own, the Ditransitive construction denotes an experience of transfer 'X causes Y to receive Z'. Thus, when a verb like 'bake' is said to be 'coerced' into the Ditransitive construction, the sense of creation is denoted by the verb and the sense of transfer is denoted by the construction into which the verb is coerced. Hence, the sense of transfer in '*John baked Sue a cake*' is the contribution of the di-transitive construction ('X causes Y to receive Z') not by the verb itself.

This does not mean that the verb lacks any contribution. The theory of semantics that is associated with the verb in CCG, which aims to explain such occurrences mentioned above, is called as 'Frame Semantics' (Fillmore 1975, 1982, 1985).

2.3.2 Frame Semantics and FrameNet

Contrary to the other semantic theory like semantic features or truth conditional approaches to meaning, the Frame Semantics (FS) theory claims that 'meanings are relativized to scenes' (Fillmore, 1977). That is meaning of a word is not conceptualized or understood in isolation, but is conceptualized or best understood in terms of other related concepts which are in relation to that word. Within the Cognitive Linguistic tradition, the nature of linguistic knowledge is based on the sensuous experiences of the speaker. Hence, words are conceptualized with respect to a scene, which is termed as 'Frame' in the FS theory, in which it occurs. For instances, Fillmore explains the COMMERCIAL EVENT frame which includes concepts like *buy, spend, charge, cost, pay*. Thus, the conceptualization of

these words is based on the COMMERCIAL EVENT frame, or in other words, when a speaker hears or uses any of these words, the COMMERCIAL EVENT frame is evoked. Thus, he comments the COMMERCIAL EVENT frame provides 'the background and motivation for the categories which these words represents' (Fillmore, 1982:116-17). As the COMMERCIAL EVENT frame denotes an event or situation in the real words, hence the frame would also consist of participants of that event. The typically participant of a COMMERCIAL EVENT would include BUYER, GOODS, SELLER and so on. Thus, totality of all the elements of an event is the 'semantic frame' of that event, including cultural knowledge associated with that event or concept.

The present work uses the FrameNet (FN) project, housed at the International Computer Science Institute in Berkeley since 1997, to determine the 'participant roles' (see section 2.3.3). The FN project is an online lexical database based on the applied version of the FS theory. As discussed above meaning is best understood in terms of other related concepts or by the frames they evoke, hence, within FN, 'semantic frames serve to organize the lexicon of English by grouping together all the senses of words that evoke the same semantic frame' (Ruppenhofer, et al., 2016). Thus, words like BUYER, GOODS, SELLER and so on, termed as Lexical Units (LU) in the FN project, are grouped together under the same (mother) frame, which can be further related to other frames. Each LU, denoting an event will also have their own respective participants. Hence those participants are labelled as Frame Elements (FE), which corresponds to 'thematic roles', as show in figure 2.2 below:

Fig. 2.2. The FE of BUY (https://framenet.icsi.berkeley.edu/luindex)

As seen in the figure 2.2, the FE of a 'buying' event contains various elements, some of which are *core*, while others *peripheral* or *extra-thematic*. The core elements are those elements which are known as 'syntactically relevant aspects of verb meaning' (cf. Goldberg, 1995:27-9). For instance, an event of buying can be linguistically represented as:

(9) **I** $_{[BUYER]}$ **bought** $_{[TARGET]}$ **five books** $_{[GOODS]}$ for my friend for Rs. 600

Here, in example (9), only the core FE are encoded in the subject and the object position (the transitive construction) while the other FEs are encoded with oblique phrases. Hence, syntactically the core FEs are given priority over the other elements. Thus, these are annotated as 'core'. Also see (https://framenet.icsi.berkeley.edu)

Coming to the examples discussed above (4-8), the frame that is evoked by the verb 'kick' involves experiences like 'a habitual action' (examples 4), 'kicking an object' (example 5), 'kicking a something (ball) for someone' (example 6), 'kicking someone which can cause an injury' (example 7), 'kicking something far away' (example 8), which is associated with the experience of 'kicking'.

Now, as discussed above ASCs are meaningful, hence, verbs can be combined with those ASCs whose meaning is compatible with the aspects of verb's meaning. For instance, example (5) involves an act of 'kicking something far away', which is similar to the meaning encoded in the caused-motion construction, i.e., 'X causes Y move to/from Z'.

Further, examples like '*John baked Sue a cake'* is grammatical because frame semantic knowledge associated verbs of creation, like that of '*bake'*, involves experiences like 'one may create an entity or may intend it for someone else'. Whenever, one creates an entity, as in 'He baked a cake', the Transitive construction is used; while the created entity is for someone else then the Ditransitive construction is used, as the semantics associated with the Ditransitive is 'transfer'. Further, Goldberg explains examples like *'He sneezed the napkins off the table'* involving experiences like 'forceful expulsion of air' associated with the act of 'sneezing', which can displace something. Such experience is compatible with the semantics of the Caused-motion construction. Moreover, such knowledge also involves that the 'forceful expulsion of air' is not strong enough to move something larger or heavier like that of a 'table'.

Goldberg (1995) also shows the distribution of adverbs and adjuncts in relation to the frame semantic knowledge. For instance, an adverb like '*slowly*' can be used with a verb like 'walking', while it cannot be used with a verb like '*careening*' (*careen* refers to an uncontrolled swiftly motion). Similarly, an adjunct like 'with a hammer' cannot be used to 'tear a paper'. Thus, verbs evoke different scenes or frames which should be compatible with the semantics of the ASCs, which provides a linguistic manifestation of the event. Thus, verbs do not select different arguments, but verbs are used with different ASCs.

2.3.3. The integration/fusion of verbs and ASCs

As is clear from the discussion above, the constructionist approach differs from other approaches in determining the argument structure. The constructionist approach claims that the argument(s) and meaning of a sentence is *not* solely determined by the verb. But both the verb and the ASCs are fused together to determine the syntax (including the arguments) and the semantics. The CCG claims that the ASCs and the verb have their interdependent roles. As discussed above and represented in table 2.2. ASCs are meaningful for more general events of the world, while the verb adds a specific event of the world. For instance, the Ditransitive construction denotes a generalized meaning of transfer, whereas when a verb like 'give' is used in this construction it denotes a specific meaning. As both the verb and the ASCs denote events, hence both the verb and ASCs have their different roles. Goldberg argues that verbs are associated with '*participant roles*' which are specific to the event they denote, while ASCs are associated with '*argument roles'*, which are generalized roles. For instance, the Ditransitive construction which is linguistically manifested as 'SVO_IO_D' includes three argument roles, an 'Agent', a 'Recipient' and a 'Theme'. While the verb 'give' also consists of three participant role 'donor', 'recipient' and 'theme'. Thus, in order to combine a verb like 'give' in the Ditransitive construction, the argument roles of the construction and the participant roles of the verb must be compatible with each other. This is what Goldberg terms as '*Semantic Coherence Principle'* (SCP), which state that:

> "Only roles which are semantically compatible can be fused. Two roles $r1$ and $r2$ are semantically compatible if either $r1$ can be construed as an instance of $r2$, or $r2$ can be construed as an instance of $r1$. [...] Whether a role can be construed as an instance of another role is determined by general categorization principles" (Goldberg, 1995:50).

Goldberg (1995) also provides a composite structure to visual represent the fusion a verb with a construction. For instance, if we look into the fusion of the verb 'give' with the Ditransitive construction, the composite structure is represented as:

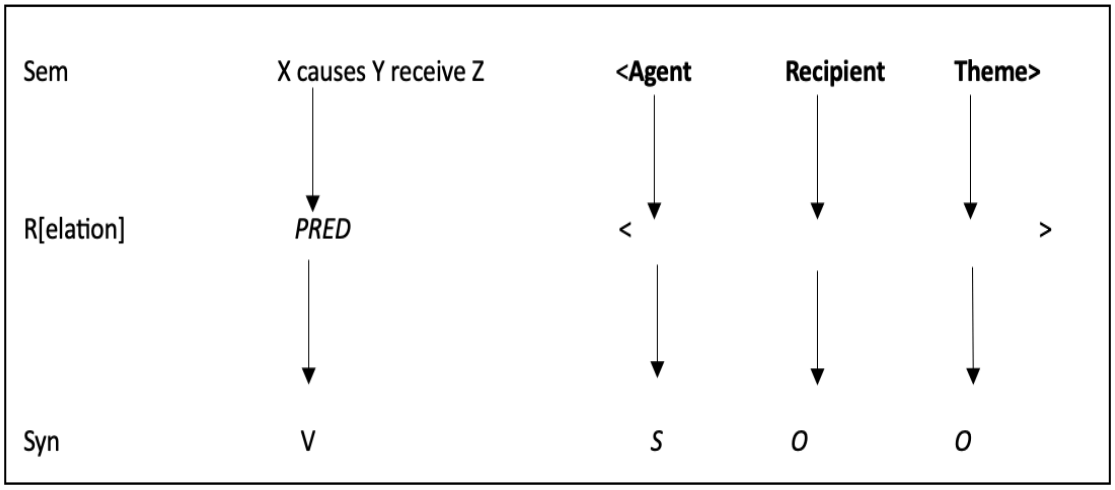

Fig. 2.3. The composite structure of the Ditransitive construction

The first row of the representation denotes the meaning *Sem* (i.e. semantics) of the construction, 'X causes Y to receive Z' followed by the argument roles of the construction (in bold), '**Agent', 'Recipient'** and **'Theme',** which represents profiled[2] roles. 'Every argument role linked to a direct grammatical relation (SUBJ, OBJ1 or OBJ2) is constructionally profiled' (Goldberg, 1995: 48). The last row is the syntactic realization *Syn* (i.e. syntax) of the semantics of both the Ditransitive construction. The second row specifies how a particular verb is used in the construction. Each verb has a meaning, represented as 'R' or 'relation'. PRED is the variable that is filled by the verb when a particular verb is used or integrated into the construction. Figure 2.4. represents when the verb 'give' is used with the Ditransitive construction.

[2] The term profiling is borrowed from frame semantics and cognitive grammar.

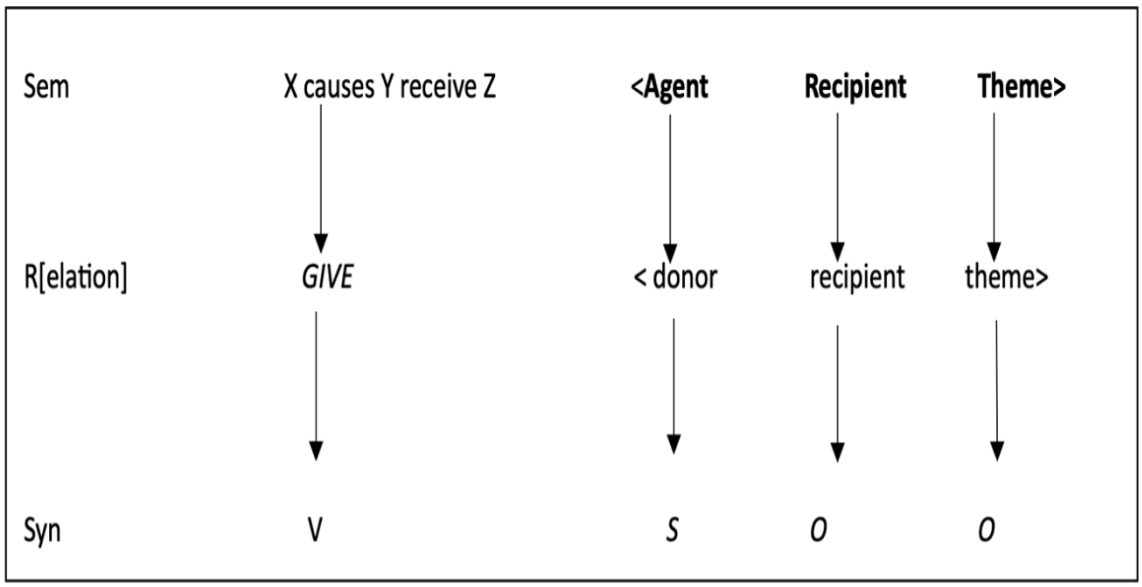

Fig. 2.4. The composite fused structure of the Ditransitive construction+ 'give'

The empty slot PRED is now occupied by the verb 'give' and the participant role[3] that is associated with the verb 'give', 'donor', 'recipient' and 'theme'. The participant roles 'donor' is an instance of the argument of 'Agent', while the participant role 'recipient' and 'theme' is in one to one correspondence with the argument 'Recipient' and 'Theme'. Hence, according to the SPC the both the roles are compatible with each other.

Another principle introduced by Goldberg is the *Correspondence principle*, which states that:

> "Each participant role that is lexically profiled and expressed must be fused with a profiled argument role of the construction. If a verb has three profiled participant roles, then one of them may be fused with a nonprofiled argument role of a construction"
>
> (Goldberg, 1995:50)

This principle states that when a verb has three participant roles and one of them is less prominent, then the less prominent participant role can be fused with the non-profiled argument role of the construction. For instance, Goldberg cites the verb 'put' which consists of three participant roles an 'agent', 'theme' and 'goal' (location), is used with the

[3] The participant roles are based on the FrameNet project.

Caused-Motion Construction which consists of three argument roles, Cause', 'Theme' and 'Path', as shown in Fig 2.5. below:

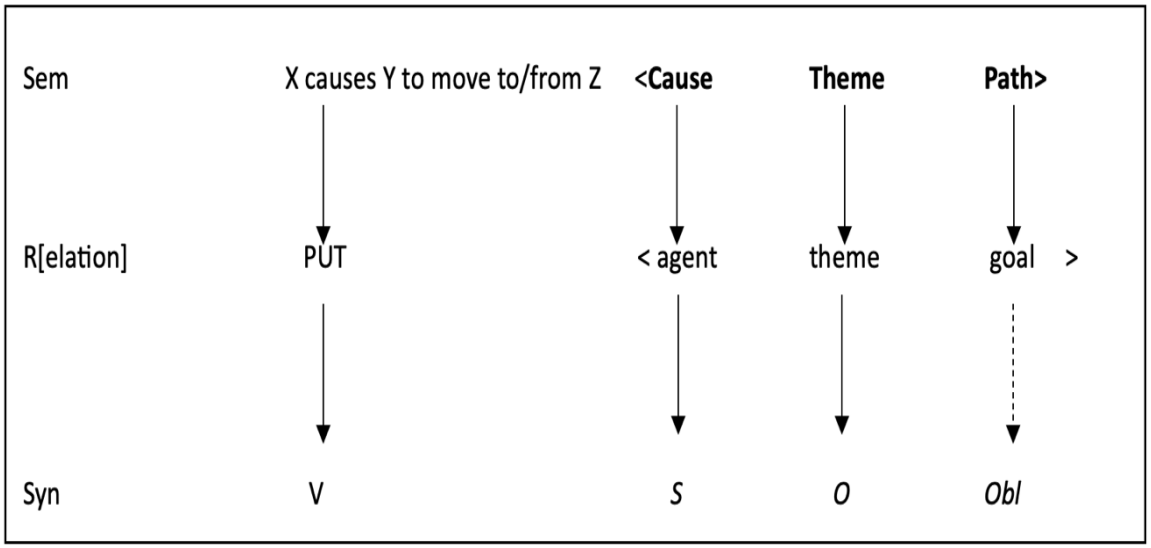

Fig. 2.5. The composite fused structure of the Caused-Motion construction+ 'put'

In figure 2.5. the verb 'put' is used with the Caused-Motion Construction. The argument roles of the construction include a 'Cause', a 'Theme' and a 'Path', while the verb also has three participant roles, an 'agent', 'theme' and 'goal'. The 'agent' is an instance of the 'Cause', while the 'theme' is in one-to-one correspondence with the 'Theme', and the 'goal' is an instance of 'Path'. The dotted line denoting the oblique phrase is not profiled, this is because oblique phrases are less prominent in the event, i.e., neither the oblique argument initiates the event nor it is affected by the event, but its mere presence is necessary to complete the meaning.

Thus, both the SCP and the CP determines the type of verbs occur that can occur with different constructions. Apart from this, as discussed in section 2.3.4, the construction can add certain arguments which are inherently absent in the semantics of the verb, which is termed as Coercion. Examples as '*John baked Sue a cake'* is a case of Coercion.

2.3.4. Coercion

As ASCs themselves are meaningful, hence, ASCs can contribute certain aspect of the meaning that is inherently absent in the verb. This is called coercion, i.e., the verb is coerced into a construction. If we consider the example *'John baked Sue a cake'*. The participant role of the verb 'bake' only involves two participants a 'cook' and 'produced food'. However, the Ditransitive construction consists of three arguments. The third argument is added by the construction, namely the recipient 'Sue'. The figure 2.6 shows the coercion of the verb 'bake' into the Ditransitive construction.

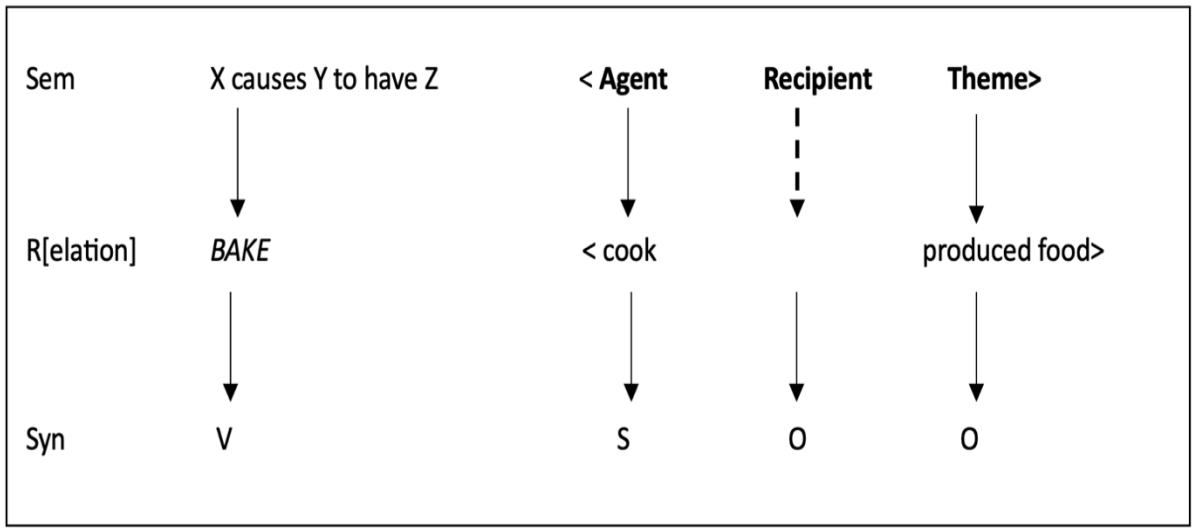

Fig. 2.6. The composite coercion structure of the Ditransitive construction + 'bake'

The recipient 'Sue' is added by the construction, hence, from a semantic point of view the bold dotted line represents that the recipient argument is added by the construction. The syntactic line is solid because the recipient is encoded by direct grammatical relation, i.e. the object which is always profiled, also prominent in the discourse. Goldberg does not distinguish between an argument that is added by the construction and an argument that is encoded by an oblique phrase. Consider the examples below:

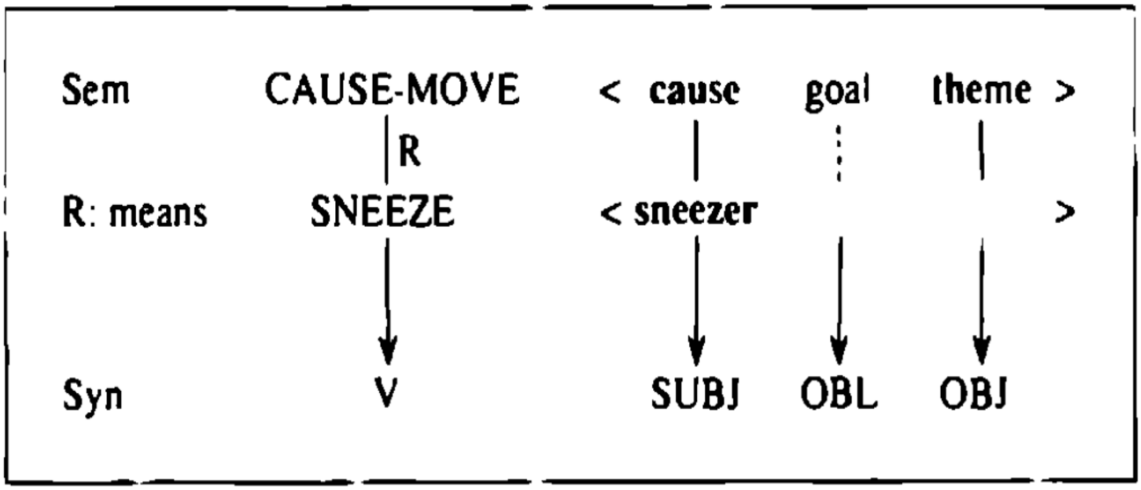

Fig. 2.7. Composite structure of the Caused-motion + sneeze in Goldberg (1995:54)

The Figure 2.7. represents the coercion of the verb 'sneeze' with the Caused-Motion construction resulting in 'he sneezed the napkins off the table'. The participant role of the verb 'sneeze' involves one participant 'sneezer', but is used in the Caused-motion construction. In figure 2.7 the participant role 'sneezer' is an instance of the argument role 'Cause', hence compatible with each other. The arguments 'napkins' and 'off the table' are added by the construction, hence the two slots of the second row are left empty. However, Goldberg does not distinguish between the arguments that are added by the construction and arguments encoded as an oblique phrase. Hence, the present work proposes to adapt the same figure as follows:

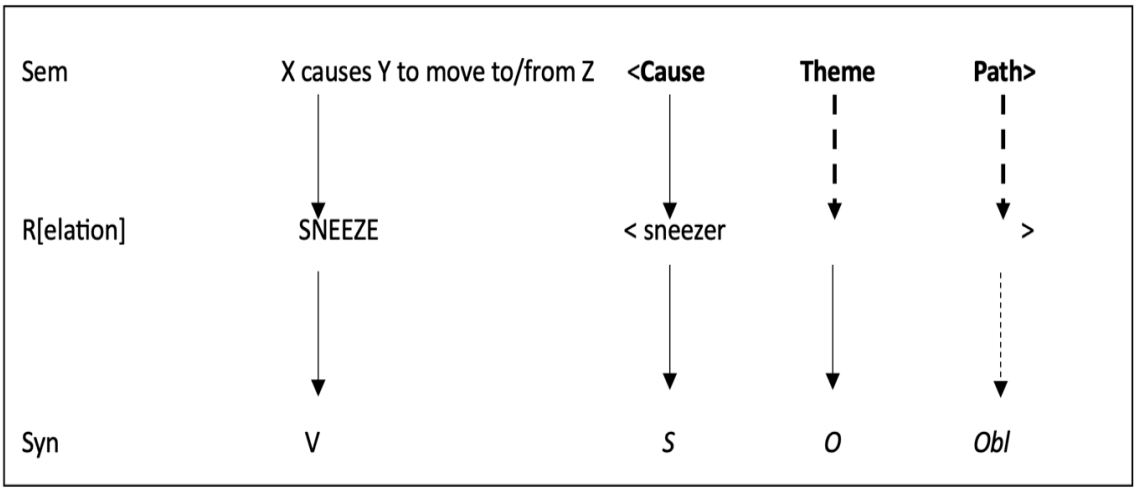

Fig. 2.8. Composite structure of the Caused-motion + 'sneeze'

Here, a distinction has been made between the arguments that are added by the construction, i.e. coercion and arguments that are unprofiled, encoded via the oblique phrases. The arguments that are added by the construction is bolded and dotted, the 'napkins' and 'off the table'. The arguments which are encoded by the oblique phrase is un-bold and dotted, representing that these are unprofiled, 'off the table', thus, differentiating between the two phenomena.

2.4. The network of the Constructions

Within the Constructionist approaches the knowledge of language consists of constructions, which are generalized pair of form and meaning. Thus, the term 'Construct-i-con', which includes all levels of linguistic elements of various size and complexity (see Goldberg, 2006:5). Thus, in the words of Goldberg (2006, 2019), "it's constructions all the way down". The ASCs are the form-meaning pairing of the basic sentence patterns, i.e. the syntax-of the language, which reflects humanly relevant scenes.

As the knowledge of language consists of constructions, the constructions are organized in a structured way which forms a network of constructions. The network among these constructions is formed by various links connecting the various constructions. Goldberg (1995) lists four of such constructions namely:

(a) The polysemy link, which exists between the prototypical sense of a construction and its extensions, for instance the caused-receive construction and the cause-enable construction (Goldberg, 1995: 30-39), and so on.

(b) The sub-part link, when one constructions is a proper sub-part of another construction and exists independently, for instance the caused-motion construction and the intransitive motion construction.

(c) The inheritance link, when a construction is a special case of another construction, based on particular lexical items, for instance the relation of the verb 'drive' with the resultative construction.

(d) The metaphorical link, when a basic sense of a construction is connected to another construction via metaphorical extension, for instance the relation between the cause-motion construction and the resultative construction.

Based on such links, Diessel (2019,2023) proposed five types of links or associations:

(1) Taxonomic relations, relates a higher level schema with a more specific or a lower level schema. For instance, the relation between the Transitive construction 'S V O' and a verb specific construction like 'S *kick* O'.

(2) Sequential relations is also known as the syntagmatic relation is the relation between frequently occurring phrases or clauses. For instance, the Noun and classifier relation.

(3) Symbolic relations, is the typically form-meaning pairing which is an instance of generalization.

(4) Filler-slot relations, is the relation between a particular construction and its related words (similar to the Semantic Coherence Principle).

(5) Horizontal relations, is the relation between construction at a similar level of abstraction.

In general, such links are based on their organizational structures, i.e., vertical vs horizontal. The hierarchy of the constrictions are organized in such a way that the more schematic construction occupies a position at a higher level than that of the more specific ones. In other words, those constructions which are more schematic, say the Intransitive construction occupies the top position, while those which are an extension of the Intransitive construction, say, the intransitive oblique constructions will occupy a position that is in a lower level compared to the Intransitive construction. The more partially filled construction, say the subject complement construction or the copula construction will occupy even a lower position compared to the intransitive oblique construction and while those constructions which are more specific will occupy the lowest position or level. In such way the constructions are organized in a hierarchical structure. The organization of the constructions in a hierarchical structure signifies the connections between the

constructions. The vertically organized construction is said to inherit features form the constructions at higher level.

The second kind of hierarchical links are the horizontal links. As cited in Smirnova and Sommerer (2020), the vertical links are also sometimes referred to as taxonomic links which symbolizes relatedness through inheritance, whereas horizontal links symbolizes partial similarity but non-inheritance. The partial similarities between the constructions which are connected via the horizontal links are based on the fact that these constructions vary from each other with respect to minimal differences, i.e. different markedness; of the oblique markers. Horizontal links connect constructions that are on the same level of complexities and are related because they share similar structures or meaning.

Janda and Divjak (2015) use two types of link to posit the relationship between the construction, the metonymical link and the metaphorical links. Metonymical link signifies the presence of absence of one or more elements, in terms of case marking patters. While the metaphorical link represents where one elements replaces another element in the construction. The thesis will adopt this model to explain the relationship between the constructions.

The next chapter deals with the Intransitive ASC and its extensions along with the network of the family of intransitive constructions in Assamese.