CHAPTER V
RULES AND DERIVATIONS OF MALAYALAM SENTENCES

The deep structures of sentences are converted into surface structures by several transformations. Fillmore's deep structure is different from that of Chomsky (1965). In the deep structure diagram, the major constituents of the sentence are no longer NP and VP, but Modality (M) and Proposition (P). Proposition is a tenseless set of relationship between the verb and the various NPs present in the sentence and also embedded sentences if there are any. Modality consists of such modalities on the sentence as tense, mood, aspect, negation etc. The first base rule of Fillmore (1968a) is as follows:

Sentence \[\rightarrow\] Modality + Proposition

\[S \rightarrow M + P\]

The Proposition constituent is expanded as a verb and one or more case categories.

\[P \rightarrow V + C_1 + C_2 + \ldots + C_n\]

The case categories will be expanded into K (Kasus) which stands for the case marker and NP which stands in the place of the particular case relation to the verb.

\[C \rightarrow K + NP\]
NP can be expanded into,

\[ NP \rightarrow (\text{Det}) + N + (s) \]

Consider the sentence,

John cut the tree

Fillmore gives the deep structure of the above sentence as follows:

Order of elements in the deep structure

Fillmore (1968a) argues that the deep structure elements are unordered. According to him, the case relations in the base are universal and unordered. The sequential ordering of elements in the deep structure is language specific and the first transformational rules must be rules which make these unordered deep structure elements into ordered sequences in the surface structure.
"Discussions on the possibility of a universal base have mainly been concerned with whether the elements specified in the rules of a universal base—if there are any—are sequential or not. A common assumption is that the universal base specifies the needed syntactic relations, but the assignment of sequential order to the constituents of base structure is language specific" (p. 1).

"If it is possible to discover a semantically universal syntactic theory along the lines I have been suggesting, if it is possible by rules (beginning, perhaps, with those which assign sequential order to the underlying deep structures into the surface forms of sentences, then it is likely that the syntactic deep structure of the type that has been made familiar from the work of Chomsky and his students is going to go the way of the phoneme" (p. 88).

Though Fillmore argues that the constituents in the deep structure are unordered, when we examine the deep structure diagrams, we can see that there is a regular order in all his diagrams.

We shall decide that the deep structure elements are ordered. Then there arise a questions—what order shall we assign to these elements in the deep
structure? We cannot formulate a universally acceptable order because a particular order acceptable to some languages may not be acceptable to other languages. The order of deep structure elements cannot be universal but it is language specific.

The sentence structure of Malayalam is different from that of English. The order of Subject-Verb-Object (SVO) found in English is not suitable for a Dravidian language like Malayalam in which the order is SOV.

Now if we decide that the order of deep structure elements is language specific, it can be on the basis of the surface structure of the language concerned. This is quite suitable for English because there is rigid word order in that language. But for a language like Malayalam, this is not workable because in the surface structure any order is possible.

So the order of deep structure cases is not possible to fix on the basis of surface structure in this type of language. Then another possible solution to this problem is that the order may be fixed on the basis of the 'Case hierarchy' which Fillmore proposes.
Hierarchy of cases

Fillmore (1971) points out that cases occur in a hierarchy.

"Cases exist in a hierarchy and this hierarchy serves to guide the operation of certain syntactic processes in particular that of subject selection. It figures in subject selection by determining which noun phrase is to become the subject of the sentence in the "unmarked" instance. That case, in the hierarchy of cases, outranks the others is the one which has the noun phrase it is associated with selected as the subject of the sentence" (p. 37).

The case hierarchy is determined by the selection of the subject in the surface structure. In certain types of sentences there is no choice in the selection of the subject. In passive sentences, for example, the deep structure object will be the subject in the surface structure. Therefore, the case hierarchy is relevant only in the "unmarked" instance, that is, in instances in which the types of sentence does not determine the selection of the subject.
Fillmore (1968a) says, "If there is an A, it becomes the subject; otherwise, if there is an I, it becomes the subject; otherwise, the subject is O" (p. 33).

The above rule is Subject Selection Rule. Fillmore (1971) has modified the above rule slightly, that is, Experiencer precedes both I and O. So the hierarchy according to Fillmore (1971) is in the following order:

Agentive
Experiencer
Instrumental
Objective
Source
Goal
Locative
Time

Fillmore (1971) has suggested that cases are represented at the deep structure level in the left-to-right order and "the Subject Selection Process merely selects the leftmost noun phrase in the list" (p. 37). He also proposes that, "those transformations which re-rank the elements then are transformations which moves some initially non-leftmost element into the leftmost position in the
list of cases" (p. 37).

According to Fillmore, the concept of case hierarchy is universal, but the hierarchical order of cases may differ from language to language. In Malayalam the following general order of cases is examined:

(a) Agentive
(b) Comitative
(c) Affective
(d) Instrumental
(e) Objective
(f) Locative
(g) Time

(a) Agentive

The Agentive case is first in the hierarchy. If it is present in the deep structure, it becomes the subject in the surface structure, irrespective of what other cases occur in the deep structure. For example, in the deep structure (1) Agentive, Affective, Objective, Time and Locative are present but Agentive becomes the subject in the surface structure of the sentence (2).
In the deep structure below, Agentive, Affective, and Instrumental are present, while Agentive becomes the subject.
(b) **Comitative**

It comes next in the hierarchy, and it does not occur without Agentive in the deep structure. It can become subject in the surface structure along with the Agentive. Sentence (8) which is semantically similar to (7) is transformationally derived from (6). Note that in sentence (8) both Agentive
and Comitative are subjects. This is why the Comitative is placed next to the Agentive.

(6) S
   /\   /
  /  \\ /
 P   M
   /\   \
 A   V
   /\   \
 N   K
   /\   \
 NP NP
   /\   \
 C   K
   /\   \
 NP NP
   /\   \
 N   N
   /\   \
 rema -ootottu maaya -aal paat- past

(7) maayayum remayum paati
Maya-and Rema-and sang
'Maya and Rema sang'

(8) maayayum remayum paati
Maya-and Rema-and sang
'Maya and Rema sang'
(c) **Affective**

Affective case has the third rank in the hierarchy. If it is present in the deep structure, it can become the subject in the surface structure only if there is no Agentive and Comitative in the deep structure. For example, see the deep structure (9) of sentence (10).

(9)

```
S
 P
 Af
 NP K
 N naan -kku
 O
 NP K
 N atu -e
 V
 K
 aagrahikk-present
```

(10) naan atu aagrahikkunnu
I that desire

'I desire it'

In the deep structure (11) Affective and Instrumental occur while Affective becomes the subject in the surface structure of (12).
The fourth rank in the hierarchy is given to Instrumental. If it is present in a deep structure in which Agentive, Comitative and Affective are absent, it becomes the subject in the surface structure. Observe the deep structure (13) of the sentence (14).
The wind broke the tree

The Instrumental case which acts as the tool does not become the subject in any case in Malayalam. If it becomes the subject, the sentence will be ungrammatical. See the deep structure (15) of the sentence (16).
Objective has the fifth case in the hierarchy. If it is present in the deep structure and if Agen
tive, Comitative, Affective and Instrumental are absent it becomes the subject in the surface structure.
In the deep structure (17) Objective and Locative occur while Objective becomes the subject in the surface structure of the sentence (18).

(16) * taakkool kataku tuRannu
      key door opened

'The key opened the door'

(e) **Objective**

(17)
(18) pustakam taRayil viinu
    book floor-in fell

    'The book fell on the floor'

See the deep structure (19) and the sentence (20).

(19)

(20) mala ivite innale peytu
    rain here yesterday rained

    'Yesterday it rained here'

(f) Locative

The sixth rank in the hierarchy is given to Locative. When it is present in the deep structure, it can become the subject in the surface structure only if Agentive, Comitative, Affective, Instrumental
and Objective are absent.

In the following deep structure Locative alone is present and it becomes the subject in the surface structure.

(21)

(22) kollam atuttu

Quilon nearing

(We) are nearing Quilon

(g) Time

The seventh rank in the hierarchy is given to Time. If it is present in a deep structure, it becomes the subject in the surface structure only if Agentive, Comitative, Affective, Instrumental, Objective and Locative are absent. In the deep structure (23) there is only one case - Time and
it becomes the subject in (24).

(23)

(24) meeymaasam vannu

May month came

'The month of May came'

From all these evidences we can say that in Malayalam the case hierarchy is A C Af I O L T. Among these, the first one (Agentive) has the greater frequency and the rank decreases from Agentive to Time. Time has the lowest rank in the hierarchy.

In Malayalam the above suggested case hierarchy does not always work. In some instances this hie-
rarchy changes.

For example, examine the following cases.

In the hierarchy Affective case's rank is higher than that of Instrumental. But in the following examples, even in the presence of Affective, Instrumental becomes the subject.

(25) aa oorma enne vallaate veedanippikkunnu
that memory me(Acc.) badly injures

"That memory badly injures me"

(26) aa kaalcca avale amparappiccu
that sight she(Acc.) amazed

"That sight amazed her"

The Objective case's rank in the hierarchy is lower than that of Instrumental. But sometimes this order changes. In the presence of Instrumental Objective becomes the subject. See the following examples:

(27) vilakku kaaRRukonṭu anānīnu
light wind-with extinguished

"The light extinguished due to wind"

(28) viṅavu mala kaaranam ṇāsiccu
crops rain due to destroyed

"The crops destroyed due to the rain"
In the presence of Instrumental, Locative which has a lower rank than Instrumental becomes the subject.

(29) muRi vellamkontu niRannu
    room water-with filled

'The room filled with water'

So Fillmore's case hierarchy is not fully agreeable due to the above suggested exceptional cases.

The order of deep structure cases may be fixed on the basis of the above suggested case hierarchy of Malayalam, that is, A C Af I O L T.

If the order of deep structure cases is decided on the basis of the case hierarchy, again there is a problem: shall we put the cases in the descending order or in the ascending order?

For English, the deep structure cases are arranged hierarchically in the right to left order, that is, the case which has the highest rank in the hierarchy comes at the right-most position and the case which has the lowest rank in the hierarchy comes at the left-most position. See the diagram
(30) given by Fillmore as the deep structure of the sentence (31).

(30)

\[ S \]
\[ M \]
\[ V \]
\[ O \]
\[ D \]
\[ A \]
\[ K \]
\[ NP \]
\[ K \]
\[ NP \]
\[ K \]
\[ NP \]

\[ past \] give \[ \emptyset \] \[ the \] books \[ to \] my \[ brother \] by \[ John \]

(31) John gave the books to my brother

This order is very convenient for English. The only difference in the word order between (30) and (31) is the difference in the position of the subject 'John'. This can be accounted for by a rule called Subject fronting.

But for Malayalam when we draw the deep structure diagram like that of English, there will be several difficulties. For instance, see the deep structure diagram (32).
This is the deep structure of the sentence (33).

(33) raaman revikku pustakam kotuttu
Rama Revi-to book gave

'Rama gave the book to Revi'

To derive this word order we need to have many transformational rules other than subject fronting. If subject fronting alone is applied, we get the ungrammatical sentence (34).

(34) * raaman kotuttu e pustakam kku revi
In Malayalam, the object should come before the verb and the verb should occur at the end of the sentence. But in (30) it is not the case. So the deep structure (30) is not acceptable for Malayalam. Therefore, we shall reverse the order of all the constituents. Accordingly, the first base rule may be given as follows:

$$S \rightarrow P + M$$

Now the verb must occur near the Modality constituent. Therefore, the second base rule for Malayalam can be given as follows:

$$P \rightarrow C_1 + C_2 + C_3 + \ldots + C_n$$

The case markers are suffixes in Malayalam. So the third base rule may be as follows:

$$C \rightarrow NP + K$$

In the deep structure of Malayalam sentence, the case which has the highest rank occurs at the rightmost position, that is, the cases are arranged hierarchically in the left to right order. In short,
the deep structure diagram for Malayalam sentences will just be the opposite to that for English. We can represent it as (35).

In English, the right-most case in the deep structure becomes the subject in the surface structure because the cases are hierarchically arranged in the right to left order. But in Malayalam, the left-most element in the deep structure becomes the subject in the surface structure because the cases are hierarchically arranged in the left to right order. This order is convenient for the derivation of Malayalam sentences.
Derivation of Malayalam sentences

The deep structures are converted into surface structures by various transformations as follows:

1. Subjectivization
2. Selection of overt case forms
3. Registration of particular elements in the verb
4. Objectivization
5. Passivization
6. Causativization
7. Topicalization
8. Nominalization
9. Relativization
10. NP Complimentation
11. NP Co-ordination

1. Subjectivization

Subjectivization is a process in which one of the cases in the deep structure is selected as the subject. This process determines which case is to become the subject of the sentence. Subject is generally (that is, in the "unmarked" instance)
selected according to the hierarchy of cases, that is, A C A f I O L T. This hierarchy for subject choice applied to the normal choice of subjects of active sentences. There are various syntactic processes for subject selection. They include,

(a) Subject fronting

(b) Subject case marker deletion

(a) Subject fronting

In Subject fronting, the case which has the priority to become the subject must be detached from the P-node and moved to the front of the sentence and attached to the S-node.

(b) Subject case marker deletion

In this process, the case marker of the fronted subject is deleted along with the case label.

2. Selection of overt case forms

For certain cases, there are overt case forms and covert case forms. The former are seen in
surface structure and the latter in deep structure. In such cases the covert case markers in the deep structure are deleted and in the surface structure the overt case forms are added by a transformation. This is what is meant by 'Selection of overt case forms'. For example, see the sentence (36).

(36) goopi reviye aticcu

Gopi Revi (Acc.) beat

'Gopi beat Revi'

In this sentence, reviye 'Revi(Acc.) is Affective. in the deep structure, and the case marker is -kku. See the deep structure (37).

(37)
3. **Registration of particular elements in the verb**

It is a process by which the elements in the Modality constituent (tense, mood, aspect, negation etc.) is incorporated into the verb. It is also called as tense incorporation.

4. **Objectivization**

Objectivization is applied only to transitive sentences, that is, to sentences which have an object and only if the deep structural Objective or Affective is selected as the object in the surface structure. In this process the object is selected and the case marker is deleted with the case label. The case chosen remains dominated by P.

Now examine the following deep structure in which we can see how they are converted into surface structures by applying the above mentioned four transformations.

See the following deep structure (38) in which Agentive, Affective, and Objective cases
are present. Among these three cases, Agentive becomes the subject in the surface structure according to the hierarchy. By Subjectivization (38) is converted into (40). First by Subject fronting, the Agentive case is detached from the P-node and moved to the front of the sentence and attached to the S-node and the structure (39) is formed. Second, by Subject case marker deletion the case marker -aal of the fronted subject is deleted and as a result (39) is changed into (40).

(38)
Then by Objectivization (40) is converted into (41) and by tense incorporation (42) is formed from (41) which is the surface structure of the sentence (43).

(41)

(42)
(43) kootati ayaalkku vadhasiksa vidhiccu court he-to capital punish-sentenced

"The court sentenced him to death."

In the deep structure (44) Affective and Instrumental occur from which Affective becomes the subject. By Subjectivization and verb incorporation, (43) becomes (47) which is the surface structure of the sentence (48).
(48) ayaal veedanakontu piθaykkunnu
he pain - with wriθes

"He wriθes with pain"

Now examine the deep structure (49). There are
two cases - Instrumental and Objective from which
Instrumental becomes the subject in the surface
structure. By Subjectivization, Objectivization
and tense incorporation (49) becomes (53) which
is the surface structure of the sentence (54).

(49)
(53)

(54) mala krsi nasippiccu
rain crops destroyed

'The rain destroyed the crops'

In the deep structure (55) Objective, Locative and Time occur from which Objective becomes the subject in the surface structure. By Subjectivization, Selection of overt case forms and tense incorporation, (55) changes to (59) which is the surface structure of the sentence (60).

(55)
Yesterday the dead body deposited on the shore

Observe the deep structure (61) in which Locative and Time occur, from which Locative becomes the subject in the surface structure (64) of the sentence (65).
(63) aakaasam raatri

(64) aakaasam raatri -il irulatay- past
'The sky clouded in the night'

The deep structure (66) contains only Time and in the surface structure of the sentence (70) it becomes the subject. By applying Subjectivization and tense incorporation (66) is converted into (69).

(66)

(67)
5. Passivization

The preceding derivations deal with the "normal" choice of subjects of active sentences. For the "non-normal" choice of subjects of passive sentence, the subject selection is not based on the hierarchy. The Objective or Affective case becomes the subject even if the Agentive is present. The
Modality constituent will include the feature $^\text{\text{-+ passive}}_7$ in the deep structure of such sentences. A new rule called `pet- incorporation' rule introduces `pet-' into the Modality constituent. Figure (71) changes to (73) by Subjectivization. By `pet- incorporation rule,' (73) changes to (74). Then by applying tense incorporation (74) is converted into (75) which is the surface structure of the sentence (76).

(71)
(76) avan raamanaal kollappettu
he Rama - by killed-was

"He was killed by Rama."

6. Causativization

The deep structure of causative sentences consists of two simple sentences. For example, see the deep structure (77). In causativization, first we have to apply Subjectivization and tense incorporation to the embedded sentence and as a result (77) changes to (80). Then apply Subjectivization to the matrix sentence and (80) is converted into (82). Then the elements preerippikk- and tense of the matrix sentence, are incorporated into the verb of the embedded sentence and then the S-node and the repeated P-node of the embedded sentence are deleted and the embedded sentence is attached to 0. Finally by Objectivization sita 'Sita' becomes the object. As a result the structure (83) is formed, which is the surface structure of the sentence (84).
(81) acchan -aal siita pathikkunnu peerippikk-present

(82) acchan siita pathikkunnu peerippikk-present

(83) acchan siita pathippikkunnu
The Topicalization transformation is a device for selecting one case of a sentence as topic. There are two types of topicalization - primary topicalization and secondary topicalization. The Subjectivization process explained earlier is called primary topicalization. As a result of this, the subject is formed. Secondary topicalization is different from this. In Malayalam, word order is free. According to the speaker's intention, any NP can be moved to the first position. This is called Secondary topicalization. For example, see the deep structure (85) in which there are three cases - Agentive, Locative and Time. In the surface structure, any of these three cases can occur in the first position as topic. We can derive the surface structure (88) of sentence (89) from the deep structure (85).
(85)

(86)

(87)

naan -aal ampalam -il prabhaatam -il pook-past

naan -aal ampalam -il prabhaatam-il pook-past

naan ampalam -il prabhaatam -il pook-past
By repeated application of secondary topicalization, it is possible to generate the different surface word orders found in Malayalam. For example, sentence (90) and (91) are derived from (89) by topicalizing `ampalattil` and `prabhaatattil` respectively.

(89) `naan prabhaatattil ampalattil pooyi`

```
I morning -in temple - in went
```

'I went to the temple in the morning'

(90) `ampalattil naan prabhaatattil pooyi`

(91) `prabhaatattil naan ampalattil pooyi`
By repeated application of this process sentence (92) and (93) can be derived from (90) and (91).

(92) prabhaatattil ampalttil īnaṅ pooyi

(93) ampalattil prabhaatattil īnaṅ pooyi

Sentence (92) below can be generated from (91) by topicalizing īnaṅ again.

(94) īnaṅ prabhaatattil ampalattil pooyi

8. Nominalization

Nominalization involves what is called Genitive case. We have seen embedded sentences which are embedded under the case category O (Objective). Another type of embedded sentence is within the NP itself. A rule of this kind can be posited as follows:

\[ \text{NP} \rightarrow (S) \text{N} \]

Here N will be an ordinary lexical item of the same N. The result is an NP consisting of a noun modified by a Genitive case. Here the N in the modified NP will be the same as the N in the adjunct sentence. For example, see the deep structure (95)
from which (96) is formed by deleting the repeated noun, the tense and the verb and reattaching the Affective case to the dominating NP. When an Affective case is subjoined to an NP, its case marker is replaced by Genitive. Thus (97) is formed from (96) which is the surface structure.

(95)
8. Relativization

Relative clauses are those sentences which are embedded in a noun phrase that directly dominates another NP (matrix) in a sentence. The embedded sentence contains an NP which is identical with the matrix NP and it is called the constituent NP.

In relativization, the finite verb of the constituent sentence is converted into a relative clause. For example, see the deep structure (96). By applying Subjectivization, Objectivization and tense incorporation to the embedded sentence, (96) becomes (100). Then Subjectivization and tense incorporation are applied to the matrix sentence...
and (100) is converted into (103).

(97)
Then relativization transformation is applied to the constituent sentence. It involves two processes, first, the verb is shifted to the left of the object NP and then the relative participle marker 'a' is inserted to the object NP. Finally the repeated NP is deleted. As a result the structure (104) is formed which is the surface structure of the sentence (105).

\[(104)\]

\[\text{NP} \quad \text{S} \quad \text{P} \quad \text{O} \quad \text{V} \]

\[\text{naan} \quad \text{aval paatiya paattu} \quad \text{keettu} \]

\[(105)\]

\[\text{aval paatiya paattu} \quad \text{naan} \quad \text{keettu} \]

she sang which song I heard

'I heard the song which she sang'

9. Complimentation

Complement clause is a sentence which is embedded in an NP of a sentence as a co-constituent of some head noun. For example, see the sentence
In the above sentence, *avar vivaahitaraayi* 'they got married' is a complement clause of the noun *vaarta* 'news' and *ennu* is the complementizer to which the relative participle marker *-a* is added to form *enna*. Examine the deep structure (109) of the sentence (108).

(109)  

```
(108) avar vivaahitaraayi enna vaarta
they got married that news
vimala visvasiccu
Vimala believed

'Vimala believed the news that they got married'

In the above sentence, *avar vivaahitaraayi*
'they got married' is a complement clause of the noun *vaarta* 'news' and *ennu* is the complementizer to which the relative participle marker *-a* is added to form *enna*. Examine the deep structure (109) of the sentence (108).

(109)```
In order to derive the sentence (108) from the deep structure (109), first apply Subjectivization and tense incorporation to the constituent sentence and as a result (109) changes to (112). Then apply Subjectivization and tense incorporation to the matrix sentence and (112) is converted into (115).

(110)
Then complementizer insertion transformation is applied which introduces the complementizer _ennu_ before the head noun and as a result sentence of the type (116) is formed. Finally the relative participle insertion transformation is applied which introduces the relative participle _a_ to the complementizer and _ennu_ is converted into _enna_ and so the sentence (117) is formed.

(116) vimala avar vivaahitaraayi _ennu_ vaarta visvasiccu

visvasiccu
(117) vimala avar vivaahitaraayi enna vaatra visvasiccu
Vimala they got married that news believed
‘Vimala believed the news that they got married’

10. Co-ordination

The process of co-ordination involves the conjunction of two sentences which have identical verbs.

According to Fillmore, conjunctive sentences are derived from Comitative phrases.

Fillmore (1968a) argues that, "there may be a relationship between the ways in which languages deal with 'Comitative' constructions and the phenomenon of co-ordinate conjunction of NPs" (p. 81).

See the deep structure (118) below:

(118)
To derive the surface structure, first the Comitative is promoted after the Agentive and (118) changes to (119) and then by Subjectivization and tense incorporation (122) is formed from (119) which is the surface structure of the sentence (123).

(119)

(120)

(123)
(121) liila siita -ootu samsaarikku.!:~u
(122) liila siita -ootu samsaarikkunnu
(123) Leela Sita - with speaks
"Leela speaks with Sita"
If Comitative is not promoted, that is, if C remains inside the NP, the entire A becomes the subject. During Subjectivization, the entire A is fronted in Subject fronting, and the case marker of both A and C are deleted in subject case marker deletion. The structure (118) becomes (124) by Subject fronting and to (125) by Subject case marker deletion and finally to (126) by tense incorporation.

(124)

(125)
Then conjunctive particle insertion transformation is applied which inserts -um after each NP and as a result sentence (127) is formed.

(127) siitayum liilayum samsaarikkunnu
Sita and Leela and speaks
'Sita and Leela speaks'

We have discussed various transformations which change deep structures into surface structures. Now we shall illustrate the above transformations with some more examples. See the deep structure (128) in which there is no case other than Agentive. (128) changes to (131) by Subjectivization and tense incorporation and it is the surface structure of the sentence (132).
Examine the deep structure (133) in which Agentive and Comitative cases occur. After the promotion of Comitative after Agentive, Subjectivization and tense incorporation (133) becomes (137) which is the surface structure of the sentence (138).

(133)

(131)  
(132) avan ootunnu he runs
He argues with Rajan.
The deep structure (139) contains an Affective case. It changes to (142) by Subjectivization and tense incorporation and it is the surface structure of the sentence (143).

(139)

```
(140)
```

```text
The deep structure (139) contains an Affective case. It changes to (142) by Subjectivization and tense incorporation and it is the surface structure of the sentence (143).

(139)

```
(140)
```

```text
The deep structure (139) contains an Affective case. It changes to (142) by Subjectivization and tense incorporation and it is the surface structure of the sentence (143).

(139)

```
(140)
```
Examine the deep structure (144) in which there are two cases - Agentive and Affective. (144) changes to (148) by Subjectivization, Objectivization, Selection of overt case form and tense incorporation and it is the surface structure of the sentence (149).

(144)  

\[ S \rightarrow \text{NP}\text{NP}\text{V} \]

\[ \text{NP} \rightarrow \text{N} \]

\[ \text{NP} \rightarrow \text{addeeham} \]

\[ \text{NP} \rightarrow \text{mariccu} \]

\[ \text{V} \rightarrow \text{he} \]

\[ \text{V} \rightarrow \text{died} \]

\[ \text{V} \rightarrow \text{He died} \]
(146)

```
S
  /\  
 NP  P  M
  /\  /\  /\  
 NP  Af NP V  
  /\  /\  /\  
 NP  K  NP  
  /\  /\  
 N  N  N  N
```

Patti aval -kku katikk past

(147)

```
S
  /\  
 NP  P  M
  /\  /\  /\  
 O  NP  NP V  
  /\  /\  /\  
 NP  K  NP  
  /\  /\  
 N  N  N  N
```

Patti aval -e katikk past

(148)

```
S
  /\  
 NP  P  
  /\  
 O  NP
  /\  
 NP  K
  /\  
 N  N
```

Patti aval -e katiccu
(149) pāṭṭi avale katiccu
dog she(Acc.) beat

'The dog beat her.'

Observe the deep structure (150) in which only one case, that is, Objective occurs. (150) becomes the surface structure (153) of the sentence (154) by Subjectivization and tense incorporation.

(150)

(151)
In the deep structure (155) there are two cases - Agentive and Objective. From (155) the surface structure (159) of sentence (160) is formed by applying Subjectivization, Obje-
cтивization and tense incorporation.

(155)

(156)
See the deep structure (161) in which Agentive, Affective and Objective occur. By applying Subjectivization, Objectivization and tense incorporation the surface structure (164) of sentence (165) is formed.
The deep structure (166) contains the cases Agentive and Locative. It is converted into (170) of the sentence (171) by Subjectivization, Selection of overt case form and tense incorporation.
(169) avan muRRam -il nilkkunnu

(170) aval muRRam -ttu nilkkunnu

(171) avan muRRattu nilkkunnu
he courtyard-in stands

*He stands in the courtyard*
Examine the deep structure (172) in which Agentive, Objective and Locative occur. (172) changes to (176) by Subjectivization, Objectivization and tense incorporation. (176) is the surface structure of the sentence (177).

(172)

(173)
(174)

S

NP

O

NP

K

P

L

V

K

N

N

raaju ruupa -e petti -ilninnu etukk- past

(175)

S

NP

O

NP

K

P

L

V

K

N

N

raaju ruupa petti -ilninnu etukk- past
Affective and Objective are present in the deep structure (178). It is converted into the surface structure (182) of the sentence (183) by Subjectivization, Objectivization and tense incorporation.
See the deep structure (184) in which Affective and Instrumental occur. By Subjectivization and tense incorporation (184) becomes (187) which is the surface structure of the sentence (188).
Affective and Locative are present in the deep structure (189) which becomes (193) by Subjectivization. Selection of overt case form and tense incorporation. (193) is the surface structure of the sentence (194).

(189) 

```
(188)  raaman  tanuppukantu  viRaykkunnu
       Rama       cold - with    shivers

'Rama shivers with cold'
```
(190)

S

Af

P

M

NP

K

L

V

NP

K

NP

K

M

N

N

goopi-kku pariiksa

-il
toolkk-
past

(191)

S

M

NP

P

L

V

NP

K

NP

K

M

N

N

goopi pariiksa

-il
toolkk-
past
The deep structure (195) contains Affective, Objective, Locative and Time. By applying Subjectivization, Objectivization and tense incorporation (195) changes to (199) which is the surface structure of the sentence (200).

(195)
naan aa paattu, Rood-ilvaccu innale -il keelkk-past

naan aa paattu, Rood-ilvaccu innale-il keettu

"yesterday I heard that music when I was in the road"
Objective and Instrumental are present in the deep structure (201) and by Subjectivization and tense incorporation (201) becomes (204) which is the surface structure of the sentence (205).

(201)

(202)
The plant withered due to sunshine.
Observe the deep structure (206) in which Objective and Locative occur. By Subjectivization and tense incorporation, (206) is converted into (209) which is the surface structure of the sentence (210).

(206)

(207)
'The tree fell towards the pond'
In the deep structure (211) only the case Locative occurs. By Subjectivization and tense incorporation (211) changes to (214) which is the surface structure of the sentence (215).

(211)

(212)
(213)  
\[
\text{S} \\
\text{NP} \\
\text{N: viitu} \\
\text{P: atukk-} \\
\text{M: past}
\]

(214)  
\[
\text{S} \\
\text{NP} \\
\text{N: viitu} \\
\text{P: atuttu}
\]

(215)  
\[
\text{viitu} \\
\text{atuttu} \\
\text{house} \\
\text{neared}
\]

(We) neared the house.
See the deep structure (216) in which only Time occurs. By Subjectivization and tense incorporation (216) becomes (219) which is the surface structure of the sentence (220).

(216)

\[
\begin{array}{c}
S \\
| \\
P \\
| \\
T \\

\text{mannukaalam} \\
\text{-il} \\
\text{pook-} \\
\text{past}
\end{array}
\]

(217)

\[
\begin{array}{c}
S \\
| \\
P \\
| \\
T \\

\text{mannukaalam} \\
\text{-il} \\
\text{pook-} \\
\text{past}
\end{array}
\]
(218)  
\[ S \rightarrow NP \rightarrow N \rightarrow "\text{mannukaalam}" \rightarrow P \rightarrow V \rightarrow "pook-" \rightarrow M \rightarrow "\text{past}" \]

(219)  
\[ S \rightarrow NP \rightarrow N \rightarrow "\text{mannukaalam}" \rightarrow P \rightarrow V \rightarrow "\text{pooyi}" \]

(220)  
\[ "\text{mannukaalam}" \rightarrow "\text{due-season}" \rightarrow "\text{pooyi}" \rightarrow "\text{gone}" \]

"The winter has gone"
We shall examine some examples of passivization. Observe the deep structure (221) in which an Agentive and Objective occurs. By passivization the Objective case becomes the subject. By Subjectivization, pet- incorporation and tense incorporation (221) changes to (225) which is the surface structure of the sentence (226).

(221)

(222)
The deep structure (227) contains an Agentive case and an Affective case. When we apply passive transformation, Affective becomes the subject. So by Subjectivization, pet- incorporation and tense incorporation (227) becomes (231) which is the surface structure of the sentence (232).

(226) kataku raamanaal turakkappettu.

doors Rama - by was opened

'The door was opened by Rama.'
Next we shall examine some causativization transformations. See the deep structure (233). By various processes of causativization (233) converts into the surface structure (241) of sentence (242).

(232) addeeham goopiyaal vadhiikkappettu
he Gopi - by was killed

'He was killed by Gopi'

(233)
See the deep structure (242). By various processes of causativization (242) is converted into (249).

(240) P
  S

NP → K

NP → K

NP → V

avar ayaal ekontu parasyam accatikkunnunu

(241) avar ayaalekantu parasyam accatipikkunnunu

they he(Acc.)–with notice print make

'They make him to print the notice.'
We shall discuss some Nominalization transformations. The deep structure (251) is transformed into (252) by deleting the repeated noun, the tense and the verb of the embedded sentence and reattaching the Affective case to the dominating NP in the Objective case. By Subjectivization of the
Objective case. Selection of overt case form in Locative and tense incorporation (252) changes to the surface structure (256) in which the Affective case is changed into Genitive case.

(251)
See the deep structure (258). By Nominalization it is converted into the surface structure (266) of the sentence (267). The deep structure (258) is transformed into (259) by deleting the repeated noun, the tense and the verb of the lowermost embedded sentence and reattaching the Affective to the dominating NP in the Locative case. By applying Objectivization and tense incorporation
to the second embedded sentence (259) changes to (262). Finally by Objectivization of the Objective case, tense incorporation and by deleting the repeated P-node and S-node and by reattaching the Locative case to the dominating NP, (262) changes to (265) which converts into the surface structure (266) in which the Affective case is changed into Genitive case.

(258)
valakal-e kilūn-present

valakal-e il ul-present

aval akku kay
valakal -e kiuli - present

valakal

valal -kku kay

/aval -kku kay
(263)

valakal kiluññ - present

valakal kay -il unto

aval -kku kay
Now see the structure (268) which consisted of two cases - Agentive and Locative. Inside the Locative case there is an Affective case derived by Nominalization transformation. By Subjectivization and tense incorporation (268) changes to (272) which is the surface structure of the sentence (273).
(268)

M
v
K
P
NP
K
A
L
V
M
S
NP
K
N
raaju
aal
raaman
-kku
nencu
-il
cavitt-
past

(269)

M
v
K
P
L
V
M
S
NP
K
N
raaju
aal
raaman
-kku
nencu
-il
cavitt-
past
(270)

NP

raaju raaman

NP

-kku nencu -il cavitt- past

(271)

NP

raaju raaman

NP

-kku nencu -il cavitti
The deep structure (274) contains an Objective case in which an Affective case occurs. By Subjectivization and tense incorporation (274) changes to (278) which is the surface structure of the sentence (280).
vimala -kku saari -e nallataak - present

vimala -kku saari -e nallataak - present
We shall examine some more examples of relativization. The deep structure (280) is converted into (287) by relativization. Notice that the Affective case in the constituent sentence does not act as subject even though it is in the subject position and so Subject case marker deletion does not take place.
(285)  
NP
  
P
    O
      S
        P
          NP
            Af
              NP
                K
              NP

avan aval -kku kaasu untu kaasu tiirkk-past

(286)  
NP
  
P
    O
      S
        P
          NP
            Af
              NP
                K
              NP

avan aval -kku kaasu untu kaasu tiirrttu

(287)  
NP
  
P
    O
      S
        P
          NP

avan avalku ulla kaasu tiirrttu
(288) avan avalkkulla kaasu tiirttu
he she -to money complete

'(He has completed the money which she has')

(289) By various processes of relativization (289) changes to (89)

(289)
(290)

```
A
  NP K
  - naan -aal

O
  NP K
  S
  N
  pustakam-e

P
  NP K
  S
  N
  pustakam-e

M
  N
  M

M
  N
  N
  naan -kku kay -e

M
  V
  N
  ul-present

M
  V
  N
  ul-present
```

nu kotukk-future

present

present
(293)

S

P

A

NP

K

N

naan

-aal

NP

K

N

pustakam

-avan

NP

K

N

future

M

O

Af

V

NP

K

N

-untu

V

NP

K

N

kay

-il

ul

present

NP

K

N

naan

-kku

kay
naan -aal
pustakam

に対する未来

pusta- e avan -nu kotukk-
naan pustakam naan-kku kay kay-il untu pusta-avan -nu kotuttu kam
नान दुकान से आय-न्‌के के कय-ज उतु के पुसा-सत्र नू कोतुत्तु नू कम कम
Observe the following examples of complementation transformations. By complementation, the deep structure (302) changes to (308).

(301) \(\text{naan enRe kayyilulla pustakam avan -nu kotuttu}\)

'I gave the book which I have in my hand'
(303)

```
NP K
naan -kku

S
pratikksikk-present

NP K
avar-aal naale -il var-future
```

(304)

```
NP K
naan -kku

S
pratikksikk-present

NP K
avar naale -il var-future
```
(309) avar ɡaale varumennu ḳaan pratiiksikk-
unnu
they tomorrow come-will-that I expect

'I expect that they will come tomorrow' 

The deep structure (310) is converted into (320) by complementation.

(310)
(312)

goopi -aal

(deeham -e)

tanuppu -kontu viRaykk- present

kutti -kku deeham ul- present

paray- past
(315)

A

P

N

goopi -aal

S

S

paRay- past

P

I

V

L

N

deeham

K

tanuppu -kontu viRaykk- present

AF

NP

K

N

kutti -kku deeham
(318)

S

NP

P

O

V

M

NP

N

goopi

S

paray- past

NP

P

I

V

K

NP

N

deeham

tanupp -konto viRaykkunu

A

NP

NP

K

N

kutti

-ku

deeham
Examine some Co-ordination transformations.

The deep structure (322) changes to the surface structure (326) by Co-ordination.

(321) *Gopi said that the body of the child shivers*
(325) Rema and Usha-and jooli does the work.'

(326) Rema and Usha-and jooli does the work.'

(327) Remayum ussayum jooli ceyyunnu
Rema-and Usha-and work does
Observe another deep structure (328) which converts into the surface structure (332) by Co-ordination.

(328)

(329)
(330)

\[ S \rightarrow NP \rightarrow NP \rightarrow P \rightarrow Af \rightarrow O \rightarrow V \rightarrow M \]

\[ sati \rightarrow silla avar -kku sadya \rightarrow e orukk- present \]

(331)

\[ S \rightarrow NP \rightarrow P \rightarrow Af \rightarrow NP \rightarrow V \rightarrow M \]

\[ sati \rightarrow silla avar -kku sadya orukk- present \]
Satī and Sheela prepare the feast for them.
FOOTNOTES

1. According to Chomsky (1965), the deep structure of a sentence is as follows:

```
S
  NP
  VP
    V
    Art
      N
```

Rama beat the child

This is the deep structure of the sentence, Rama beat the child.

2. Fillmore (1970) has eliminated the Modality constituent (M). For details see Chapter II, Footnote 9).

3. Fillmore (1970) has eliminated the case marking element (K) and as a result the case suffixes are directly joined to the NP.

4. According to Fillmore (1970), the deep structure of this sentence is as follows:
5. Chomsky (1965) also mentions about the order of deep structure elements. He argues that the base rules have two separate functions, that is, they define the grammatical relations and they determine the ordering of elements in the deep structure and that the transformational rules which map deep structures into surface structures reorder the elements in the deep structure.

"The rules of the categorial component carry out two quite separate function: they define the system of grammatical relations and they determine the ordering of elements in the deep
At least the first of these functions appears to be carried out in a very general and perhaps universal way, by these rules. The transformational rules map deep structures into surface structures, perhaps, reordering elements in various ways in the course of this operation" (pp. 123-124).

6. For example, the sentence aval raavile viittil pooyi 'she went to the house in the morning' can have the following orders:

- aval raavile viittil pooyi
- aval viittil raavile pooyi
- aval pooyi raavile viittil
- aval viittil pooyi raavile
- aval viittil raavile pooyi
- aval raavile pooyi viittil
- raavile aval viittil pooyi
- raavile viittil aval pooyi
- raavile aval pooyi viittil
- raavile pooyi aval viittil
- raavile pooyi viittil aval
- raavile viittil pooyi aval
- viittil aval raavile pooyi
7. The concept of Case Hierarchy is seen in Halliday's Grammar also. According to him, initiator, if present, becomes the subject. If it is absent, Goal becomes the subject. If it is absent, actor becomes the subject, if present. If it is absent, goal or attribuaut becomes the subject, if present.

8. Sinha (1975) argues that, "A case hierarchy plays no part either in the semantic or in the phonological component of a Generative Grammar. It is hypothesised simply to account for surface word order with the help of transformations, only one of which, the Subject Selection Rule, has been spelled out in detail" (p. 128).
9. The causative verbs are derived either from intransitives or from transitives by adding causative suffixes. The causative suffixes are -i-, -ppi- and -ippi-.

(1) raaman ootunnu
Rama runs

'Rama runs'

(2) ayaal raaman raamane ootikkunnu
he Rama(Acc.) make to run

'He makes Rama to run'

(3) siita saari utukkunnu
Sita sari wears

'Sita wears the sari'

(4) amma siitaye saari utuppikkunnu
mother Sita (Acc.) sari make to wear

(5) aval jooli ceyyunnu
she work does

'She does the work'
(6) ayaal avalekkontu jooli ceyyikkunnu
he She(Acc.)-by work make to do

"He makes her to do the work"

(7) amma ayaalootu parannu avalekkontu
mother he-with said she(Acc.)-by
jooli ceyyikkunnu
work makes to do

"Mother had him make her to do the work"

All the above sentence types can be defined on the basis of the participants involved in their structures. In sentence (1) raaman is the subject and it is in the Agentive case. In (2) the Agentive subject of the noncausative sentence (2) becomes Affective (object) and the External causer (subject) of (2) is Agentive. In (3) siita is the subject and it is in the Agentive case, and saari is the object and it is in the Objective case. In (4) the Agentive (subject) of the noncausative sentence becomes the Agentive the Affective
(indirect object) and saari becomes the direct object and the External causer (subject) of (4) is Agentive. In (5) aval (Agentive) is the subject and jooli (Objective) is the object. In (6) the Agentive subject of (5) becomes Instrumental and the External causer (subject) of (6) is Agentive. The Agentive subject of (6) becomes a mediator (External causer) in (7) and the Second External causer (subject) of (7) is Agentive.

For detailed study of the various causative sentences refer Andrewskutty (1973) and Krishnamurthy (1971).

10. Chomsky gives the structure of a Relative Clause as follows:

```
S
 /\   
NP  VP
    /\  /
   S   NP
      /\  /
     S   N
        /\ /
       V

Aval kaaryam paRannu kaaryam sariyaanu
```
This is the deep structure of the sentence,

\[ \text{aval paRaṇṇa kaaryam sariyaanu} \]

she said—which matter true is

'The matter she said is true'


11. According to Chomsky the structure of an NP Complement Clause is as follows:

\[
\begin{array}{c}
\text{S} \\
\text{NP} \\
\text{S} \\
\text{val kinaRRil caati} \\
\text{vaarta kallamaanu}
\end{array}
\]

This is the deep structure of the sentence,

\[ \text{aval kinaRRil caati enna vaarta kallamaanu} \]

she well-in jumped that news lie - is

'The news that she jumped into the well is a lie'
For details refer Andrewskutty (1973).

12. Chomsky gives the deep structure of a conjunctive sentence as follows:

```
  S
 / \       /
S1  S2     /
/  /       /       /
NP VP NP VP
  /     /     /     /
N V N V
  /   /   /   /
usa paati siila paati
```

The above deep structure is that of the sentence,

usayum siilayum paati
Usha-and Sheela-and sang

'Usha and Sheela sang'