FILLMORE'S CASE GRAMMAR
AND
OTHER CASE GRAMMAR MODELS

Chapter IV
IV.1 Preliminary

The concept of abstract case roles as distinct from concrete case markers has become familiar in linguistics only recently, especially through the writings of the scholars such as Charles J. Fillmore (1968, 1971, 1977), Wallace Chafe (1970), John Anderson (1971), Jeffrey Gruber (1976) and others. The main contention of these scholars has been that the grammatical categories like subject, direct object, indirect object etc. which are primarily based upon case markers, are only surface categories in that they reflect the irregularities and idiosyncrasies of individual languages. It has been observed in detail in the earlier chapters. Naturally, these schools thought that there was a need to postulate deeper systems of case roles (which may perhaps be universal) such that the minimally relevant core meaning of sentence and also the commonness between different kinds of sentence can be made very explicit.

However this idea of case roles as distinct from case markers did not receive much attention from contemporary linguists until recently when Fillmore succeeded in connecting it up with the concept of deep structure that has been already made popular by the Transformational Generative theory of Chomsky. His claim that the case roles are better suited for deep structure representation than grammatical categories (like subject noun phrase and verb phrase) was apparently the main reason why the theory very quickly caught the fascination of contemporary linguists.

The Case Grammar theory assumes that there is a minimum number of case roles that would be required by a given language (or even by the natural languages in general) for the adequate representation of the meanings of different sentences. It assumes further that the actual representation of these case roles, with the help of case markers, is rather irregular and idiosyncratic in individual languages, and that the establishment of an abstract level of case roles as distinct from that of the case markers would be helpful in removing these irregularities and thereby explicating the underlying structures (or meanings) of sentences.
The actual number and type of case roles that occur in a given sentence is considered to depend upon the kind of action, event or state that is being expressed by that sentence, or rather by the kind of main verb that occurs in that sentence. For example, if a sentence describes the action of running or crying, there would be a need to indicate, minimally, only a single case role, namely the person who is running or crying (Agent), whereas if a sentence describes the action of giving, there would be a need to indicate at least three different case roles, namely the giver (Agent), receiver (Beneficiary) and the object that is being given (Patient). One can, therefore, establish different case frames for different verbs by establishing these minimum sets of case roles.

The different models of case theory are developed by the other linguists such as Chafe (1970), Anderson (1971), Jackendoff (1972), Walter Cook (1979) and others along with that of Fillmore's. The system of case roles or case relations of these scholars is going to be presented in this section. The case theory, as introduced by Fillmore and others tries to establish an abstract system of case roles or case relations as distinct from that of concrete case markers like affixes, prepositions, postpositions and so on.

IV.2 Fillmore's Case Grammar

IV. 2.1 The Fillmore 1968 model

IV.2.1.1 Background. Charles J. Fillmore, in a number of interesting papers (1966, 1968, 1969, 1971 and 1977), developed an attractive model of Case Grammar. The distinguishing feature of it is that at the deepest syntactic level, a sentence consists of a verb and an unordered series of semantic cases, drawn from a universal vocabulary. Fillmore was worried in particular about the seeming inability of Chomsky's Aspects (1965) model to represent both categorial and functional information pertaining to prepositional phrases. His starting point was the observation that Aspects (Chomsky, 1965) could not adequately capture the fact that expres-
sions such as 'in the room, toward the moon, on the next day, in a careless way, with a sharp knife,' and 'by my brother' are simultaneously prepositional phrases and adverbials of location, direction, time, manner, instrument and agent respectively. His solution was that prepositional phrases in underlying syntactic structure be reanalyzed as noun phrases with an associated prepositional 'case-markers', both NP and case-marker being dominated by a case symbol capturing that NP's semantic function in the sentence. Generality, he claimed, then demanded that every NP (even those which, as surface subjects, have no associated preposition) be so represented in underlying structure.

The presentation of the case grammar model is given by Charles Fillmore in 'The Case for Case', *Universals in Linguistic Theory* (1968:1-88). A similar model was presented by him earlier in 'A proposal concerning English prepositions', *Georgetown University Round Table on Languages and Linguistics* 1966 (Fillmore, 1966:19-36). This model was later revised in 'Towards a modern theory of case', *Modern Studies in English* (Fillmore, 1969:357-371). These are the principal sources for the Fillmore 1968 case grammar model. 'The Case for Case' was first presented by Fillmore at a conference on language universals. In the introduction to that conference, Fillmore's paper was described as presenting a universal underlying set of case-like relations that play an essential role in determining syntactic and semantic relations in all languages. Walter Cook comments on Fillmore's work:

"The Fillmore 1968 model was a solid case grammar model, the first of its kind in modern linguistics, and prompted many to attempt a similar approach. Fillmore's object was to create 'new conceptual tools' for the analysis of languages. What he arrived at was a semantic analysis of languages. What he arrived at was a semantic analysis at a certain level of clause structure which manifests the semantic relationships between the essential elements of clause, the central verb and one, two or
three noun phrases, in much the same way as logic analyzes the relationships between a predicate and its arguments. Although Fillmore's goal was to provide a case base for a transformational grammar, the model, which evolved, was more of a kind of semantic valence theory which analyzed the clause in predicate-argument terms, independently of such surface grammatical relationships as subject and object. Chomsky had noted the need for a new level of semantic analysis not provided by the Standard Theory. A part of Fillmore's success was that his model seemed to provide that level of semantics"...

"The wider appeal of case grammar is probably due to the fact that, after a long period in which meaning was first ignored then relegated to an interpretive role, semantics could be approached directly. The linguist could now deal with meaning in much the same way as logicians do but with more attention to the differences to be found in natural languages. Case grammar provided a system for analyzing the content behind the clause rather than its surface structure. If syntactic studies were based on visible language structures, then the meaning behind the structure was "empirically discoverable" (Fillmore, 1968: 5) given that any language is a system of communication. The data is not in language expression but in the content behind the expression. This content could now be expressed in case grammar terms. The attempt to analyze meaning, no matter how defective the model, directly turned the minds of analysts towards meaning rather than form and this attempt to analyze meaning is the principal challenge offered by the introduction of the theory of case grammar" (Cook, 1989: 28).

Fillmore describes his own approach as the one based upon two principles: (1) the centrality of syntax, and (2) covert categories. By 'centrality of syntax' Fillmore means an approach which works downward
from the sentence syntax rather than upward from the morphological form; by 'covert categories' Fillmore is referring to the meaning underlying the use of traditional case categories. A clear distinction is made between syntactic categories, such as subject and direct object, and deep structure categories. In Fillmore's words, "what is needed is a conception of base structure in which case relationships are primitive terms of the theory, and in which such concepts as subject and object are missing" (Fillmore, 1968: 2). The subject and object categories, according to Fillmore, belong to surface structure and not to the deep structure.

Fillmore's principal objective then is to explain what is meant by deep case structure, how these are universals belonging to the base of a transformational grammar, and how they can be used to derive surface structures. His hope is that "by distinguishing between surface and deep structure case relationships, by interpreting subject and object as aspects of the surface structure, and by viewing the phonetic shape of nouns as determinable by many factors" (Fillmore, 1968: 19) case systems can be shown to be compatible across languages.

The present study would attempt to throw light on some of the claims made by Fillmore in his Case Grammar theory. Fillmore's claims are: that his case grammar model is a substantial modification to the theory of transformational grammar based upon a reintroduction of the conceptual framework interpretation of case systems; that he presents it with a clear understanding of the difference between the deep and surface structure; that the deep case system consists of the semantic roles played by the nouns in a sentence and the case roles presented by him is "a universal underlying set of case-like relations that play an essential role in determining syntactic and semantic relations in all languages" (Fillmore, 1968: vii).

In the present study it would be observed whether these claims are justifiable in respect of English and Marathi as far as these two major languages, with independent historical evaluation over more than a
millenium have different surface case systems as observed in Chapters II and III.

According to Fillmore 'the concepts underlying the study of case uses may have a greater linguistic significance than those involved in the description of surface case systems' (Fillmore, 1968: 19). The surface case system of the languages consists of the set of inflectional case endings that are possible with nouns. These inflections, expressed in the declension of nouns, fit the nouns for use in surface syntax, including their use as subject, direct object, indirect object, modifier and various adverbial adjuncts. Surface case systems are not comparable across languages.

There is only one surface case inflection in English, that is, the 's' for the genitive or possessive, for example, 'Mohan's house', whereas there are a number of inflections indicating different surface cases in Marathi. For example, many grammarians claimed that English has only two cases based on the surface form, that is, the Nominative and the Genitive, 'Mohan' and 'Mohan's' whereas Marathi has seven or eight cases, from Prathama: to Saptami or from Prathama: to Sambodhan with different overt case markers introduced by various grammarians and discussed in detail in Chapter II.3 and II.4. The variation in respect of the case forms in English and Marathi as discussed above indicates that the forms of cases in these two languages are not comparable.

The deep case system consists of the semantic roles, which these nouns play, in the meaning of the sentence. The list of deep cases is a list of these roles and, if it turns out that this is a limited set with cross linguistic validity, then case systems may be compared across languages. The list of case roles includes those case 'uses' familiar to traditional grammar, notions such as Agent, Object, Source, Goal, Location, Instrument, and Accompaniment.

Fillmore presents his 1968 model of case grammar as "a substantial modification to the theory of transformational grammar based
upon a reintroduction of the conceptual framework interpretation of case systems, but this time with a clear understanding of the difference between deep and surface structure” (Fillmore, 1968 : 21). Walter Cook in his Case Grammar Theory (1989) has summarized and discussed Fillmore’s Case Grammar model (Fillmore 1968, 1971 and 1977) very systematically and illustratively, and for the sake of convenience in the presentation of Fillmore’s case grammar models in this chapter, many points are directly borrowed from Cook’s (1989 : 1-58) analysis of Fillmore’s case grammar theory.

Fillmore’s model is based upon a clear distinction between CASE FORM and CASE USE, suggested by the distinction between deep and surface structure (Chomsky, 1965). In case grammar, case use belongs to the deep structure and case form belongs to the surface structure. Nouns are inflected for case and the case markings are the visible sign of the kind of syntactic relations that the system provides. Case uses are the meanings that the case forms are used to convey and are universal across languages. It is the ‘concepts underlying the study of case uses’ that are linguistically significant in the study of the content underlying language expression; concepts are comparable across languages (Fillmore, 1968 : 19).

There should be no problem in using the term CASE for the underlying semantic relationships provided that this term is properly understood as applying to the deep structure semantic relationships. NUMBER, as a semantic category referring to the one and the many, is universally understood but is expressed in different ways in languages that contrast singular and plural and those that contrast singular, dual and plural. GENDER, as a semantic category dealing with male/female differences, is universally understood but is expressed differently in those languages, which contrast masculine, feminine, and neuter genders. Semantically number and gender work differently in different languages. Similarly the term CASE, in its deep structure sense, must be distinguished from those
surface case forms which are proper to individual languages. Fillmore's case notions are 'a set of universal, presumably innate concepts, which identify certain types of judgements human beings are capable of making about the events going on around them such as who did it, who it happened to, what got changed, and so forth'. It is these meanings which are universal across languages and constitute the deep structure cases of the case grammar model.

According to Fillmore, the value of this view of case can be demonstrated 'if there are recognizable intrasentence relationships, if they can be shown to be comparable across languages, and if there is some predictive or explanatory use to which they can be put.' (Fillmore, 1968: 20).

**IV.2.1.2 The Case System.** Case grammar has a case system which consists of (1) a small number of cases, (2) which are sufficient for the classification of the verbs in a language, and (3) which have crosslanguage validity (Fillmore, 1975: 7). These cases are arranged according to a subject choice hierarchy.

The initial list of cases proposed by Fillmore includes: Agentive (A), Instrumental (I), Dative (D), Factitive (F), Locative (L) and Objective (O) (Fillmore, 1968: 24). But he immediately qualifies this statement by suggesting that other cases will certainly be needed. In listing the prepositions that are required for the individual cases he includes these six cases but adds Benefactive (B) and Time (T) (Fillmore, 1968: 32). In dealing with coordination he mentions the possibility of a Comitative (C) case. The same list of cases with the exception of Factitive, is found in Fillmore's other version (Fillmore, 1969: 366).

Fillmore states, "certain cases will be directly related to the modality constituent, as others are related to the proposition itself" (Fillmore, 1968: 23). In the discussion that follows cases related to the modality will be called MODAL cases and cases related to the proposition will be
called PROPOSITIONAL cases. Only the propositional cases are relevant to the sub-classification of verbs. The cases occurring in subject and object position, and "adverbial elements capable of becoming subjects or objects" (Fillmore, 1969: 366) are propositional. All other adverbials, such as (outer) Time, (outer) Benefactive, and Frequentative (Fillmore, 1969: 366) are modal cases. The seven cases listed below constitute the essential case system of the 1968 model.

IV.2.1.2.a Agentive (A). The Agentive case is ‘the case of the (typically animate) perceived instigator of the action identified by the verb’ (Fillmore, 1968: 24). As the highest-ranking case the Agentive must always be chosen as subject in simple active sentences. The Agentive is listed as typically animate in order to include the possibility of considering nouns like ‘robot’ and ‘nation’ as Agents. The Agentive case is marked with the preposition ‘by’ as in sentences:

John / broke / the window. A = S (Subject)

A          V         O

The window / was broken / by John. A=PP (Prepositional Phrase)

O          V         A

IV.2.1.2.b Instrumental (I). The Instrumental case is ‘the case of the inanimate force or object causally involved in the state or action identified by the verb’ (Fillmore, 1968: 24). Natural forces such as ‘wind’ (Fillmore, 1968: 27) is called instruments. The Instrumental case may occur as the subject of the verb, as the direct object of the verb use, and also in prepositional phrases (Fillmore, 1968: 25). The typical case marking for the Instrument case is the preposition ‘by’ if there is no Agent present in the structure and is the preposition ‘with’ if there is an Agent present (Fillmore, 1968: 32), as in sentences below:

The hammer / broke / the window. I = S (Subject)

I          V         O

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Rajesh/ used / a hammer. \hspace{1cm} I = DO \hspace{.5cm} (Direct Object)

A \hspace{1cm} V \hspace{1cm} I

The window / was broken / with a hammer. I=PP\hspace{.5cm}(Prepositional Phrase)

O \hspace{1cm} V \hspace{1cm} I

The window / was broken / by the storm. \hspace{1cm} I = PP

O \hspace{1cm} V \hspace{1cm} I

IV.2.1.2.c \hspace{.5cm} Dative (D). The Dative case is ‘the case of the (animate) being affected by the state or action identified by the verb’ (Fillmore, 1968 : 24). The dative case may occur as the subject, direct object, or indirect object of nonaction verbs; it may also occur as the indirect object of state or action verbs but simply an indirect object. The Dative is typically marked with the preposition ‘to’ as in the sentences:

Girish / believed / the story. \hspace{1cm} D = S \hspace{.5cm} (Subject)

D \hspace{1cm} V \hspace{1cm} O

The book / was boring / to Mohan. \hspace{1cm} D = IO \hspace{.5cm} (Indirect Object)

O \hspace{1cm} V \hspace{1cm} D

The movie / pleased / Meena. \hspace{1cm} D = DO \hspace{.5cm} (Direct Object)

O \hspace{1cm} V \hspace{1cm} D

Girish / gave / the book / to Meera. \hspace{1cm} D = IO \hspace{.5cm} (Indirect Object)

A \hspace{1cm} V \hspace{1cm} O \hspace{1cm} D

IV.2.1.2.d \hspace{.5cm} Objective (O). The Objective case is ‘the semantically most neutral case of anything representable by a noun whose role in the action or state identified by the verb is identified by the semantic interpretation of the verb itself’ (Fillmore, 1968 : 25). Since there is also a Factive case in the list of the cases, Fillmore adds that the Objective case should probably be limited to things, which are affected by the verbal action.

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Things which are effected or created by the verbal action more properly belong to the Factitive case. The Object case may occur as either subject or object with nonaction verbs and as the direct object of action verb, but the notion of the deep structure Objective case is not to be confused with the surface notion, direct object. The prepositional marker for the O case is 0 (zero). Fillmore (1968 : 28 fn. 38) adds that sentences may be embedded only under the O case, as in the following sentences:

The story / is true. \[ O = S(Subject) \]

Kiran / liked / the movie. \[ O = DO(Direct Object) \]

Sucheta / opened / the door. \[ O = DO \]

We / persuaded / Anand / he would win. \[ O = Sent(Sentence) \]

IV.2.1.2.e Factitive (F). The Factitive case is "the case of the object or being resulting from the state or action identified by the verb, or understood as part of the meaning of the verb" (Fillmore, 1968: 25). The Factitive case is used to distinguish the EFFECTED OBJECT, which does not exist prior to the verbal action, from the AFFECTED OBJECT, which pre-exist and is acted upon. The Factitive is also used for cognate object constructions (Fillmore, 1968: 85). Since this case may never occur as subject it is not listed as part of the subject choice hierarchy. Case marker for the Factitive case is 0 (zero), as in the sentences:

Madhav / built / a table. \[ F = \text{effected} \ O \]

Meena / dreamed / a dream. \[ F = \text{cognate} \ O \]
IV.2.1.2.f Locative (L). The Locative case is 'the case which identifies the location or spatial orientation of the state or action identified by the verb' (Fillmore, 1968: 25). Locative includes both stative and directional locatives 'since locational and directional elements do not contrast' (Fillmore, 1968: 25) and are in complementary distribution. Locative prepositions 'at, in, on' occur with state verbs; the directional prepositions 'to, from, into, out of' occur with motion verbs. The Locative case may occur in a prepositional phrase, as in the sentences:

The toys / are / in the box. \( L = PP \)
O \( V \) L

The box / contains / the toys. \( L = S \)
L \( V \) O

Raju / sprayed / paint / on the wall. \( L = PP \)
A \( V \) O L

Raju / sprayed / the wall / with paint. \( L = DO \)
A \( V \) L O

IV.2.1.2.g Outer Locative (L). A propositional case, which must be, distinguished from inner Locative (Lm), a modal case. This distinction corresponds to locatives inside the VP and locatives outside the VP (Fillmore 1968: 26 fn.34). Verbs like 'keep, put, leave' require inner locatives; verbs like 'polish, wash, build' have optional outer locatives; verbs like 'believe, know, want' allow no locative at all, as in sentences.

Ajay / keeps / his car / in the garage. inner - L
A \( V \) O L

Ajay / washes / his car / in the garage. outer - L
A \( V \) O Lm

Bharati / believed / their false stories. no-L
E \( V \) O
IV.2.1.2.h Comitative (C). This case is not defined by Fillmore. It is mentioned under coordinate conjunction and listed by him as a propositional case in the revised version. From the examples given it seems to be a typically animate case used to express accompaniment. The prepositional marker is 'with'. This case may become the subject of the verb 'have', as in the sentences:

The children / are / with Mary. 

O V C 

Mary / has / the children / with her. 

C V O C – copy

IV.2.1.3 Case frames. The case frame is an array of cases into which the central verb may be inserted to describe the propositional content of a sentence. Cases are the units in the system which occur in definite configurations in the languages. There are limitations, expressed or implied, on the ways in which the various cases may combine into case frames. These limitations, taken together, constitute a set of case tactics which are summarized systematically by Walter Cook (1989: 12-13) in form of the following points.

1. In every frame at least one case must occur (Fillmore, 1968: 27). Fillmore's 1968 system does not allow zero-place predicates, every sentence must have at least one case-marked noun. Even sentences like 'it is raining' must be considered as one-place predicate with 'it' serving as the case-marked noun. In practice, case frames in the 1968 model have one, two or three cases; but, in principle, Fillmore does not exclude case frames with four or more cases.

2. No case category may appear more than once in a single sentence. The one-instance-per-clause principle is one of the cornerstones of Fillmore's early model, a principle he considers as a necessary claim. Apparent counterexamples are to be explained as two different cases or as an example of a complex sentence.
3. The Agentive and Objective cases are more fundamental than the other cases. With their surface case markings they help to define the transitivity system of languages. But in Fillmore’s model there is no obligatory O case nor any rule demanding that either the O case or the A case appear in the frame. In fact Dative, Locative, and even Instrumental occur as the only case in the frame.

4. In practice, all cases except the A case and the O case seem to be mutually exclusive. Again, this is not a restriction in principle but a generalization from the examples used.

5. Fillmore always lists the cases in the frame in right-to-left order and the symbol $S$ is used to indicate a sentence embedded under the O case. For comparative purposes, however, the practice here will be to list the cases in left-to-right order. When a sentence is embedded under the O case the case will be listed as O in the case frame followed by the notation that $O = S$, meaning that the O case dominates a sentence.

If the tactics listed above are followed, as Walter Cook suggests, the case frames of the 1968 model can be grouped into: (1) basic case frames, which use only the A case, the O case, or both; and (2) secondary case frames, which use at least one of the mutually exclusive cases, Instrumental, Dative, Locative, in conjunction with the A case, the O case, or both. The resulting verb types can be classed as Basic, Instrumental, Dative, or Locative verbs. These groupings separate the verbs of languages into semantic subtypes and, taken together, constitute one dimension of what can be described as a case frame matrix.

The other dimension of the matrix is based upon verb type. In the definition of each of the cases Fillmore refers to the ‘state or action identified by the verb’.
IV.2.1.4 Evaluation of the 1968 model. The seven cases described above form a CASE SYSTEM. These cases are used in various combinations to form frames, which are the environments for particular verbs. Within the case frame the cases are arranged according to a subject choice hierarchy and not according to the order of occurrence of the phrases in surface structure. Since Factitive never occurs as a subject, it is excluded from the hierarchy and may be considered as a variant of the O case. It replaces the O case when the object is an effected or cognate object. Comitative seems to be an alternative for Locative and would occur in the hierarchy in the same position as Locative. The subject choice hierarchy can then be listed reading from left to right as: Agentive, Instrumental, Dative, Objective (Factitive), Locative (Comitative), abbreviated as: A-I-D-O-L.

In this description of the original cases listed for the 1968 case grammar model the definitions posited by Fillmore have been placed side by side with the examples that are used to illustrate the various cases and in particular those examples which illustrate how the same notions of subject, direct object, indirect object, and prepositional or adverbia1 adjuncts form a system of surface syntactic contrast. This system is totally independent of the underlying deep structure case system. In order for a case system to be viable the cases must be able to move freely in and out of various surface structure positions. The surface structure positions are syntactic, the deep structure cases are semantic and independent of syntax.

According to Fillmore: (1) The case system must consist of a small number of elementary case notions. In practice, Fillmore limits the number here to fewer than ten cases. (2) The case system must be universal in scope. This means that this same list of cases is used to describe the verbs of any language, not just English. We are going to observe the validity of Fillmore’s criterion in relation to Marathi in the later part. (3) The case system must be capable of being extended to the
whole vocabulary of predicating words in the language. The list of cases
must be necessary and sufficient to classify all the verbs of a given lan-
guage, necessary in the sense that all the cases listed are needed to
classify the verbs, and sufficient, in the sense that no other cases are
needed. It will be examined whether Compound Verbs in Marathi create
some problem while assigning case frames.

IV.2.2 The Fillmore 1971 Model

IV.2.2.1 Background. The Fillmore 1971 model revised the deep struc-
ture and produced a new list of cases. This model was first presented in
The revised model is also reflected in an article entitled ‘Some problems
for case grammar’ and presented it in the Georgetown University Round
Table on Languages and Linguistics in 1971. Later reminiscences by
Fillmore concerning his work are found in the author’s preface to Prin-
ciples of Case Grammar (1975) and in ‘The case for case reopened’ in
Syntax and Semantics, volume 8 (1977). Walter Cook comments :

"The deep structure of Fillmore’s 1971 model is charac-
terized by the absence of any modality constituent, the abandon-
ment of the right-to-left ordering of cases, and the absence of
case markers in deep structure. The deep structure now con-
sists of a verb and a series of cases ordered left-to-right in sub-
ject choice hierarchy order. The resulting structure resembles
the logical structures of generative semantics with two main dif-
fferences. First, the generative semantics structure uses only the
labels S, V, and NP, whereas the case grammar structure replaces
the NP labels with case role labels. Second, the NP’s in the
logical structures of generative semantics are ordered according
to the syntactic function they perform as subject, indirect object,
and direct object, whereas the case-labelled nouns are ordered
according to the subject choice hierarchy" (Cook, 1989 : 34-35).
IV.2.2.2 Case System (1971). The case system of the 1971 model is developed from the case system of the 1968 model. In the 1968 model the cases are: Agentive, Instrumental, Dative, Objective, Factitive, Locative, Comitative. In the 1971 model Dative, Factitive, and Comitative are dropped. Most of the functions of the Dative case are taken over by a new Experiencer case. The 1968 Locative case, which included both stative and directional locatives, is now split into three cases, Location, Source, and Goal. Factitive is subsumed under the Goal case and Comitative is no longer mentioned, probably to be subsumed under the new locative cases. The case system of 1971 model is then a nine case system consisting of: Agent, Experiencer, Instrument, Object, Source, Goal, Location, Time as the case that Fillmore says he has ‘become comfortable with’ (Fillmore, 1971: 42). To these Fillmore later adds ‘and possibly Benefactive’ (Fillmore, 1971: 52). The subject choice hierarchy is A-E-I-O-S-G-L-T-B. The 1968 case system is compared with the 1971 system in the following figure by Walter Cook (1989: 39).

![Diagram of Fillmore 1968 and 1971 case systems]

IV.2.2.2.a Agent (A). Agent is ‘the instigator of an action’ (Fillmore, 1971: 37); ‘the principal cause of an event’ as opposed to the immediate cause (Fillmore, 1971: 43) but excluding natural forces (Fillmore, 1971: 44). Immediate causes and natural forces are subsumed under Intru-
ment. The Agent role is not restricted to animate nouns. Inanimate Agents are permitted. In Fillmore's words: "I no longer confuse selection restrictions to animates with true case-like notions" (1971: 42).

**IV.2.2.2.b Experiencer (E).** Experiencer is 'the experiencer of psychological event' (Fillmore, 1971: 37); the case required by 'a genuine psychological event or mental state verb' (Fillmore, 1971: 42). The new Experiencer case takes over most of the functions of the 1968 Dative case for the verbs such as 'see, hear, love, imagine etc.' but excludes those nonpsychological change-of-state verbs such as 'die' and 'grow', which are represented in the newer model by the O case (Fillmore, 1971: 42). Experiencer also excludes the receiver in transfer of property verbs such as 'give'. Transfer of property verbs now use Source and Goal cases with the receiver as Goal (Fillmore, 1971: 42).

According to this description of the new Experiencer case, verbs that were formerly classified as D-O verbs in the 1968 model are now reclassified as E-O verbs, including verbs of sensation: 'see, hear'; verbs of emotion: 'like, want'; and verbs of cognition: 'believe, expect, know, think'. Verbs of emotion such as 'fear, love' and verbs of cognition such as 'imagine' are listed as E-O verbs (Fillmore, 1971: 53) in which the E case is the experiential subject and the O case represents the contents of the experience. The indirect object of cognitive adjectives such as 'be apparent' and 'be interesting', which were formerly classed as O-D verbs, are now presumably to be reclassified as O-E verbs. Emotional adjectives such as 'be sad' (= feel sad) and 'be warm' (= feel warm), formerly classed as D verbs, are now reclassified as E verbs in which the E subject expresses the 'emotion-experiencer role' and the 'sensation-experiencer role' respectively (Fillmore, 1971: 40).

**IV.2.2.2.c Instrument (I).** Instrument is the 'immediate cause of an event' (Fillmore, 1971: 42) as opposed to the Agent as principal cause. If Agent and Instrument co-occur the Agent is the instigator of the event and the Instrument is that cause which comes more immediately in contact with
the event. When in ‘John breaks the window with a hammer’, ‘John’ is the principal cause but ‘the hammer’ is the immediate cause. In nonagentive causality the subject of the verb ‘cause’ can be classed as an immediate cause and is therefore assigned the Instrument case as in ‘the glare of the sunlight caused the accident’ (Fillmore, 1971: 45). Embedded sentences which are subject of the verb ‘cause’ are also immediate causes and are classed as sentences embedded under the Instrument case as in ‘Susan’s screaming caused me to drop the tray’ (Fillmore, 1971: 49).

Natural forces are also subsumed under the Instrument case (Fillmore, 1971: 44). According to Fillmore there is no reason for a separate Force case since it never occurs in contrast with either the Agent or the Instrument case (Fillmore, 1971: 44). Natural forces are better classed as Instruments since natural forces are immediate causes rather than instigators of events. This arrangement allows Agent and natural forces to co-occur in human control of natural phenomena but excludes the possibility of the co-occurrence of Instruments and natural forces in the same sentence.

The notion of Instrument as ‘immediate cause’, as Walter Cook analyses, is carried over into the domain of psychological predicates where Instrument is identified as ‘the stimulus or thing reacted to’ (Fillmore, 1971: 42) or ‘the reacted-to situation in the description of a mental event’ (Fillmore, 1971: 53). In 1968 pairs such as ‘like / please’ or ‘fear / frighten’ were both given D-O case frames and differed from each other only in subject choice. But in 1971 ‘like’ and ‘fear’ are analyzed as E-O verbs and ‘please’ and ‘frighten’ are analyzed as I-E verbs. The semantic relationship between these pairs has been destroyed by this new analysis.

Fillmore’s assignment of the I case or the O case with two-place psychological predicates is consistent. If the E case is the object and the other case is subject this other case is the ‘stimulus’ of the psychological experience and is assigned the I case as in the verb ‘please’ classed as an I-E verb. If the E case is the subject and the other case is object this
other case is the ‘content’ of the experience and is assigned the O case as in the verb ‘like’ classed as an E-O verb. Walter Cook (1989) points out that the question then arises: should these two cases be given the same label, since they seem to be in perfect complementary distribution? Both cases were classed as O in 1968 with the difference between stimulus and content predictable on distributional grounds. Fillmore’s principal argument for assigning two case labels rather than one is that the two cases seem to co-occur with verbs like ‘remind’ as in “the noise (I) reminded me (E) of the accident (O)’. But if ‘remind’ = ‘cause to remember’ then the verb is complex and the resulting case frame may be analyzed as two frames collapsed into one as in ‘the noise (I) caused (G)’, where G = the sentence ‘(E) remembered the accident (O)’. If so, the argument for separate I and O cases does not hold.

IV.2.2.2.d Object (O). Object is considered by Fillmore to be the most neutral case, the ‘wastebasket’ case, ‘the entity which moves or undergoes change’, (Fillmore, 1971: 42) the ‘content’ of the experience with psychological predicates (Fillmore, 1971: 53) when it occurs in direct object position. Sentences are still regularly embedded under the O case but sentences may also be embedded under other cases as long as they are embedded as ‘occupants of some case role’ (Fillmore, 1971: 38). For example, sentences are embedded under the I case as subject of the verb ‘cause’ or under the Goal case as object of the verb ‘cause’ (Fillmore, 1971: 46). With the reassignment of Instrument to psychological verbs and the extension of embedded sentences to Instrument and Goal cases, Walter Cook observes, the 1971 model has drifted further away from any notion of an obligatory O case.

IV.2.2.2.e Source (S). Source is the origin or starting point of motion; it refers primarily to the place-from-which the motion begins. It is applied to ‘earlier location’ with motion verbs, to ‘earlier states’ with change of state verbs, and to ‘earlier time’ with time verbs (Fillmore, 1971: 41). This case
is regularly marked in English with the motion prepositions 'from, away from, out of, off, of'.

**IV.2.2.2.f Goal (G).** Goal is the end point of motion; it refers to the place-towards-which the motion tends. It represents 'final location' with motion verbs, 'final state' with change of state verbs, and 'final time' with time verbs. This case is regularly marked in English with the directional prepositions 'to, towards, into, onto'. With change-of-state verbs the Goal case replaces the 1968 Factive case, (Fillmore,1971 : 42) as in 'he wrote a poem'. In causative constructions, those embedded sentences which function as direct object and identify the resulting state or event are represented as embedded under the Goal case.(1971 : 42-43).

**IV.2.2.2.g Location (L).** Location is the place where an object or event is located. When Location is used in a case system with Source and Goal cases the L case is restricted to stative locatives and the directional locatives are listed as Source or Goal. Fillmore notes that multiple locative phrases referring to a single location do not violate the one-instance-per-clause principle as in 'he was sitting under a tree in the park on a bench'. 'It is clear that we have in this sentence one place specification' (Fillmore,1971 : 51). This stative Location is frequently a modal case, an 'optional complement of essentially any predicator' (Fillmore,1971 : 49). When Location is a modal case it may be represented in a higher predicate with a verb like 'happen' or 'occur'(Fillmore, 1971 : 49).

**IV.2.2.2.h Time (T).** Time is the time at which an object or event is located. Multiple time expressions may refer to a single time specification (Fillmore, 1971 : 51) as in 'Tuesday afternoon about three o'clock'. Time is also often used as a modal case, an optional complement of essentially any predicator. However, 'some verbs take Location and Time complements directly' (Fillmore,1971 : 51) so that location and Time are used as propositional cases, as in 'Jeffrey spent Tuesday afternoon (T) at the beach' or 'the meeting lasted an hour' (T).
IV.2.2.2.i Benefactive (B). Benefactive is the one who benefits from an event or activity. It is listed as a possible case by Fillmore (Fillmore, 1971: 52). He seems to have in mind those Benefactive phrases introduced by 'for' meaning 'for the sake of'. This case seems to be a modal Benefactive case, optional in agentive sentences in which the Agent's role is 'deliberate or voluntary' (Fillmore, 1971: 52). Here again Fillmore suggests a higher sentence analysis with the Benefactive case occurring with a higher verb, such as 'give' or 'offer'. Fillmore does not seem to have here a clear notion of a Benefactive case, which is a propositional case, required by the verb.

IV.2.2.3 Case frames : some principles. In the 1971 model Fillmore attempts to outline the tactics for determining the emic (or being elements in contrast) status of cases with the purpose of limiting the number and kind of case frames. The first principle is the one-instance-per-clause principle; the second principle is the principle of contrast and complementation.

The one-instance-per-clause principle. "According to this principle cases occur in a case frame only once. The principle that 'no case category appears more than once in a given case frame' is enunciated in the early model (Fillmore, 1968 : 24) and is also confirmed in the 1971 model. Apparent counterexamples must be resolved either by establishing two distinct cases, or by analyzing the situation as an instance of clause embedding (Fillmore, 1971 : 38)"(Cook, 1989 : 43).

The principles of contrast and complementation: The principles of contrast and complementation are adapted from phonological and morphological studies by Fillmore. According to these principles, as Walter Cook remarks, elements in contrast are considered emic units within the system but units in complementary distribution, either in mutually exclusive distribution or with partial overlap, may be grouped as subunits of the same emic unit. Fillmore mentions in passing the terminological hor-
ror of 'allocases of the same caseme' (Fillmore, 1971: 41). However, he does not define the term 'caseme.'

According to the principle of contrast, two cases that occur in parallel distribution in the same position and which contrast with each other semantically in that position are separate emic case units. For example, as Walter Cook analyses, if the same verb has subjects with different meanings then these subjects should be assigned different case labels. This case assignment would then have to be confirmed by the use of these cases elsewhere in the system or by appealing to coordination principles, where only like cases can be conjoined (Fillmore, 1971: 40). The principle of contrast is illustrated with the verb 'be warm' in the following sentences:

Ashok / is (=feels) warm.  E = experiences warmth

This jacket / is warm.  I = induces warmth

Summer / is warm.  T = warmth when

Pune/ is warm.  L = warmth where

According to the principle of complementation, two cases may be grouped as allocases of the same case if they are in some kind of complementary distribution. The essential fact to remember about complementation is that contrast is not immediately evident. Further principles of pattern congruity, semantic similarity, and economy would be required to make the decision that two noncontrastive cases are to be grouped into a single case. Fillmore grouped stative and directional locatives under one Locative case in the 1968 model (Fillmore, 1968: 25). In the 1971 model Fillmore illustrates this principle with the Source and Goal cases placed in complementary distribution, as in the sentences illustrated by Fillmore.
He / went / from the chapel / to the cemetery.
A=O V S G

He / changed / from a weakling / to a strong man.
O V S G

The play / lasted / from noon / until sundown.
O V S G

IV.2.2.4 Verb Types. Case frames in the 1971 model use the system of nine cases arranged in a subject choice hierarchy as A-E-I-O-S-G-L-T-B. The resulting case frames, according to Walter Cook (1989), may be roughly divided into (1) basic verb types including instrumental verb using the A, I and O cases, (2) experiential verbs using the Experiencer case, and (3) locative verbs using the Location, Source, or Goal cases. Cook classified the English verbs into the following types:

"(1) Basic verb types, using the A, I and O cases.
State verbs, using the O and I cases (G as effected object).
+[_O] die, grow, float, slip, be true
+[_I] be warm (Ins); be sad (Ins)
+[_I,G] cause (inanimate)

Action verbs, using the A, I, and O cases (also G object)
+[_A] drive, run, swim, walk, ride, scream
+[_A,O] do, hit
+[_A,G] construct, write
+[_A,I,O] break, hit, strike, kick, kiss, slap

(2) Experiential verbs, using A,I,O with E case
State verbs, using the E case with I and O cases
+[_E] be warm (=feel); be sad (=feel)
+[_E,O] fear, love, imagine, regard, suspect, expect
+[_I,E] amuse (=agt), frighten, strike (=impress)
+[_I,E,O] remind (=cause to remember)
Action verb, using the E case with the A,I,O cases
+[_A,E,I] amuse (+agt)

(3) Locative verbs, using A and O cases with L,S,G

State verbs, using the O case with L,S,G
+[_O,L] be in, live in, sit, occur, happen
+[_O,S,G] change, last, float (=go), slip, fall, come go, move (-agt)

Action verbs, using A and O cases with L,S,G (or T)
+[_A,O,G] lean, tv, push, hit, strike (=hit)
+[_A,T] spend (time)
+[_A,*O,S,G]/A=O come, go, move, drive, run, swim, walk
+[_A,O,*S,G]/A=S give, offer, sell, send, throw
+[_A,O,S,*G]/A=G buy, get, receive, rob, steal, take
+[_A,O,S,G] drop, push, shove

Note that the notion of 'time' may be represented by the T case, as in the
verb spend (time); this concept may also be represented by S and G
cases, as beginning and end time points" (Cook, 1989: 44-45).

Related lexical entries: There is no derivational system to relate lexical
entries in either the 1968 or the 1971 Fillmore models. In the 1971 model
case frames such as 'break', +[(A),(I),O], are still conflated. Case frames
still differ from each other by subject choice as with 'have / belong to', or
by object choice as with the 'spray' type verbs. But there is no mention of
the type of inchoative and causative proforms used by Lakoff (1965) to
relate verbs that are derived from the same morphological root. How-
ever, Fillmore does deal with different meanings of the same lexical predi-
cate by a process called conflation, adapted from Leonard Talmy's 1920
work with passing reference to McCawley's 1968 predicate-raising rules.
The basic process is to paraphrase the meanings of a verb and list these
various paraphrases as the underlying structure, which is then conflated
into an expression with a single lexical verb. This process can be applied
to both motion verbs and impact verbs.
**Motion Verbs:** In the semantic domain of motion verbs, Fillmore postulates that the most basic motion verbs are 'come, go', and 'move' since these verbs have no manner, means or medium incorporated into them (Fillmore, 1971: 41). These verbs are then used as basic elements to describe other verbs of motion 'drive, run, swim, and walk' receive two case analyses depending upon whether they are meant to describe types of activities, or types of movements (Fillmore, 1971: 41). When used as activity verbs, they tend to occur with durational phrases; when used as movement verbs, they tend to occur with directional phrases of the Source / Goal type. In movement contexts, the verbs are interpreted as conflation of 'go-by-driving' or 'go-by-running' in which the underlying verb is 'go' and the surface verb adds the manner, means, or medium of the motion. The contrast between these verbs used as an activity and as a movement is given in the following sentences:

Mayur / walked / for an hour.
A
V
T_m

Mayur / walked / to the store.
A, O, S, G / A = O, S-del
V
G

Similarly, verbs like 'float' may express either the process of being suspended in a medium or movement through that medium (Fillmore, 1971: 48). When the verb expresses movement it is interpreted as a conflation of 'go-by-floating'. The difference between the two case analyses is illustrated in sentences below. Suspension in a medium has an O case frame, movement has an O, S, G case frame.

The bottle / is floating / on the water.
O
V
L_m

The bottle / is floating / into the cove.
O, S, G / S-del
V
G
**Impact Verbs:** The process of conflation may also be applied to verbs of impact, such as ‘hit, push, shove, strike’, in which the event of hitting causes an object to move. Normally verbs of impact will receive a simple A-O analysis but when the impact causes movement then the same verbs are interpreted as two clauses conflated into one. Sentences like ‘John hit the ball over the fence’ are interpreted as ‘John hit the ball and it went over the fence’. The verb ‘hit’ has the meaning ‘cause-to-move-by-hitting’. The conflation theory seems to suggest that there is some remote structure in which the original two clauses are related to each other by the verb CAUSE. The event of ‘John-hit-the-ball’ causes the event ‘ball-go-over-the-fence’. This complex verbal structure is then reduced to a single lexical verb. Sentence is represented by the following figure.

Mayur hit the ball over the fence.

=CAUSE (Mayur-hit-ball, ball-go-over-the-fence)

Impact verbs

The conflation process would then have to combine the three verbs into a single predicate in which ‘hit = cause-go-by-hitting’ but the details of this derivation are less than clear. An alternate solution is to postulate two different meanings for the verb. In the first meaning ‘hit’ = ‘X hits Y’ and the verb is a simple A-O verb. In the second meaning ‘hit’ = ‘X causes -Y-to-move-by-hitting it’ and the verb is an A-O-S-G motion.
verb with the lexical verb indicating the cause of the motion. The contrast is illustrated in the sentences:

Mayur / hit / the ball. A, O
      A    V    O

Mayur / hit / the ball / over the fence. A, O, S, G /S-del
      A    V    O    G

In this solution impact verbs receive two different case analyses. Just as motion verbs may have two different meanings associated with verbs of activity and verbs of movement, so impact verbs may have two different meanings associated with verbs of simple impact and verbs of movement caused by impact. The different meanings of these verbs would then be entered into the lexicon with the choice of meaning determined by context.

Instrumental verbs: Walter Cook postulates another problem, which makes it difficult to construct a set of lexical redundancy rules to relate morphologically similar verbs, which is Fillmore's fascination with the Instrument case. He said that there is no simple way to link similar verbs, which seem to be sometimes accompanied by the Instrument case and at other times without it. Yet Instrument remains one of the hallmarks of the Fillmore models and it is hard to imagine a Fillmore type case grammar without it. So Cook tries to find a solution for it, that is, there are three positions an analyst can adopt with regard to the Instrument case. (1) The Instrument case is always present in the meaning of the verb, (2) The instrument case is sometimes present in the meaning of the verb, or (3) the Instrument case is never present in the meaning of the verb (Cook, 1989: 49). Cook discussed them in detail as follows.

1. Instrument always present: In this position, the analyst holds that certain verbs always require the Instrument case as a propositional case and as part of the case frame, whether or not that case appears in the
surface structure. According to this first position verbs like 'break', which sometimes occurs with instrumental phrases and sometimes occur without them, always have the Instrument case in their deep structure. This amounts to a psychological claim that Instrument is in the mind of any speaker who uses such a verb, whether he expresses it or not. It is as though the speaker, on uttering a sentence like ‘John broke the window’, already expects the hearer to ask: ‘with what?’ It is not certain that anyone holds this extreme position. Even those linguists like Fillmore, that require some kind of Instrument case to be part of the system, would not go so far as to say it is present in any single verb all the time. The only real candidate might be a verb such as ‘use’, where the meaning of the verb itself indicates instrumentality.

2. Instrument sometimes present: According to this position, the same lexical verb may occur with Instrument in the deep structure in some contexts but occur without Instrument in the deep structure in other contexts. This seems to be Fillmore's position when he describes the verb 'break' as having four different case frames. In nonagentive use 'break' has the case frames O, or I-O, in agentive use the verb 'break' has the case A-O or A-I-O. Even though these four case frames are conflated into a single lexical entry, there is no reason to believe that Instrument is present when the O frame or the A-O frame is used since there are parallel I-O and A-I-O case frames for those instances in which the Instrument occurs.

The problem with this position is economy. For every O verb there must be a parallel I-O verb to insure that the Instrument, when it does occur, is a deep structure or propositional case. The result is that the lexicon contains two verbs where it should contain one. Every instrumental case frame described in such a system has its parallel noninstrumental case frame. The Instrument case seems to have no domain of its own.
3. Instrument never present: According to this position, the Instrument case is always a modal case, never a propositional case. Therefore, it is never included in the list of cases and is never a part of any case frame. The modal Instrument may occur with virtually any action verb, wherever the meaning of that verb allows the expression of secondary causes.

The principal objection against this position is the use of the Instrument case as subject. If Instrument is not the part of the case system, how is one to distinguish between the sentences ‘John broke the window’, where ‘John’ is an Agent, and ‘the hammer broke the window’, where ‘the hammer’ is an Instrument? The answer is you can not and need not distinguish them.

The point at issue is whether the nouns in the structure determine the case frame of the verb or whether the verb in the structure determines the roles the nouns play in the structure. In the noun-centered system initially adopted by Fillmore, the nouns were first given case labels and then grouped together as an environment in which the verb might occur. In a verb-centered system, such as advocated by Fillmore in 1977, nouns are not cases, they are CASE CANDIDATES. The verb determines the roles that the nouns will play. The case roles are read onto the nouns from the verb, not vice versa.

Therefore, if a verb like ‘break’ is essentially an ‘A-O’ verb, the case role of Agent will be read onto the subject and the case role of Object will be read onto the direct object, no matter what nouns happen to be there. If the noun happens to be an inanimate noun like ‘hammer’ the notion of Agency is read onto that noun. Since Agency is no longer necessarily limited to animate nouns and cases are relational and not categorical notions, there should be no problem is ascribing agency to inanimate nouns. When a noun is assigned a role by the verb, the fit may not be prefect and we may have the beginning of metaphor. But when ‘the dish runs away with the spoon’ it is ‘the dish’ that takes on the features of an Agent due to the verb but the verb does not change its meaning at all.
The result of listing the Instrument case as always a modal case and never a propositional one is that the concept of Agency is broadened. The original Agent and Instrument of the Fillmore models coalesce into a supercase, which includes what elsewhere, might be considered either Agents or Instruments. Under this supercase are also included those nouns which are listed as natural forces. Agent, Force, and Instrument are all one. This is not necessarily a disadvantage, according to Walter Cook (1989), because in the noun-centered system it was often difficult to choose between Agent and Instrument, once Agent was listed as only ‘typically’ animate. Debates raged over particular nouns, with the determining factor often listed as mere size. Thus, ‘hammers, chisels, knives’ were classed as Instruments, but ‘tractors, pile drivers, computers’ were classed as Agents. Assuming Agent and Instrument as well as natural forces under a single case may relieve the analyst of these tiresome measurements. Fillmore’s (1971) various case roles function as some rules of forming case frames of verbs, and they are discussed systematically and illustratively by Walter Cook (1989: 51-54) which is borrowed here.

**Covert case roles:** The theory of covert case roles is more fully developed in the 1971 than in the 1968 model. Covert case roles are those cases that are present in the deep structure but often not present in the surface structure. The importance of covert roles is that they allow the case grammarian to perform a deeper analysis of the case structure, thus avoiding the criticism of Jackendoff (1972) that deep cases are in a one-to-one relationship with surface noun phrases. If this were true, case grammar would be no more than an arbitrary labelling system for NPs already existing on the surface. The 1971 model has a complete theory of covert roles, including deletable roles, coreferential roles, and lexicalized roles.

**Deletable case roles:** The deletable roles, once called ‘vacant’ roles in the 1971 Fillmore model, are those cases that sometimes appear in the
surface structure and sometimes do not. They are discovered by comparing two sentences, one that contains the role in question in the surface structure and one that does not contain this role in the surface structure. Fillmore already had deletable case role in his 1968 model with reference to ‘deletable object’ verbs (Fillmore, 1968: 29). In the 1971 model Fillmore uses the notion of deletable roles to distinguish between verb types on the basis of what case is deletable. For example, the verb ‘rob’ and ‘steal’ are similar but differ in that ‘rob’ has a deletable Object case whereas ‘steal’ has a deletable Source case, as in the following sentences.

John / robbed / a bank / (of money). \( A,O,S,G / A = G,O - \text{del} \)
A = G \hspace{1cm} V \hspace{1cm} S \hspace{1cm} O - del

John / stole / money / (from a bank). \( A,O,S,G / A = G, S - \text{del} \)
A = G \hspace{1cm} V \hspace{1cm} O \hspace{1cm} S - del

Deletable roles are empirically discoverable but require the use of the analyst’s judgement. Verbs are found in different contexts with a wide array of possible surface structures. It is up to the analyst to observe the different cases that occur. But for each case role he must make the judgment either (1) that this case is a modal case not required by the meaning of the verb and therefore should be excluded from the case frame, or (2) that this case, although not always present, is required by the meaning of the verb and should be included within the case frame. The frequency of occurrence of the case role on surface structure is often an indication that the case role is associated with the meaning of the verb and required in the case frame. Compare the following sentences in which the G and O cases are essential to the meaning of the verb but deletable, whereas the unmarked T and L cases are optional modal cases.

John / spoke / to me / about that / yesterday / in the hall.
A = S \hspace{1cm} V \hspace{1cm} G \hspace{1cm} O \hspace{1cm} T \hspace{1cm} L

FILLMORE’S CASE GRAMMAR AND OTHER CASE GRAMMAR MODELS (139)
Coreferential case roles: In the 1968 model there were no totally covert case roles. The concept of cases that are required in the deep structure but which do not and can not appear on the surface was absent from that model. But in the 1971 model both coreferential and lexicalized roles appear.

Coreferential roles are two deep case roles that are applied to the same NP in the surface structure. The doubly labelled NP has two case functions within the sentence. Fillmore re-enforces the notion of coreferential roles by adding a specific rule of required coreference deletion. According to this rule, the lower ranking of the two case roles according to the subject choice hierarchy is obligatorily deleted and may not appear as a separate NP in the surface structure. In all of the examples given the Agent role is coreferential with some lower ranking role and, according to the rule, the lower case role is deleted. But this does not exclude the possibility of coreference existing between two case roles, neither of which is an Agent. The notational convention followed here is to include the two coreferential case roles within the case frame and mark the lower ranking role with an asterisk (*) to indicate that it may not occur in the surface structure. The reason why the totally covert case role, marked with an asterisk (*) cannot appear in the surface is indicated after the case frame. When two roles are coreferential they are joined by an equal’s sign. Thus, for an A-O-S-G verb with coreferential A and O cases, the case frame of the verb is written as +[_A,* O.S.G/A=O. Some example of coreferential roles are given in the following sentences:

\[
\begin{align*}
\text{John / went / to Chicago.} & \quad A,*O,S,G / A=O,S\del \\
A=O & \quad V \quad G \\
\text{John / gave / the flowers / to Mary.} & \quad A,O,*S,G / A=S \\
A=S & \quad V \quad O \quad G
\end{align*}
\]

A=G  V  O  S

In the first sentence stated above 'John' is the instigator of the action and therefore an Agent, but he is also the moving object and therefore has the semantic role of Object. With motion verbs, agentive or nonagentive, the O case is always the moving object. The subject NP then is both Agent and Object and the A case and the O case are marked as coreferential. Although the deep structure case frame is A-O-S-G, the O case since it is coreferential with A, may not appear in the surface structure. The surface structure expression always appears as A-S-G with S or G or both deletable.

In the second sentence above 'John' is instigator of the action of 'giving' and the source of the 'gift'. The Agent role is coreferential with Source, therefore, Source will not appear in the surface structure. Similarly in the last sentence 'John' is simultaneously the instigator of the action of getting the book and the receiver of the property. The Agent is coreferential with the Goal of the activity and Goal may not appear on the surface.

The principle of coreferential roles is not to be confused with the grammatical process of REFLEXIVIZATION. In fact, one excludes the other. Coreferential roles are two roles that are applied to the same surface NP. The lower ranking of the two receives no independent realization on the surface. Since this involves a single NP, reflexivization is impossible. The rule of reflexivization applies to two coreferential NP’s in the same clause and operates independently of case relationships. The appearance of a reflexive pronoun is an indication of two NP’s coreferential in the surface structure and is prime facie evidence that the two roles are not coreferential in the deep structure sense.

When a surface reflexive pronoun appears it must be given a different case role from the NP with which it is coreferential. In the follow-
ing sentence, for example, the object is reflexivized but the subject has the case role of Agent (A) while the direct object has the case role of Object (O).

\[ \text{John} / \text{washed} / \text{himself}. \]

\[ \text{A} \quad \text{V} \quad \text{O} \quad \text{A,O} \]

**Lexicalized case roles:** Lexicalized roles appear in the 1971 model, sometimes-called 'built-in' or 'incorporated' roles. Lexicalized roles are roles that are incorporated into the predicate and therefore do not normally appear in the surface structure. Lexicalized case roles are a special application of a more general process of incorporation. Many elements are incorporated into the meaning of specialized verbs. For example, manner, means, or medium are often incorporated onto motion verbs (Fillmore, 1971: 48). Lexicalized roles occur when one of the role essential to the case frame is incorporated into the verb and therefore is not represented in the surface structure. The notational convention followed here is to list the lexicalized propositional role as part of the case frame and mark it with an asterisk (*) to indicate that it does not appear on the surface. The reason why it does not appear in the surface structure is indicated by adding the notation after the frame that the role is lexicalized. Thus, the case frame of the verb 'slap' is A-I-O with the I lexicalized and is written as \(+[\_A,*I,O] / I\text{-lex}\).

It is possible to repeat the lexicalized role in the surface structure if the role is modified in some way. In this instance there is no change in the case frame of the verb. The case is still lexicalized but a copy of the lexicalized role appears on the surface with its modification. In the following first sentence with the verb 'slap' the unmodified instrumental phrase may not occur in the surface structure, but if the instrumental phrase is modified as in the following second sentence then the modified phrase may occur in the surface structure of the sentence.

\[ \text{Mary} / \text{slapped} / \text{John} / (\text{*with her hand}). \]

\[ \text{A} \quad \text{V} \quad \text{O} \quad \text{A,*I,O}/l\text{-lex} \]

**FILLMORE'S CASE GRAMMAR AND OTHER CASE GRAMMAR MODELS** (142)
Mary slapped John with her left hand.

A, V, O, I-lex

Both propositional roles and modal roles may be lexicalized into the verb. The lexicalization process is a general process that allows a wide range of surface parts of speech in various combinations to be lexicalized into the verb. These combinations include V + NP: 'dine' = 'eat dinner', V + prep: 'enter' = 'go in'; V+ prep + NP: 'jail' = 'put in jail' and V + NP + prep: 'skin' = 'remove skin from'. The case grammarian is interested primarily in those lexicalized NP's which are propositional cases and required by the meaning of the verb in order to arrive at the correct case frame for each verb no matter what the surface form. Lexicalized modal cases may be ignored. The fact that role is lexicalized is no guarantee that it is a propositional case since both propositional and modal cases may be lexicalized.

Lexicalized case roles have a much wider application than the few examples of lexicalized Instrument cited by Fillmore. Lexicalized roles are often discovered in conjunction with those lexical items in which the same morphological form is used as both noun and verb. Given a noun 'comb', there is often a corresponding verb 'comb' which incorporates the meaning of the noun into the verb as 'comb' = 'to arrange the hair with a comb.' When matching noun-verb entries are found in the lexicon there is a strong possibility that the noun has been incorporated into the verb and may be an essential part of its case frame.

Verbs of imposition (put-on verbs) and verbs of removal (take-off verbs) frequently incorporate their object noun into the verb. 'Put on' verbs include: 'bait, color, clothe, dress, grease, hook, oil, powder, paint, plaster, polish, roof, salt, saddle, water, wax', with the meaning 'put X on.' Take-off verbs include: 'core, gut, husk, peel, pit, scale, shell, skin' with the meaning 'take X off'. In case analysis the verb must be paraphrased in terms of its corresponding noun in order to reveal the complete case frame prior to the lexicalization of one of the essential nouns into the verb.
form as in the following sentences:

Jaya / powdered / her nose. \[A,^*O,S,G/O-lex\]

A put-powder-on G

Suresh / watered / the lawn. \[A,^*O,S,G/O-lex\]

A put-water-on G

Although lexicalized roles are not limited in principle, the main examples of the lexicalized roles seem to be the Object case when in direct object position. But the Goal case may also be lexicalized into the verb. This occurs with inanimate nouns in verbs such as ‘box, bag, pocket, can, bottle, bank’ with the meaning ‘put into X’, and with animate nouns in verbs such as ‘cage, jail, imprison’, as illustrated in the following sentences:

He / had boxed / all the oranges. \[A,O,S,*G / G-lex\]

A put-into-boxes O

They / had jailed / Robin Hood. \[A,O,S,*G/G-lex\]

A put-into-jail O

Walter Cook (1989) evaluated the Fillmore 1971 model as follows:

**IV.2.2.5 Evaluation of the 1971 model.** It is apparent that compared to the 1968 model the new 1971 model has certain advantages. The deep structure of the 1971 model is greatly simplified and directly reflects the content of the case frame. Since this structure is identical except for the case labels with the structures used in generative semantics, it has the potential for expansion with all the modal elements and modal cases representable as higher predicates. The omission of prepositions in the deep structure and the absence of rules that add features to nouns is also an advantage as it traces the relational character of the cases as opposed to categorial notions. Cases are semantic relations originating in the verb and case roles are imposed upon the nouns by the verb.

The list of cases in 1971 is different but not necessarily better that the list of cases in 1968. In the 1971 list the localist and nonlocalist
systems are mixed. The local cases Location, Source, and Goal are extended to the domain of change of state and transfer of property but are not extended to the domain of mental state verbs that here use, instead, the Experincer case. The resulting framework is inconsistent. There is doubt, for example, whether in verbs of communication one should apply the localist theory and use the Source and Goal cases for speaker and hearer, or whether one should use the nonlocalist theory and use Agent and Experincer cases for speaker and hearer. There is, however, one solid improvement over the 1968 model. The place of covert case roles (deletable roles, coreferential roles, and lexicalized roles) is made explicit, with the result that the semantic analysis is now deeper than mere surface labelling of cases. Case frames are improved by the addition of those roles which do not always appear in the surface structure (Cook, 1989: 54-55).

**IV.2.3 The Fillmore Case grammar revisited, 1977**

**IV.2.3.1 Clarification of the basic assumptions.** Almost ten years after the publication of 'The case for case' Fillmore reviews the case grammar position in the 'The case for case reopened' (Fillmore, 1977: 59-81). In this article he discusses the basic assumptions of the theory, some apparent and real challenges to the theory, and then adds a new interpretation of case grammar within a more general semantic framework.

The basic assumptions of the model are clarified by Fillmore. He makes it clear in his 1977 article that case grammar is not a grammar; it deals with a level of organization of the clause, describes certain aspects of lexical structure, and offers a convenient way for describing clause types (Fillmore, 1977: 62). It is not 'a general model of linguistic structure' and certainly does not deal with intonation. Case grammar describes 'the inner structure of a clause' (Fillmore, 1977: 60) and deals with internal semantics, the relation of verb to nouns, and not with external semantics, such as truth-value, entailments, or illocutionary force. It deals with
that semantic level which considers such relations as Agent / Recipient, but not with the grammatical level of subject / object, or the rhetorical level of topic / comment.

Case grammar theory offers 'a semantic valence description of verbs and adjectives' (Fillmore, 1977: 60), comparable to the syntactic valence theories prevalent in Europe. Such a description is semantically oriented with semantics as central. As a semantic valence, the system is also verb-centered, not noun-centered, since the valence of the verb determines the nouns that go with that verb and not vice versa. The semantic valence of the verb is now expressed in terms of case frame which 'indicates the case notions conceptually present in a sentence' (Fillmore, 1977: 64). The use of deletion transformations (Fillmore, 1977: 64) makes certain case roles deletable from the surface structure and enables the case analyst to distinguish between case roles that are not conceptually present in the deep structure and case roles which are conceptually present in the deep structure but sometimes not expressed in the surface structure.

Fillmore again rejects the position that all nouns in English are marked by prepositions in the deep structure, a position he held in 1968, but had rejected in his later model (Fillmore, 1971: 65). He also rejects the position, which he held in 1968 but rejected in 1971, that some cases are necessarily animate. Since cases are relational, not categorical, notions (Fillmore, 1977: 65), and (± animate) is a feature of the noun category, these features should not be applied to the descriptions of the cases.

The basic assumptions of case theory include a list of cases, their use in case frames, and a subject selection hierarchy. The list of cases represents case uses, not case forms (Fillmore, 1977: 66); cases are relational, not categorical, and represent roles played by objects in the ontological universe, not a list of categories in the universe. Fillmore admits that he still does not know what the cases are or how many of them there are (Fillmore, 1977: 59).
IV.2.3.2 The notion of ‘deep cases’: The notion of ‘deep cases’ is clarified in greater details by Fillmore in his article ‘The case for case re-opened’ (Fillmore, 1977: 60). Here he tried to locate the concept of deep cases within traditions of semantic and grammatical inquiry. According to him, within semantics, the notion of deep cases is a part of what might be called INTERNAL, as opposed to EXTERNAL semantics, that is, it concerns the semantic nature of the inner structure of a clause, within internal semantics, the concern is SYNTAGMATIC rather than PARADIGMATIC; that is, deep cases are among the types of semantic relations that elements of sentence structures have with each other in context. The concern is with the inner structure of clauses rather than with the semantics of interclausal connections through the devices of co-ordination and subordination.

Within grammatical theory the concept of deep cases can be thought of as a contribution to the theory of grammatical levels, to the theory of grammatical relations, to the description of valences and collocations, and to the general theory of the functions of sentence constituents.

Cases are arranged into case frames as an ‘essential feature of the theory of deep cases’ (Fillmore, 1977: 61). For a particular sentence the case frame expresses the cases required by the verb in that particular context and constitutes one meaning of that verb. The semantic analysis provided by the case frame is related to the surface syntactic structure containing subjects and objects by means of subject choice hierarchy. Some subject choices will be language specific, as, for example, those languages that do not allow inanimate causes as subjects. Other subject choices will be verb-specific, as in the pairs ‘like / please’, ‘strike / regard’. These verb-specific choices must be registered in the lexicon.

IV.2.3.3 Fillmore’s framework with SCENE, PERSPECTIVE and SALIANCE: In his 1977 review of the case grammar model Fillmore
places case grammar within the context of general semantic theory. His position is described in the slogan: 'Meanings are relativized to scenes' (Fillmore, 1977: 59). This new semantic context uses the terms: scene, perspective, and salience. By putting case grammar into this framework Fillmore gives us a better understanding of the case frame, the ways in which sentences should be understood, and how semantic material is separated into figure and ground.

The SCENE is the event in the real world that is activated by any of the verbs relating to that scene. Within a scene there are many elements which are activated within the scene but not directly expressed in the utterance. For example, in the scene Fillmore calls 'the commercial scene' there is an event which may be described, in part, by many different sentences including such verbs as: 'buy, sell, cost, pay' (Fillmore, 1977: 72). In this scene there are at least two Agents, the buyer and the seller, and at least two objects changing hands, the goods and the money.

The PERSPECTIVE is a point of view relative to this scene that is determined by the particular verb chosen. If, for example, we choose the verb 'buy' then the buyer becomes the Agent and is foregrounded; the Agency of the seller is overlooked, and the seller is treated as the Source in the transaction. The object in focus is the goods bought, and the fact that money changes hands is left in the background. The verb determines the perspective and the case frame expresses the case roles that are required, not by the scene in general, but by this particular perspective on the scene.

According to Walter Cook, "The feature of SALIENCE is much less developed and deals with the various possibilities of what is more likely to be foregrounded and what is more likely to be left in the background. Using scene and perspective, case frames are now intelligible as expressing one of many possible perspectives on a given scene, a perspective that is determined once the verb and its accompanying case frames are chosen". (Cook, 1989: 58).
It is indeed interesting to compare this position with that of M.K. Damle, a well-known grammarian of Marathi (1914) who warns us that if the case categories in Marathi are classified on the basis of ka:rakas or meanings, there arise many complications. In the chapter entitled 'Vibhatyaarthva va a:khyata:rt' (Damle, 1965 third edn. : 64-66) he provides the list of ka:raka:rtas. The early grammarians of Marathi who classified case categories on the basis of their meanings categorized them into two classes (1) Kā:rakavibhakti, the verbal case, viz., the NP having relationship with the verb in a sentence and (2) upapada:vibhakti, viz., the NP having relationship with the other NP in a sentence. But as Damle argues, the features of the ka:rakavibhakti do not apply properly to upapada:vibhakti, so the classification of case categories based on their ka:rakas or meanings is not accepted as logical by him.

On the other hand, Charles Fillmore comes to the conclusion that the ‘surface’ organization of a sentence and its ‘deep’ (semantic) structure are asymmetrical. He is a linguist who has tried to define the semantic ‘roles’ which are relevant for the meaning of the sentence. In inflected languages, like Marathi the semantic functions of nominal elements of a sentence are partially reflected in the case system. He thus, relies on the case system in his search for a semantic model of the sentence. In his theory, case is assumed to be a ‘pure’ function, and grammar is conceived as a set of rules for surface realization of case meanings. Fillmore’s model is applied to the semantic aspect of the sentence, the proposition. He writes, “In the basic structure of a sentence we find what might be called the ‘proposition’, that is, a tenseless set of relationships involving verbs and nouns ... separated from what might be called the ‘modality’ constituent.” (Fillmore, 1968 : 23). While it is common in transformational grammars, to begin syntactic analysis with a division of the sentence into a verb and a noun phrase (S → NP + VP), Fillmore begins by dividing the utterance into a modality and a proposition (S → M + P). Leaving aside the modal component of the sentence, Fillmore proceeds
with an analysis of the proposition. The proposition, as analyzed by Walter Cook, is composed of a verbal nucleus plus satellites, or arguments, which are characterized by their role relative to the predicate, or, in Fillmore’s terms, by ‘deep case.’

We are going to observe in the next section how far and in what way these ‘deep case roles’ are realized in Marathi, and examine their validity with reference to one of the languages of the world, that is, Marathi.

IV.3 OTHER CASE GRAMMAR MODELS

IV.3.1 Wallace L. Chafe (1970)

Wallace Chafe does not claim himself to be a case grammarian, but he uses a set of cases, inspired by Fillmore’s 1968 model to describe what Chafe calls ‘verb-noun relations’ in his Meaning and the Structure of Language (1970:10). One of the most important models to be considered in the context of case semantics is Chafe’s generative semantics model in which semantics is central. Parallel to Fillmore’s case grammar model, Chafe’s model also considers the verb to be central and all case relationships to originate with the verb. In other words, the semantic structure of a simple sentence consists of a central verb and a series of nouns, each noun related to the verb by one of a set of noun-verb relations parallel to Fillmore’s cases. Chafe’s system consists of seven cases:

Agent, Experiencer, Beneficiary, Instrument, Patient, Complement and Location. Of these cases Agent and Patient are more fundamental since either Agent or Patient appears in every semantic structure except those structures later to be described as Ambient. His cases are defined as follows:

**Agent (agt)**: Agent is the case required by an action verb (Chafe, 1970:130). The Agent specifies “something (or someone?) which performs the action” (1970:100). An Action sentence will answer the question: ‘What did N do?’ in which N is the Agent noun. The Agent occurs in both action
and action-process sentences and is always chosen as subject when the verb is used in the active voice. Agent nouns will always have the semantic feature 'potent' which means it 'has the power to do something, has a force of its own' (Chafe, 1970: 109). Although the potent feature is regularly associated with animate, 'there seem to be some nouns which are not animate but which may nevertheless occur as Agents' (Chafe, 1970:109). These 'potent' nouns are always Agents, not Instruments. Even inanimate nouns which are not intrinsically potent can be given a 'derived potency' (Chafe, 1970: 155) in some contexts.

**Patient (pat).** Patient is the case required by a state or process verb (Chafe, 1970: 102). For state verbs, patient specifies 'what it is that is in that state' (Chafe, 1970: 98). For process verbs, patient specifies a noun which is said to have 'changed its state or condition' (Chafe, 1970: 100).

**Experiencer (exp).** Experiencer is the case required by an experiential verb (Chafe, 1970: 46). The Experiencer specifies "one who is mentally disposed in some way" (1970: 145). This vague definition can be made more explicit by noting that the examples of verbs chosen by Chafe deal with sensation: 'see, hear, feel'; with emotion: 'want, like'; and with cognition: 'know, learn, remember.'

**Instrument (ins).** The Instrument is 'some object which plays a role in bringing a process about, but which is not the motivating force, cause or instigator; something which the Agent uses" (Chafe, 1970: 155). Instrument has no selectional feature in the verb but may be added to action-process verbs (1970: 152).

**Beneficiary (ben).** Beneficiary is the case required by a benefactive verb (Chafe, 1970: 150). It specifies "the one who benefits from whatever is communicated by the rest of the sentence" (1970: 147). This vague definition is made more explicit by noting the examples used by Chafe which indicate a state of possession: 'have, own', the transfer of property with non-agentive verbs: 'acquire, find, lose, win' and with
agentive verbs: 'buy, sell, send, give'. According to these examples, the Beneficiary is interpreted as the possessor in state verbs and the nonagentive party in transfer of property verbs. The Beneficiary noun occurs with state process, and action-process verbs, but not with action verbs (Chafe, 1970: 150). A completable verb optionally takes a complete noun which 'completes or specifies more narrowly the meaning of the verb' (1970: 156). In creative verbs it specifies 'what it is that is created' (1970: 156). Complement nouns occur with state verbs and action verbs as direct object.

**Location (loc).** Location is the case required by a locative verb (1970: 159). Location specifies the space in which an object is located. Consequently 'a location noun does not occur without a Patient noun' (1970: 217) since the patient noun will represent the object to be located. Only state verbs can be intrinsically locative (1970: 159) but there are derived locative process, action and action-process verbs.

In every locative predication Chafe considers the locative preposition 'in, off, under, into' to be the locative predicate (1970: 159). Consequently in state locative predications it is not the verb 'be' but the preposition which is the locative verb root. In nonstate predications the locative root is added to the verb to form compound verbs like 'fall off, crawl under' etc.

Chafe's system is a verb-centered system in which the verb determines the number of nouns in the structure as well as the case relations that the nouns bear to the verb. "It is the verb which dictates the presence and character of the nouns, rather than vice versa" (Chafe, 1970: 97). In contrast, Fillmore's 1968 model is a noun-centered system in which the nouns provide an environmental feature into which verbs may be inserted, called the case frame. In a truly verb-centred system the case-roles are read on to the noun from the verb. Of these cases Agent and Patient are more fundamental since either Agent or Patient
appears in every semantic structure except those structures later to be described as Ambient. Fillmore's (1968) Dative case is divided into Experiencer and Beneficiary (Chafe, 1970 : 148) and Fillmore's Factive case is subsumed under the Complement case (Chafe, 1970 : 156).

Semantic structure in the Chafe model consists of a central verb and a series of case-marked nouns. The distribution of cases depends upon semantic features in the verb. Features are added to the verb by a series of semantic formation rules and these features determine how many and what kinds of cases will be added to the verb.

The rules of semantic formation add semantic features to the verb and determine the number and kinds of cases to be added to the verb in the semantic structure. The cases used in the model are ranked hierarchically according to which case is normally chosen as subject.

Like Fillmore in 1968, Chafe arranges these cases in a right-to-left order with the probable subject choice to the far right in the structure.

Chafe establishes his subject choice hierarchy on the basis of the distribution of new and old information. Working on the principle that 'a sentence will always contain one and only one noun root which is not new' (Chafe, 1970 : 217), and knowing that the non-new noun will be in subject position, Chafe establishes his own subject choice hierarchy which he lists in right-to-left order as 'this hierarchy consists of Location, Patient, Beneficiary, Agent' (Chafe, 1970 : 217). This subject choice hierarchy is later expanded to include the Experiencer in Chafe's rules of subject formation which are reminiscent of Fillmore's 1968 subject choice rule:

"An Agent or Experiencer noun takes priority in becoming subject ... a Beneficiary noun has the next priority ... otherwise a patient noun becomes the subject" (Chafe, 1970 : 244).

In the areas dealing with case grammar, as Walter Cook points out, Chafe's model is strong precisely where Fillmore's models are weak.
Chafe's model proves to be a true countermodel to Fillmore and a careful comparison of the two raises issues that will certainly lead to better case grammar models in the future. Any case grammar that seriously considers Chafe's alternatives will profit from them (Cook, 1989).

For Chafe as for all generative semanticists, semantics is central, not syntax. It is in the semantic area, where thought is organized, that the well-formedness of sentences is determined. Psychologically, we know what we want to say before we determine how we are going to say it. Within the semantic structure the verb is the central element and the cases are determined by semantic features within the verb. Chafe's case system is better organized than Fillmore's, the verb types are much more clearly defined, and there is a well developed system of derivation that binds together the basic verb types (Cook, 1989: 85).

The strength of Chafe's semantic structure is the centrality of the verb. The verb is specified by selectional features, which, in turn, select the cases required by the verb. This is a true semantic valence theory in which the valence of the verb, its propensity to attract definite cases, is clearly defined by features and these features individually demand the presence of specific case marked nouns from the verb.

It can be said of Chafe's model that his semantic structure has the lack of a higher S node and the immediate constituent ordering of the cases as they are added one by one to the structure. While Chafe does not go into detail for compound sentences and does not directly treat complementation, he does suggest a means for handling relative clauses (Chafe, 1970: 288) and various surface structure adverbials (Chafe, 1970: 307), with the interesting observation that these higher predicates are state verbs. Complementation could be easily handled by embedding sentences under the Patient case. However, a logical structure closer to Fillmore 1971 would be easier to handle (Cook, 1989: 85).
IV.3.2 John M. Anderson (1971)

Another important attempt at the construction of case grammar model is that of John M. Anderson in *The grammar of Case: Towards a Localistic Theory* (1971). He develops his Case Grammar within the context of a syntactic model. (Anderson, 1975: 3), and builds the case system as part of a dependency grammar (Anderson, 1971: 29). He believes that in a dependency grammar in which the cases are represented as dependent upon the verb “the case elements can be interpreted quite naturally as expressing the relation contracted between their dependent Ns and this dependency system “the essentially relational (notional) role of V is contrasted with the basically thing-referential N” (Anderson, 1971: 31). Anderson insists that the verb is central in semantic structure, not just in surface structure.

“Verbs are central relationally, they govern the case functions contracted by nouns: Nouns are primary referentially (and perhaps selectionally), they terminate (nonrecursive) dependency trees” (Anderson, 1971: 31 fn 1).

The dependency model of Anderson, like the generative semantics model of Chafe, places semantics and not syntax as the basis for the generation of sentences. Within these semantic-centered systems the verb is the central element and is a starting point for the formation of semantic structure.

In Anderson's model the semantic structure is central. This semantic structure is formed by semantic formation rules. Anderson's case grammar theory is regarded as the 'localistic' theory. The germinal idea of a localistic theory is that physical location is one of the basic categories that natural language must deal with, and that languages handle many abstract events (such as ownership, cognition. In his book *The Grammar of Case: towards a localistic theory* (1971) John M. Anderson introduces four cases in which two are syntactic (Nominative and Ergative), and two are locational (Locative and Ablative). These cases can be elabo-
rated as follows:

1. **Nominative**: The Nominative case is the name Anderson gives to a deep role relationship comparable to Patient. It should not be confused with the ‘nominative case’ used in grammars of Latin and the like. The Nominative is “the notionally most neutral case” (Anderson, 1971: 37), like Fillmore’s original object. The basic difference between patient and Nominative is that Nominative is universally present, according to Anderson. As he states “every clause has Nominative somewhere” (Anderson, 1971: 50). The only possible exception to this might be an ambient clause like ‘It is hot in this room’, which seems to have only a Locative (Anderson, 1971: 50).

2. **Ergative**. The Ergative case is the instigator of the action; the term comes from the Greek root ‘erg’ meaning ‘work’. The erg is the energizer of the clause. This corresponds very closely to Agent. Ergative is “typically rather than necessarily animate” (Anderson, 1971: 40), and so would probably also include force-type Instruments, like ‘The tornado destroyed the town.’

3. **Locative**. Anderson’s Locative case tells the spatial or (psychological) location of the Nominative. One can subdivide Locative into fine semantic distinctions (‘in’, ‘on’, ‘beside’ etc.) but Anderson finds this unprofitable to his theory. The primary use of Locative is to express physical location, but it is also used in an abstract sense in experiential clauses, where Longacre would have Experiencer. For example,

   ‘Many people know the truth / The truth is known to many people.’

Anderson quotes Kurylowicz’s opinion that “the dative is generally nothing less than an offshoot of the locative used with personal nouns” (Anderson, 1971: 103). He further notes that some Indo-European languages mark both Dative and traditional Locative with the same inflection.

This is the main point of Anderson’s localistic theory: that verbs
of sensation, psychological impingement, possession, and exchange can all be handled as abstract uses of Locative (and Ablative).

4. Ablative. Anderson's fourth and the last case is the Ablative that is the 'place from which' the Nominative or action is moving. Ablative can only occur in conjunction with Locative. A clause which has an Ablative is a directional clause.

1. The ball (Nom) lay on the floor (loc) – non-directional

2. The ball (Nom) rolled from Jane (Abl) to Mary (Loc)

   Notice that in example (1) Locative is the 'place at which but in the directional clause (2), it is the 'place to which'. What evidence does Anderson have to show that these two different sorts of Nominative are, in fact, the same case? He cites examples like these:

3. He has come here from London / He is not in London / He is here.

4. He went from here to London / He is not here / He is in London.

   The first clause in both examples is a directional one and it contains both Locative and Ablative. The second and third clause are logical correlates of the first. The 'place to which' is the 'place at which', and the place from which' is the same as the 'place at which not'. This helps to confirm that Locative is the same case in both directional and non-directional clauses. Moreover, it illustrates that there is "some kind of antonymic relation ... between Locative and Ablative" (Anderson, 1971: 120).

   We have seen that Locative can be used either concretely or abstractly. In the same way, a clause with Locative and Ablative can also be either way. Here are examples of abstract directional clauses:

5. Meera (Erg / Abl) sold the book (Nom) to Sneha (Loc.)

6. Madhav (Erg / Abl) taught Sanskrit (Nom) to Sheela (Loc)

7. Ranjana (Erg / Abl) said a few words (Nom) to Priya (Loc.).
8. Nilima (Loc) smelled the odour (Nom) of the roses (Abl).

Though Anderson changes and complicates his grammatical scheme time and again, he never considers adding another case (though in Chapter II he contemplates of combining Ablative and Ergative)

The localistic case system offers a challenge to the nonlocalistic systems of the type proposed by Fillmore and Chafe. It seems that any semantic domain that can be represented in a nonlocalistic system can be equally well represented in terms of stative and directional locatives.

Anderson's model concentrates upon the analysis of simple declarative sentences including the formation of semantic structures and the realization rules required to derive the surface structure. In his development of the model Anderson explicitly excludes the co-ordination of clauses, sentences containing questions and commands, the modal verbs, and tense and aspect (Anderson, 1971: 33).

The semantic structure of Anderson's dependency model consists of a central verb dominating a series of cases. These cases, in turn, dominate nouns and their case markers. The verbs and cases are generated in an SVO order in their proper surface structure position for English. Since the cases are arranged in surface structure order they cannot be arranged according to any subject choice hierarchy. In Anderson's model there is no modality, no higher S node. Although Anderson generally excludes all modal elements, he does suggest, in discussing modal locative phrases, that they are probably derived 'via some type super-ordination' (Anderson, 1973:83, fn1), following Fillmore's suggestion about higher predicates (Anderson, 1968:23, fn 29).

In Anderson's dependency model the semantic structure is generated from an empty V symbol by means of subcategorization rules (SRs), which add features to verbs, and dependency rules(DRs), which add nouns and syntactic features to the structure in accordance with the features generated. The semantic structure in Anderson's model begins with an
initial V and without an initial strings as it did in the verb - centered Chafe model.

In Anderson’s dependency grammar the cases are defined as “grammatical relations contracted by nouns which express the nature of their participation in the state or process represented in the sentence” (Anderson, 1971: 10). The cases are not interpreted as constitutes nor the NPs as constituents; rather, the case “expresses the function which a particular NP has in a clause” (Anderson, 1971: 29). The underlying case relations are a universal of language” (Anderson, 1971: 14) with the same set of cases applying to all languages.

Case relationships in deep structure are to be distinguished from surface structure relations like subject and object. Following the 1968 Fillmore model, Anderson considers surface grammatical functions like subject and object as “superficial neutralizations of distinct underlying cases” (Anderson, 1971: 10); “the nominals which come to contract these functions have diverse underlying case relationships” (Anderson, 1971: 44). With this distinction Anderson is able to revise the localist hypothesis within a new framework in which localism is applied to semantic structure, not to surface structure.

Anderson’s case system consists of four cases: nominative (nom), ergative (erg), locative (loc) and ablative (abl) but he uses the locative case in two meanings, giving him reductively a five case system. The non-local cases, nominative and ergative, are used apart from the local cases to describe basic verb types. Among the local cases, locative is used for both concrete and abstract stative predicate and locative Goal and ablative-Source are used for both concrete and abstract directional predicates. The five case system is similar to Gruber’s 1965 localistic system and Anderson applies it with great consistency (Cook, 1989: 116).

Anderson assumes that ‘verbs and adjectives are categorically identical’ (Anderson, 1971: 38). He distinguishes them from each other by the [± stative] feature which controls the introduction of the copula ‘be’.

FILLMORE’S CASE GRAMMAR AND OTHER CASE GRAMMAR MODELS (159)
If one ignores the syntactic stative feature in Anderson and replaces it with Anderson's distinction between "notionally stative verb types [-progressive] and notionally dynamic verbs [+ progressive], then Anderson's verb types can profitably be compared with the analyses of other case grammarians" (Cook, 1989: 163).

IV.3.3 Jeffrey S. Gruber (1976)

Jeffrey Gruber proposes a 'prelexical categorial structure' which is 'deeper than the level of deep structure in syntax' (Gruber, 1976: 2). This pre-lexical structure provides a base for the syntactic structure and at the same time provides the meaning relations between the parts of a sentence. In Gruber's theory of lexical structure, the deeper the syntactic structure is, the more semantics will fall within its scope. Within this prelexical structure it is the verb which is the central element.

The case-like system of semantic interpretation later on called thematic relations was originally introduced by Jeffrey Gruber in Lexical Structures in Syntax and Semantics (1976). Working within the context of the Standard Theory (Chomsky, 1965), Gruber states his position as 'a derivational (i.e. generative) semantic theory as opposed to an interpretive one' (1976: 1) which concentrates upon 'how the meaning of a kernel sentence and its syntax are related' (Gruber, 1976: 1). "The verb is the principal variable in sentences upon which the syntactic form of a sentence depends" (Gruber, 1976: 3). Further, these 'syntactic patterns in a given language are connected to relationships of meaning" (Gruber, 1976: 3).

Gruber's study, therefore, deals with the syntactic patterns in sentence structure which are deeper than the level of deep structure and which also give an indication of the semantic structure. The verb is the central element in the structure. Other elements in the structure are noun phrases and prepositional phrases which are given case-like labels associated with particular verbs.
W. Cook substantiates Gruber's work to be considered as the case grammar.

"A case grammar model is one that deals with the semantic relationships in terms of a central verb and a series of case labelled NP's required by the semantic valence of the verb. There is a small list of cases and a set of tactics for using these case roles to express the environments in which a verb occurs. Verbs in the lexicon are related through their case frames and involve the use of deletable, coreferential, and lexicalized case roles" (Cook, 1989: 122).

Gruber's work deals with a prelexical categorial structure which is the basis for both syntactic relationships and semantic relationships within a sentence. The verb is the principal variable upon which the syntax and semantics of a sentence depend. The relationships in a sentence are expressed in terms of this central verb and series of nouns with case-like labels. The basic case role is the Theme, which is regarded as 'an obligatory element in every sentence' (Gruber, 1976: 38). Other case labels used in conjunction with the Theme are Location (Gruber, 1976: 78) and Goal (Gruber, 1976: 66), to which Agent (Gruber, 1976: 157) is added later.

Gruber's system then is essentially a five case system consisting of:

(1) Agent - (2) Theme - (3) Location - (4) Source - (5) Goal

\[ A \ - \ O \ - \ L \ - \ S \ - \ G. \]

These five case roles are used to separate verbs into verb types. In one dimension Gruber classifies verb as motional, durational and non-descript (nonmotional, nondurational). In the other dimension he classifies them according to semantic domains as identificational, positional, and possessional. The case system is a localistic one with Location, Source and Goal used in their concrete meaning to describe positional
verbs and in their abstract meaning to describe both possessional and identificational verbs.

Verbs are related to each other through case relationships. For example, the intransitive / transitive forms of the verb ‘roll’ are related as noncausative / causative forms (Gruber, 1976: 6). In other words they differ in that one requires an Agent and the other does not. Coreferential roles are essential to Gurber’s analysis for some times “the theme is optionally identified as an Agent” (Gruber, 1976: 158). Gruber’s use of the incorporation of several lexical categories into a simple lexical verb, although it primarily deals with the incorporation of prepositions, opens the way for lexicalized cases. Deletion transformations are also possible within the model, allowing for the possibility of the deletion of some essential case roles from the structure.

It could be said of Gruber’s system that it is localistic. It applies concrete locative cases to abstract locative use, whereas Fillmore’s 1968 system is nonlocalistic with a different kind of generalization. Although Gruber’s localist system has an advantage in relating Positional and Possessional uses of the same verb, Fillmore’s nonlocalist system has an advantage in keeping concrete locative verbs distinct from the more abstract domains of possession or mental state verbs.

Walter Cook comments:

“The system of thematic relations proposed by Gruber was the first case grammar ever proposed but it did not become prominent until it was adopted by Jackendoff in 1972. In many ways Gruber anticipates Fillmore, describing verbs in terms of case relationships, and also anticipates Anderson, proposing a localistic system with an obligatory Theme. Jackendoff accepts Gruber’s basic classification of verbs in terms of a set of thematic relations, reducing Gruber’s verb types to primitive semantic functions with semantic domains specified by locational modes. He then incorporates this analysis into the interpretive semantic com-

FILLMORE’S CASE GRAMMAR AND OTHER CASE GRAMMAR MODELS (162)
ponent of the grammar. The system of thematic relations proposed by Gruber and Jackendoff raises many serious issues for case grammar theory. Given localistic case system, should local cases be excluded from basic verb types? Is durative a lower level semantic primitive or a higher function with lower semantic functions in its scope? Can the system be successfully applied to experiential verbs? Given the importance of the Gruber Jackendoff contributions to case theory, these questions should be answered in a context that compares thematic relations with the case grammar models of Fillmore, Chafe, and Anderson” (Cook, 1989: 148).

Gruber’s theory, as Janet D. Fodor (1977) points out, is roughly contemporaneous with Fillmore’s and is similar to it in a number of fundamental respects. Gruber (1965: 67) also proposed a level of representation ‘shallower’ than the semantic level but ‘deeper’ than the standard deep structure level. And he also used this level to relate sentences with converse verbs. But theories of Fillmore and Gruber are by no means identical, and one significant aspect of Gruber’s should be emphasized. Gruber called his proposed level of representation the PRELEXICAL LEVEL. As this indicates, the terminal elements of tree structures at this level are not lexical items but are, in effect, semantic primitives. Fillmore’s underlying structures for sentences like-

The audience liked the overture.

The overture pleased the audience.

contain the two distinct lexical items ‘like’ and ‘please’ and his Subject-ValORIZATION transformation is sensitive to the difference between them. Which noun phrase is raised into subject position depends on which verb is present. By contrast, Gruber’s prelexical representations of these sentences would be identical, and contain only semantic primitives common to both verbs. Transformations can apply to these prelexical representations BEFORE lexical items are inserted. Lexical items carry
contextual specifications which govern the types of structure into which they can be inserted. Thus, instead of deciding which transformation to apply on the basis of a previous choice of lexical item (which is Fillmore’s approach), Gruber decides which lexical items to insert on the basis of which prelexical transformations have applied.

This is obviously closely akin to prelexical transformations and post-transformational lexical insertion which are fundamental to generative semantics. Gruber’s prelexical structures, at least in early versions of the theory, were less abstract and semantically explicit than GS (Generative Semantics) underlying structures; like Fillmore, Gruber assumed that some interpretive semantic rules would still be needed. Also, Gruber does not require, as generative semantics does, that a lexical item can substitute only for a single constituent of the prelexical structure. His derivations therefore differ in details from Generative Semantics derivations. But though these differences turn out to be significant, the similarities also stand out. To a large extent, Gruber’s theory has been absorbed by generative semantics.

Also, Gruber’s system of THEMATIC RELATIONS (which are what corresponds to the case relations of Fillmore’s theory) have been adopted by Jackendoff as part of the semantic representation system of an extended standard organizational principles of Gruber’s theory; he rejects the prelexical level, and drives the thematic relations from standard deep structures by means of interpretive rules.

IV.3.4 Ray S. Jackendoff (1972)

Ray S. Jackendoff adopts Gruber’s system of case-like relations and calls them ‘thematic relations’ (Jackendoff, 1972 : 29), based on the fact that there is an obligatory Theme in every sentence. The other case relations in Jackendoff’s system are the same as Gruber’s, namely, Location, Source and Goal (Jackendoff, 1972 : 32), to which Agent is later added (Jackendoff, 1972 : 32). He arranges these five cases in a
thematic hierarchy (Jackendoff, 1972: 43) in the following order:
(1) Agent (2) Location, Source and Goal, (3) Theme.

He then proceeds to use this thematic hierarchy to explain the passive (Jackendoff, 1972: 43), the reflexive (Jackendoff, 1972: 148), as well as the Equi NP deletion rule (Jackendoff, 1972: 214). As far as the case system is concerned Jackendoff remains faithful to Gruber’s original analysis. He clarifies Gruber’s system without changing any of the essential details.

Jackendoff (1972) held that case grammar and thematic relations were two opposing systems. Given a choice between the two systems, he rejects the Fillmore 1968 case model as inadequate to express semantic relationships and adopts Gruber’s theory of thematic relations.

According to Jackendoff, the deep and surface structures in Fillmore’s 1968 case grammar differ only in word order and the addition of case nodes and case markers. “The numbers of NPs in the deep and surface structures is the same; each surface structure noun phrase is assumed to have exactly one deep structure case” (Jackendoff, 1972: 34). The system of thematic relations, however, as proposed by Gruber allows the use of coreferential rules. More than one case label can be applied to the same NP in the surface structure.

It is true that Fillmore does not deal explicitly with coreferential roles in his 1968 model but deletable roles are used as in the sentence: ‘Mother is cooking.’ (Jackendoff, 1968: 29). If some case roles are deletable then, in those sentences in which the object is deleted, the number of NPs in the surface structure and in the deep structure are no longer the same. Jackendoff is, however, correct in assuming that an adequate case grammar theory requires coreferential roles. Fillmore adds both coreferential roles and lexicalized roles in his 1971 model.
IV.3.5 Robert E. Longacre (1976)

R.E. Longacre’s scheme of case categories (Longacre, 1976) is based on a careful consideration of case grammar literature as published at the time. He believes that Fillmore’s ideas regarding case grammar, especially as developed from 1967-70 point the way to a useful set of notional categories – whatever the uses, abuses and vagaries of subsequent developments Longacre’s scheme tried to do several things, as he claims: (1) evolve a scheme of case frames which would classify verbs in all languages; (2) identify a case frame according to predicate features which necessarily called forth a given constellation of cases or roles; (3) use minus / plus Agent, Experiencer and Patient to define the main quadrants of the system; and (4) come out with an overall regularity which still left room for local irregularity (cf. The periodic chart of the chemical elements).

Longacre’s scheme of case categories published in 1976 draws heavily on Fillmore and Chafe with useful features appropriated from others, for example, Halliday and John Anderson. Especially, he wants an ‘object’ or ‘patient’ which is not a wastebasket case as in so many case grammar systems. He retains Experiencer and Instrument – in spite of qualms regarding the latter. He adds Measure, retains but redefines Halliday’s Range, and abolishes Benefactive. Fillmore’s (1971) Source, Path and Goal are kept along with the realization that in many non-Indo European languages these are never expressed in one clause: ‘I left A, passed through B, and arrived at C’.

Longacre describes his book An Anatomy of Speech Notions (1976) as “an attempt to catalogue the notional categories underlying language” (1976: 9). He explores the deep structure relations which underlie grammatical structures, dealing at different times with different hierarchical levels (clause, sentence, repartee, and discourse). At the clause level the deep structure is defined in terms of a case grammar which is related to those of Fillmore, Chafe and others. He defines a
system of ten cases which include in their definitions both relational and semantic features.

"Experiencer (E). An animate entity whose registering nervous system is relevant to the predication (Longacre, 1976: 27).

"Patient (P). The inanimate entity of which a state or location is predicated or which undergoes change of state or of location; the animate entity which undergoes change of (physical) state or of location (Longacre, 1976: 28).

"Agent (A). The animate entity which instigates a process or which acts; an inanimate entity which acts (e.g. an astronomical body or the semi-autonomous machine) (Longacre, 1976: 28).

"Range (R). The role assigned to any surface structure nominal that completes or further specifies the predicate; the product of the activity of a predicate (Longacre, 1976: 29).

"Measure (M). The role assigned to the surface structure nominal which completes a predication by quantifying it; the price in a transfer (Longacre, 1976: 30).

"Instrument (I). An inanimate entity or body part which an (animate) agent intentionally uses to accomplish an action or to investigate a process; any entity (unintentional with animate) which conditions an (emotional) state or which triggers a change in emotional or physical state (Longacre, 1976: 31).

"Locative (L). The locale of a predication. This role is more limited in distribution than source, path and goal which replace it in many frames. The locale of a predication is the place where the predication takes place without implying motion to, form or across the space indicated (Longacre, 1976: 32).

"Source (S). The locale which a predication assumes as place of origin; the entity from which physical sensation emanates; the animate entity who is the original owner in a transfer (Longacre, 1976: 32).
"Goal (G). The locale which is point of termination for a predication; the entity towards which a predication is directed without any necessary change of state in that entity; the animate entity who is the non-transitory or terminal owner” (Longacre, 1976: 33).

"Path (Path). The locale or locales transversed in motion etc. predications; the transitory owner” (Longacre, 1976: 34).

In addition to these neuclear cases, the system includes the peripheral cases of Time and Manner. Cause and Purpose, however, are not included since Longacre discusses these on the sentence level.

In Longacre’s case system, verbs are classified according to their semantic properties, according to a basic division of state, process, action process and action types. These parameters are closely related to the constellations of cases which the various verb classifications predict, so these classifications are referred to as ‘case frames’. This breakdown is described by charts (Longacre, 1976: 42-3). The cases and case-frames form the basis for the discussion of sentence (interclausal) relationships. In this system, case grammar functions as one of many levels in a multilevel approach to deep structure categorization (Scott Palmer, 1979: 41).

IV.3.6 Pike and Pike (1977)

Austin Hale (1973) and Pike (1976) seem to have had a different reason for developing a system for relating nominals in a clause than Longacre did. In contrast to Longacre’s approach, there is no mention of ‘deep structure’ or of mapping from one level to another, but rather there is a concern for identifying surface grammatical units according to their full range of accompanying functional relations. Hale and Pike, like case grammarians, felt that in classifying clauses, something more was needed than mere surface marked or ordered categories of subject, object and referent (indirect object and bound locative) since, with consistent meaning, clauses may represent the same cluster of nominal items in a variety
of categorical arrangements. Case grammar (Fillmore in particular) was rejected as too heavily weighted with 'semantic' features; Hale preferred to treat these items separately. In Hale's system, the concept of transitivity was abstracted out of the environment of direct surface structure relations, and nouns were described purely according to their transitivity relationships to the verb. The four relationships thus created were: Actor, Undergoer, Site (later called Scope) and Item. These are defined later on by Pike and Pike (1977) as follows:

**Actor.** "The term (participant) which performs the action of the verb" (Pike and Pike, 1977: 481)

**Undergoer.** "The term (participant) which receives the action of the verb; or is an analogous relation to the verb, with semantic variants" (Pike and Pike, 1977: 491).

**Scope (or Site).** "The term (participant) which denotes the direction or goal toward which or away from which the action of the verb is directed" (Pike and Pike, 1977: 489).

**Item.** Item is not defined but presumably means item described or classified.

Pike and Pike (1977) use cases as features linking the case system to the verb system. 'The first choice is between actor and no Actor. This distinguishes between transitives and equatives. For the transitive set the next choice is between Undergoer and no Undergoer. Those which have no Undergoer are the transitives.' (1977: 46). Equative verbs are assigned the item case. All verb types are further classified as to whether or not they require the Scope case.

However, once these roles are tied to the transitivity system, they acquire a new to the transitivity system, they acquire a new operational definition. **ACTOR** is the subject or a nonequative verb, **ITEM** is the subject or an equative verb, **UNDERGOER** is the direct object of transitive verbs and, **SCOPE** is any other essential nominal.
IV.3.7 Walter Antony Cook (1989)

According to Walter Cook, case grammar theory is a theory of sentence semantics in which the content of a single clause is represented in terms of a verb and the cases required by that verb's semantic valence. His case grammar matrix model is a particular model within that theory, an alternative model based upon the best insights of other models within that theory. His case grammar matrix model remains within the case grammar tradition in the cases, the case frames used, the system of derivation adopted, and the use of covert roles.

The logical structure of Cook's model consists of an S dominating a verb and one, two or three cases. His case system consists of five propositional cases: Agent Experiencer, Benefactive, Object and Locative and nine modal cases.

Propositional cases, according to Walter A. Cook (1978) are cases required by the semantic valence of the verb. His case grammar matrix model uses five propositional cases. In subject choice hierarchy order they are: Agent (A), Experiencer (E), Benefactive (B), Object (O) and Locative (L). His modal cases are cases not required by the semantic valence of the verb. They include: Time, Instrument, Manner, Cause, Purpose, Result, Outer Locative and outer Benefactive.

As W. A. Cook (1978) puts forth, propositional cases are cases required by the semantic valence of the verb types with which they occur. Each case that occurs with a verb is matched by a semantic feature in the verb itself, following Chafe (1970). The sum of the semantic features is the semantic valence of the verb. It is this semantic valence which determines the number and kind of cases that must occur with a verb. Modal cases are optional cases not required by the verb's semantic valence.

Walter A. Cook (1978: 299-300) defines the five propositional cases as follows:

"Agent (A) is the case required by an action verb. Although Agent is the typically animate doer of the action, inanimate nouns may also be Agents.
Experiencer (E) is the case required by an experiential verb. Experiencer is the person experiencing sensation, emotion, cognition, or communication.

Benefactive (B) is the case required by a benefactive verb. Benefactive is the possessor of an object, or the nonagentive party in transfer of property.

Object (O) is an obligatory case found with every verb. Object is the neutral underlying theme of the state, process, or action described by the verb.

Locative (L) is the case required by a locative verb. Locative is restricted to physical location, and includes both stative and directional locatives.” (W.Cook, 1978 : 299-300).

Case frames are arranged in the form 3 x 4 matrix of case frames with state, process and action verbs in one dimension and basic, experiential, benefactive and locative in the other. Verbs which are morphologically related constitute a set with one form as intrinsic and other forms derived from it by means of the four derivational units: inchoative, resultative, causative and decausative. A theory of covert case roles is used to explain the absence of certain case roles in surface structure.

**Case frame matrix**:

<table>
<thead>
<tr>
<th>Verb types</th>
<th>Basic</th>
<th>Experiencer</th>
<th>Benefactive</th>
<th>Locative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. State</td>
<td>Os be tall</td>
<td>E,Os like</td>
<td>B, Os have</td>
<td>Os, L be in</td>
</tr>
<tr>
<td>2. Process</td>
<td>O die</td>
<td>E,O enjoy</td>
<td>B, O acquire</td>
<td>O,L move, iv</td>
</tr>
</tbody>
</table>

**Case tactics**: The tactics by which the five cases of the matrix model are arranged into case frames have been developed from many sources. If these tactics are followed, W. Cook claims, then the number and kind of case frames possible within the model are severely limited. These tactics are summarized by Cook in the following set of statements:

FILLMORE'S CASE GRAMMAR AND OTHER CASE GRAMMAR MODELS (171)
(1) Each frame consists of a verb and one, two or three cases.
(2) The Object case is obligatory to every case frame.
(3) The secondary cases E, B and L are mutually exclusive.
(4) No case except O occurs more than once in a case frame.
(5) Cases are listed left to right by subject choice hierarchy.

As per Cook’s case frame matrix, the verbs of a language are first analyzed as state, process or action verbs. If the verb is a state, it belongs on the first line of the matrix and the O case is marked as Os to indicate stativity. If the verb is a process, it belongs on the second line of the matrix and no Agent is present in the case frame. If the verb is an action, it belongs on the third line of the matrix and has an Agent case in the case frame.

1) **State Verbs** express a notionally stative situation. In English, state verbs do not take progressive aspect nor the command imperative. In any conflict between the stative meaning and the syntactic tests, the stative meaning takes precedence.

2) **Process verbs** express a dynamic nonagentive event. In English, they freely take the progressive aspect but do not take the command imperative. Process verbs include motion verbs with inanimate subjects and involuntary human activities.

3) **Action verbs** express a dynamic agentive event. In English, action verbs take both the progressive aspect and the command imperative. Action verbs refer to an Agent who may be said to be performing the action indicated by the verb.

Verbs are next classified with a specific semantic domain. Verbs that use only the primary cases, Agent and Object, are classed as basic verbs. Verbs which also use one of the other three cases, the Experiencer, the Benefactive, or the Locative cases, are listed within the Experiential, Benefactive and Locative domains. The Experiencer, Benefactive and
Locative cases are mutually exclusive and never occur together in the same case frame.

1) **Basic Verbs** are only the Agent and Object cases. These are verbs which do not belong to the experiential, benefactive, or locative domains and include basic state, basic process and basic action verbs.

2) **Experiential verbs** use the Experiencer case along with the Agent and Object cases. These verbs describe the semantic domains of sensation, emotion, and cognition proper to the inner life of man. Experiential verbs are also used to describe human communication, which always involve a speaker, a hearer and what is said.

3) **Benefactive verbs** use the Benefactive case along with the Agent and Object cases. These verbs describe the semantic domains of possession and transfer of property. State verbs describe possession and process verbs are used to describe voluntary and involuntary transfer of property.

4) **Locative verbs** use the Locative case along with the Agent and Object cases. These verbs describe the semantic domains of location and direction. State verbs describe static location in a place, marked with stative prepositions. Process and action verbs describe directional motion, marked with directional prepositions.

**Extension of the Matrix:**

The suggested case frame matrix is established by Cook with the claim that twelve case frames of the matrix are necessary and sufficient for the classification of all the verbs of the language in all their meanings. This claim was modified in the following ways –

1. Double O case frames are to be allowed.

2. Some special verbs will require an essential Time element, and

3. Verbs with the same case frame may differ in regard to the case to be chosen as subject.
(1) Double O case frames: Special problems arise with the analysis of predicate nouns, those two-place predicates in which the subject and predicate nominal are somehow equated. The simplest solution is to relax Fillmore’s one-instance-per-clause principle and allow double-O case frames, for example, be +N as +[Os, Os]. Become +N as +[O, O] and verbs with the meaning ‘make, become’ as +[A, O, O].

(2) Essential Time case: There are verbs in the language which require an essential Time case. For example, Time is predicated of an event as ‘the meeting is on Wednesday’. Classified as +[Os, T]. process verbs may occur such as ‘last’ classified as +[_O, T], and action verbs occur such as ‘spend (time)’ classified as +[___A, O, T].

(3) Subject choice: Verbs with the same case frame often differ by subject choice such as ‘have’ +[B, Os] and ‘belong to’ +[Os, B]. the frame is identical in the number and kind of cases but the abnormal subject choice is indicated by writing the case frame with the cases in reverse order. If these exceptions are taken into account, W. Cook argues, then the case frame matrix must be revised to include double O frames, that is, frames with a Time case and frame that differ in subject choice. The revised matrix introduced by Walter A. Cook is as follows:

Revised Case frame matrix:

<table>
<thead>
<tr>
<th>Verb types</th>
<th>Basic</th>
<th>Experiencer</th>
<th>Benefactive</th>
<th>Locative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.State</td>
<td>Os be tall Os, Os be +N</td>
<td>E, Os like Os, E be boring</td>
<td>B, Os have Os, B belong to</td>
<td>Os, L be in L, Os contain</td>
</tr>
</tbody>
</table>
In accordance with W. Cook's matrix model, once the verbs of a language have been classified into case frames and placed within definite cells of the matrix, it is clear that there are related sets of verbs based upon the same lexical root. These related verbs often include state, process and action forms. What is needed, as he states, is a derivational system which, given one verb in the set is basic, will explain how other verbs are derived from it, and introduces the system of derivation (Cook, 1989: 197-198). He adopts the bidirectional derivational system proposed by Chafe (1970).

According to Walter Cook, his case grammar matrix model is a model which represents the semantic structure of each clause in terms of a central verb and the cases required by the semantic valence of that verb. (1) Deep structure consists of an S (sentence) dominating V and one, two or three cases. (2) The list of cases includes Agent, Experiencer Benefactive, Object and Locative cases that are mutually exclusive. (3) Verb types found from the cases are arranged in a 3 x 4 matrix of case frames. (4) Morphologically related verb forms constitute a set with one form as intrinsic, and other forms derived from it by derivational units. (5) A theory of covert case roles, and lexicalized roles, is used to explain the absence of certain roles in surface structure.

Interestingly W. Cook's case grammar matrix model was applied to the complete text of Ernest Hemingway's The Old Man and the Sea. The novel contains roughly 5000 clauses and a case frame was assigned to each clause. All verbs in the text were sorted according to case frames. He observed that, in general, the case frames of the matrix proved to be necessary and sufficient for the classification of all the verbs encountered in the text. The extensive application of the model to the narrative of the text revealed, on the one hand, that the same verb was used with different case frames to express a wide variety of semantic content; on the other hand, many different surface expressions were encountered which had the same underlying semantic representation.
W. A. Cook's case grammar matrix model was applied to a wide range of European languages, including Spanish, French, German, Dutch, Portuguese and Norwegian. It was also applied to non-European languages such as Chinese, Japanese, Thai, Korean, Vietnamese, Persian and Arabic. In all of these languages, W. Cook (1989 : 210) states, the case frames of the matrix proved to be necessary and sufficient for the classification of the verb system although the syntactic correlates of these frames and the syntactic tests for establishing them varied from language to language.

IV.3.8 Stanley Starosta

Stanley Starosta's *The Case for Lemicase: An Outline of Theory* (1988) is a lexicalist approach to case grammar. As a version of case grammar, lexicase recognizes that the part of a speaker's knowledge of the grammatical properties of the sentences in his or her language includes a set of semantically contentful case relations which obtain between the head of a construction (the head of a noun phrase as well as the head of a sentence) and its nominal attributes. As a consequence, the model assumes that it is not enough to mark a verb (or noun) for the purely categorial environment in which it is allowed to occur, as was done in Chomskyan 'standard theory' transformational grammar. In addition to categorical environment feature (and ultimately instead of it), verbs (and nouns as well) must be provided with an environment stated in terms of case relations.

S. Starosta in his article 'Case relations, perspective and patient centrality' (1981-82) explains his aim in forming his lexicase grammatical framework.

"Lexicase is an attempt to retain the insights of case grammar without sliding into the empirical bankruptcy which befell its Fillmorean antecedent. The general strategy employed to this end is a strict adherence to the requirements of formality and
explicitness and the ruthless rejection of all redundant power-consuming machinery" (S. Stanley, 1981 – 82 : 3)

His argument is that instead of calling grammar as the hand maiden of semantics, his framework has put the whip in the other hand and placed the primary burden of identifying case relations on grammatical criteria, correspondingly decreasing the weight of purely situational evidence (S. Starosta, 1981 – 82 : 4).

The case relations assumed by him to be needed in a universal grammar are

"**Patient (PAT)** the perceived central participant in a state or event (obligatory with all verbs; formerly ‘object’ or ‘theme’).

**Agent (AGT)** the perceived external instigator or initiator of an event or state.

**Locus (LOC)** the perceived location, source, or goal of the patient (formerly ‘inner Locative’).

**Place (PLC)** the perceived abstract or concrete spatial setting of the action or state (formerly ‘Outer Locative’).

**Correspondent (COR)** the entity perceived as being in correspondence with the patient (Formerly ‘Dative’ or ‘Experiencer’).

**Reference (REF)** the perceived external frame of reference or standard for the state or action (formerly ‘Benefactive’).

**Means (MNS)** the abstract path by way of which an external influence impinges on the situation (formerly ‘manner’).

**Time (TIM)** the temporal setting of a state or event.” (S. Starosta, 1981 – 82 : 4-5)

After specifying the case relations as stated above, S. Starosta clarifies that the semantic definitions given after each case relation are secondary rather than criterial. The existence and inventory of case relations is established first on the basis of syntactic criteria and the semantic
definitions are then induced by comparing the instances of a given syntactically defined case, say, AGT, and noting what semantic features are shared by the various instances of that case relation (S. Starosta, 1981-82: 5).

Advocating the grammar-oriented procedure, S. Starosta states, it becomes possible to state certain universal grammatical generalizations that were not possible under the situational approaches. They are:

1. Patient is obligatory with every verb.

2. Six case relations can be grouped into three ‘inner-outer’ pairs, with one number of each pair referring specially to the referent of the patient case relation and the other member referring to the situation referred to by the sentence as a whole.

3. An agent must always act on a Patient, never in isolation.

4. Patient always takes precedence over Locus as a candidate for subject therefore,

5. The subject of an intransitive sentence is always a patient.

6. An accusative language is one in which AGT always takes precedence over PAT as the case relation of the subject, and

7. An ergative language is a language in which the subject of every verb is a Patient.

8. All verbs follow the ‘One per sent constraint’ except for instances of successive inclusion or contiguity, no case relation can appear more than once per clause. This entails that

9. Only when a process of lexical derivation such as morphological causativization introduces a new case relation into the case frame of a verb that already has an instance of that case relation will the old case relation be completely displaced. That is,

10. Exceptional behaviour such as ‘extended demotion’ or ‘blocking’ in causativization will occur only in the causativization of agentive sen-
11. An AGT 'demoted' by causativization or passivization can no longer be an AGT (S. Starosta, 1981-82: 8-9).

In short, by rejecting the use of external situations alone to analyze sentences, and by requiring grammatical justification to establish case relations, Starosta Stanley adopts the position that distinct sentences describing the same external situation may assign different case relation to actants referring to the same entity. Similarly, although intuitively he may claim that a number of entities qualify as 'agents' in a given situation, linguistically our internalized grammars force us to choose only one of them to represent as a grammatical Agent with any given (agentive) verb. These different possible choices represent different perspectives on a single situation, and the various different perspectives are each associated with a particular verb class and its characteristic case frame. According to S. Starosta, the verb thus acts as a perceptual filter which imposes its own linguistically determined structure on unstructured external reality.

IV.3.9 Noam Chomsky (1981)

Chomskyan grammar is considered to be the case grammar by Stanley Starosta (1987: 62) because Chomsky's Aspects (1965: 102, 106-7) has the sample rules and illustrative fragment of the base component and Chomsky (1965: 68-70) polemizes against overtly labeling grammatical relations, claiming that such relations are functional or relational rather than categorical, and thus can and should be represented solely by differences in tree configurations. However when Chomsky writes some actual generative rules and has to put his arrows where his rhetoric is, we find him labeling most of the constituents inside and outside the VP with typical case relation names such as 'Place, Time and
Manner' exactly the way Fillmore does. The prominence of 'theta-roles' (= thematic relations = case relations) in current Government and Binding theory and offshoots such as Marantz's work (On the Nature of Grammatical Relations, 1984) make it clearer than ever that Chomskyan grammar is case grammar.

In the parametric approach to grammar outlined in Chomsky (1981) and subsequent work, Universal Grammar (UG) is a system of the sub-theories. The central idea of this approach, henceforth the Government-Binding (GB) account, is that the surface diversities of individual languages are reducible to different choices made by these languages from the parametric options embedded in UG. In this system a child's learning a language is largely a matter of fixing the values and fixed in one of permitted ways, on the basis of experience, the child is equipped with the core grammar of the language.

The Government-Binding model comprises several levels of representation. The basic assumption of X-bar theory introduced in Chomsky (1970) is that for a given lexical category [±N, ±V] every node dominating [±N, ±V] up through a certain number of dominating nodes must have the same categorical features. Chomsky defines the other sub-systems of principles as follows:

"Bounding theory poses locality conditions on certain processes and related items. The central notion of government theory is the relation between the head of a construction and categories dependent on it. Theta-theory is concerned with the assignment of thematic roles, such as agent-of-action, etc. Binding theory is concerned with relations of anaphors, pronouns, names and variable to possible antecedents ... Control theory determines the potential for reference of the abstract pronominal element PRO" (Chomsky, 1981 : 5-6)
See (1) of which the properties follow from the interaction of sub-systems and principles which include those in (2):

(1) Lexicon

\[
\begin{array}{c}
\text{D - Structure} \\
\downarrow \\
\text{Move - alpha} \\
\downarrow \\
\text{S - Structure} \\
\downarrow \\
\text{Phonetic Form (PF)} \quad \text{Logical Form (LF)}
\end{array}
\]

(2)i. X-bar Theory
ii. Bounding Theory
iii. Government Theory
iv. Theta-theory.
v. Binding Theory
vi. Case Theory
vii. Control Theory.

The theory of case is concerned with the assignment of (abstract) case to elements that are in case marking positions. Case theory was introduced in Rouveer and Vergraauw (1980) and Chomsky (1980). The basic insights behind this Case theory are three-fold. First, it is the perception that having or not having case features is a syntactically significant property beyond simply having a particular case feature in some context and not some other case feature. Second, it is the idea that certain configurational contexts are case assigning contents and others are not, and finally, it is the observation that lexical NP's lacking Case features given a set of case assigning contexts, are ungrammatical at the level of S-structure.
Chomsky's 'Government and Binding' theory has the aspect of theta-roles. In the outline of universal grammar (UG) the case theory is a part, the subsystems of principles along with bounding theory, government theory, theta-theory, binding theory, and control theory. While dealing with the nature of case assignment to nouns in a sentence, case is assigned under government, that is, a governor assigns case to the NP that it governs. There must be a government relationship between the NP and its case markers (assignors).

In government relation the notion of c-command is very important. According to the theory of government. A governs B, if I) A is a Governor, II) A m-command B, III) no barrier intervenes between A and B IV) minimality is respected.

(1) Governors are the lexical categories and tensed INFL:

```
S
  \---\-----\
  NP         INEL
    \---\-----\
      (A)     (Z)\-----\
                (B)
```

(2) Minimality:
A governs B if there is no node Z such as:
i) Z is a potential governor for B;
ii) Z m-commands B;
iii) Z does not m-command A;

```
VP
  \-----\
  \-----\
  (A)     (2)\-----\
          \-----\
            (B)
```

FILLMORE'S CASE GRAMMAR AND OTHER CASE GRAMMAR MODELS (182)
In this framework each overt NP must be assigned case, for example,

i) NP is nominative if governed by AGR

ii) NP is objective if governed by V with the subcategorization feature:......NP (i.e. transitive)

iii) NP is oblique if governed by P

iv) NP is genitive in (NP ... X)

v) NP is inherently case-marked as determined by properties of its (....N) governor. (Chomsky, 1981 : 170)

The case assigned under (i) to (iv) has been referred to as 'structural case'. Structural case, in general, is dissociated from theta-role; it is a structural property of a formal configuration (Chomsky, 1981 : 171). However, inherent case is closely linked to theta-role (thematic role).

There are several open questions in Chomsky's case theory. For example, while Chomsky (1981) thinks that Nominative case is assigned under government by AGR, there is another view that it may or may not involve government. Saito (1985) even thinks that Nominative case is not assigned by any element but inherently marked in languages like Japanese.

There have been contradictory views about the level at which case assignment takes place. Chomsky (1981) proposed that inherent and oblique cases are assigned at D-Structure, that structural case is assigned at S-Structure. This position was later revised and it was suggested that case-assignment can be not later than S-structure (Chomsky 1981).

The systematic attempt at a formal theory of case assignment in what has come to be known as the Government –Binding (GB) theory is Chomsky’s (1980) On ‘Binding’ (in Linguistic Inquiry 11.1 : 1-46) where he assumes that the feature [+ tense] constitutes the element assigning Nomi-
native case under government. NP is Nominative if governed by [+ tense]. Government is the basic structural notion that underlies many of the sub-systems of UG. Chomsky’s (1980) definition of government is informally stated as follows:

Government: A governs B if A c-commands B and no major category or major category boundary appears between B and A.

Chomsky (1981) abandons his 1980 position and makes a distinction between structural case and ‘inherent case’. That is NP’s governed by AGR, verb and preposition (and also an NP which has genitive case) are assigned ‘structural case’ and ‘a book’ in the construction ‘John gave Bill a book’ is assigned ‘inherent case’. Further, AGR (which is basically nominal in character, according to Chomsky) is taken to be the governing element which assigns case in INFL (inflection). Since [+N, -V] is not generally a case assigner, he extends the theory of case so that [+N, -V, +INFL] is a case assigner along with [-N]. in other words, he regards [+INFL] as basically ‘verbal’. Consider the following structure of the sentence given earlier:

```
   S
  /   \
NP   INFL
    /   \
   V   NP
     /   \
    TENSE  a book
    /  \
   JOHN  give
   /     \
  AGR     Bill
```

In the structure above AGR governs and assigns Nominative case to ‘John’, the NP in the subject position. ‘Bill’ will be assigned Objective case by the verb ‘gave’ which governs it and ‘a book’ will be assigned
'inherent case'.

Chomsky (1982) assumes that AGR element is a set of specifications for the features: person, number, gender (PNG) and in (pro-drop language) case. (cf. Chomsky, 1982: Chapter 5). He states that AGR assigns Nominative case under government and that there is a strict feature matching when this takes place in pro-drop languages. This view of Chomsky, it can be noted, does not differ from his (1981) position but for the reference to pro-drop languages.

Chomsky (1986), contrary to his earlier stand, remarks that even nouns and adjectives can be case assigners and hold the view that case is uniformly assigned under government. He argues that the agreement element of INFL is associated (or coindexed) with the subject which it governs since they share all maximal projections, and assigns it Nominative case. However, he distinguishes the 'structural cases' Objective and Nominative assigned in terms of S-structure position from the inherent cases 'assigned as D-structure. Inherent cases include Oblique case assigned by prepositions and also Genitive case is assigned by nouns and adjectives. According to Chomsky, inherent case is associated with theta-marking while Structural case is not. Thus, he assumes that Inherent case is assigned by an element to NP if and only if that element theta-marks the NP, while structural case is assigned independently of theta-marking. Chomsky here overlooks the fact that Object NP's which are assigned case by the verb are indeed theta-marked.

Nicholas Ostler (1980) comments on Chomsky's 'On Binding' (1980) that in Chomsky (1980) a number of principles of case assignment are proposed. These principles apply both 'at surface structure' and also before the actual advection part of movement rules in the case of [+ Comp] element, the interrogative and relative pronouns in English. Regardless of the details, then case-marking (presumably analogous to our structurally induced case-marking) applies as one of the processes which jointly output surface structures'.

FILLMORE'S CASE GRAMMAR AND OTHER CASE GRAMMAR MODELS
Chomsky's model has, as yet, no explicit analysis of participant roles. Presumably if he considers them capable of systematic treatment at all, they will be one aspect of LF (Logical Forms), the partial semantic representation derived from surface structures by the components on the right-hand side. There seems to be little hope of identifying the extremely abstract structures postulated for FS (Functional Structure) in Case Linking theory with LF's, which are no more than variants of surface structures with a number of different types of cross-reference (indexing binding etc.) established between various constituents. It might be possible to include Linking as one of the right-hand side processes, which would establish links between LF in some form and on independent level of representation of the sentence but autonomously generated. But it seems preferable to try to establish LF altogether, and grant its useful properties as to co-reference and quantifier interpretation onto an extended forms of FS, as is done.

According to Stanley Starosta:

"Chomskyan Grammar is case grammar, and has been since at least 1965. This is easily seen by looking at the sample rules and the illustrative fragment of the base component in Chomsky's Aspects (Chomsky, 1965:102, 106-7). Earlier in the chapter (ibid, pp 687-70), Chomsky polimicizes against overtly labeling grammatical relations, claiming that such relations are functional or relational rather than categorical, and thus can and should be represented solely by differences in tree configurations. However, when he writes some actual generative rules and has to put his arrows out the VP with typical case relation names such as Place, Time and Manner, exactly the way Fillmore does" (S. Starosta, 1987: 62).