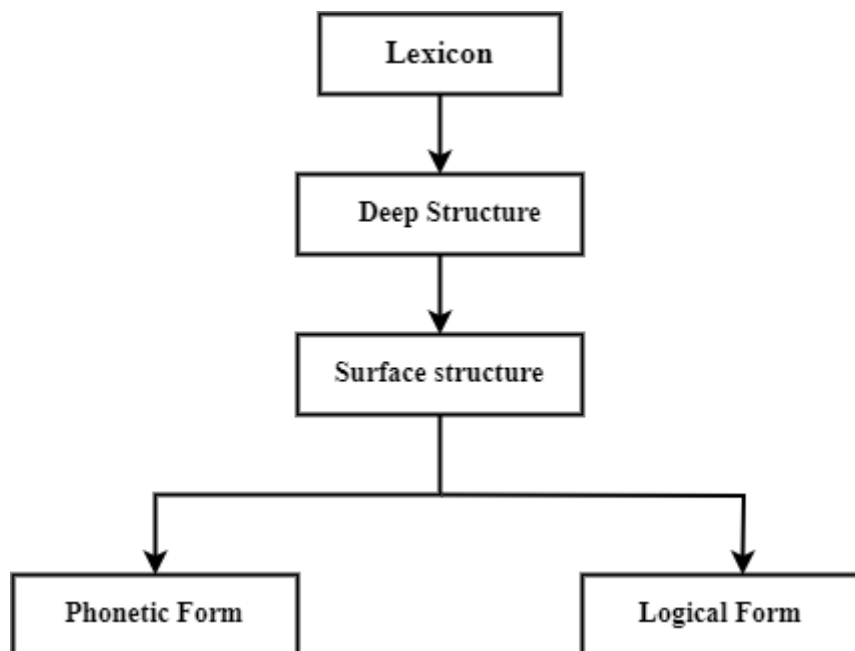


## Chapter 3

### MINIMALIST PROGRAM

#### 3.0 Introduction

This chapter looks into the derivation of syntactic structure within generative framework from the early ‘Government and Binding to the more recent Minimalist Program (MP). Generative grammar’s early understandings of grammar reveal the following concepts: grammar is a system comprising a set of interdependent rules. The components of grammar include i) lexicon, ii) syntax, iii) phrase structure rules, iv) transformation rules, v) phonetic form (PF), and vi) logical form (LF). As we know some of these notions are replaced with other notions and some are omitted. Figure 3.1 is a standard representation of the grammar in GB.



**Figure:3.1**

The four levels of syntactic representations were assumed by Chomsky in GB theory namely D-structure, S-structure, Logical Form (LF) and Phonetic Form (PF). These four levels of representation later reduced to two ‘interface level’ i.e. PF and LF. Sentence has got both forms and meaning properties. This suggests that there must be two distinct grammatical levels of representation that must interface with relevant cognitive system to get their

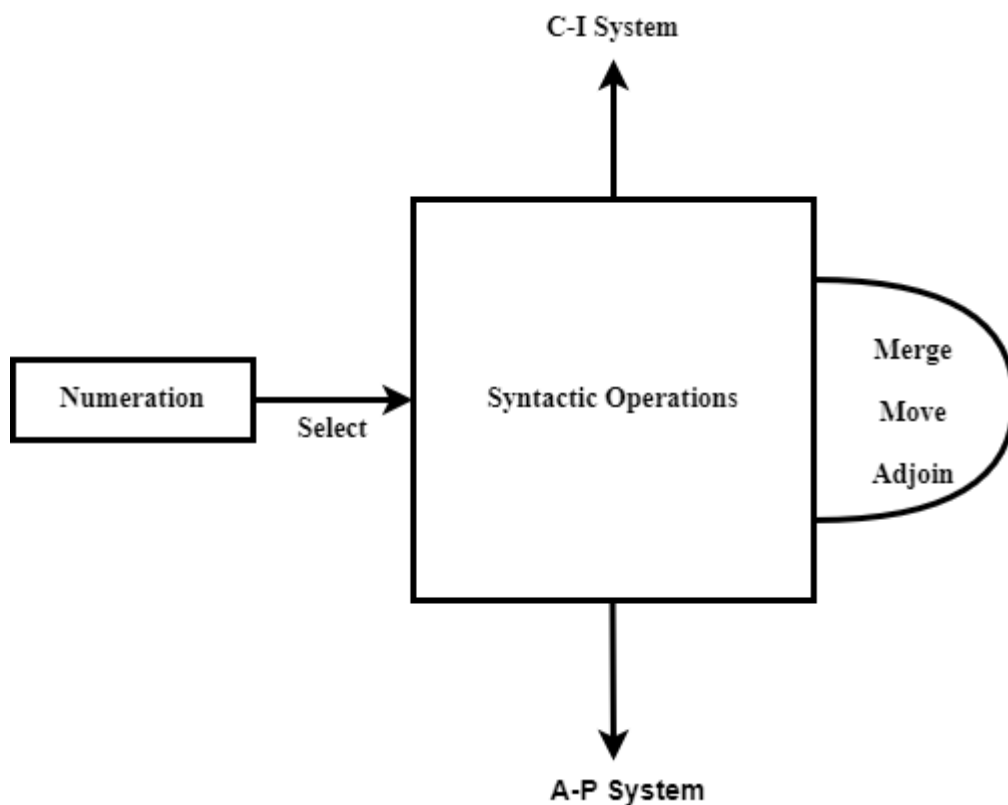
Articulatory-Perception (A-P) and Conceptual – Intentional (CI) properties. According to Chomsky these two levels become conceptually necessary as LF in the interface level where meaning is interpreted and this meaning is forwarded to the Conceptual – Intentional system and PF is the interface level where sound is interpreted as information to be forwarded to Articulatory – Perceptual system. Later, following the rules of principle of methodological economy Chomsky discarded two theory-internal levels, namely D-Structure and S- Structure as they lack empirical motivation. Further Chomsky assumes that in Minimalist Program there is a notion called ‘Language Faculty’ which consists of a lexicon and a computational system. Computational system is responsible to arrange items in pair  $(\alpha, \beta)$ , where  $\alpha$  is a PF object and  $\beta$  is an LF object. Both the items consist of ‘legitimate objects’ if they satisfy the principle of Full Interpretation (FI). The principle of FI necessitates that all these objects features be legible at the relevant interfaces. The process of derivation takes place at PF and LF if all the features of  $\alpha$  and  $\beta$  satisfy full interpretation. If either of these objects fails to satisfy the Full interpretation the derivation crashes at the appropriate level. So, a derivation is considered to be fully converged if and only if it converges at both PF and LF.

### **3.1 Feature Checking Theory**

Chomsky (1995) observes that in computational system of human languages feature checking is the core property. Human system of languages is not representational but strictly in that application of successive operations lead to  $(\alpha, \beta)$ , Chomsky (1995b). A lexical item consists of bundle of formal, phonological and semantic features. Out of this bundle of features only formal feature can participate in the course of syntactic operation. The formal features are category features (Noun or Verbs),  $\phi$ -features (person, number and gender), case feature (nominative or ergative) and strong/weak features where F is a functional category. The strong features derive overt category movement and weak features derive covert movement. The interpretable features in both the interface levels need not to be checked and the uninterpretable features should be checked off and deleted before reaching LF or else the derivation crashes.

#### **3.1.1 Architecture of Derivation Model**

As syntax relates a numeration to both sound and meaning, it allows us to establish a link between them for the communicative power of language. The general architecture of the system is shown below:



**Figure 3.2**

Have a numeration from the lexicon and to that lexicon the operation selected is applied and then the syntactic operations like merge, move and adjoin takes place. These operations apply recursively, as marked by the arrow. So that after each application the state of workspace changes. One of the syntactic object interfaces with the computational- intentional system (LF) and the other object interfaces with articulatory – perceptual system ( point of Spell Out).

### **3.1.2 Theta theory**

“The case theory and the theta theory are linked by the visibility condition. Visibility Condition: ‘A DP’s theta role is visible at LF only if it is Case marked’” (Hornstein, Nunes, and Grohmann 2010). Theta Criterion: “Each argument bears one and only one theta-role, and each theta-role is assigned to one and only one argument” (Chomsky 1981, 36). Theta ( $\theta$ ) roles are very closely related to Case. Theta theory is a module of the grammar which often plays a crucial role when it comes to inherent case assignment.  $\Theta$ -roles thus are basically semantic entities. They are a significant feature of the verb which helps in generating a meaningful sentence. A sentence may be grammatical but not meaningful, semantically. A

sentence like *'My pen eats burgers'*, is grammatical but we know that the sentence does not make any sense.  $\theta$ -roles are important to avoid such meaningless constructions.

Verbs depending on their valence require arguments and  $\theta$ -roles. A transitive verb requires two arguments and hence two different  $\theta$ -roles have to be assigned to the two arguments. The verb 'eat' requires a subject and object. The subject is usually an agent (agents are initiators of an action which mostly have to be +human) the direct object and a theme usually takes the second argument position. A di-transitive verb like 'put' requires an agent, theme and a goal. Thus, with the help of the  $\theta$  grids one can construct sentences. An expletive like 'it' does not receive a  $\theta$  role. So when an argument position does not have any theta role, we insert the expletive (for example: *It rained*). Also, the Extended Projection Principle (EPP) necessitates that every clause have a subject. In other words, the Spec of TP cannot be left empty. The Extended Projection Principle essentially states that features associated with the head of a phrase must be visible at the highest point of that phrase. In other words, the features of the head must be projected to the highest level of the syntactic structure in which the head is contained.

Theta roles are assigned at the base position before movement. In an active sentence, the semantic function of the subject and object corresponds to the grammatical functions of the subject and object. Whereas, in a passive sentence, the semantic functions does not correspond to the grammatical functions. The grammatical object of a passive sentence has the semantic function of a subject in a spec-head agreement relation occupying the spec position of IP (the doer of an action) whereas the grammatical subject corresponds to the semantic object. The subject of a passive sentence is known to be base generated in the object position where it gets its theta role and then moved to the subject position through transformation.

### **3.1.3 Theta Grid**

We all know that c-selection and s-selection both are associated with the  $\theta$  roles. The lexical items have their specified slot for each  $\theta$  role they assign. These slots are arranged in a list called  $\theta$  grid. Each of these slots has two aspects: one is responsible for the lexical semantic part of the word and the other looks at the syntactic aspects of the slot and states which syntactic category features are associated with it.

<b>V Verb</b>	<b>C-selection features</b>	<b><math>\theta</math> Grid</b>	<b>S-selection</b>	<b>Thematic roles</b>
	N	X	Entity	Agent
	N	Y	Entity	Theme
	P	Z	Entity	Goal

**Table: 3.1**

The above table specifies part of lexical entry for the verb V. Here  $\theta$  grid are shown as x, y and z. The relation between  $\theta$  grid and the lexical semantics of the predicate tells us the thematic roles and s-selectional properties are associated with the element of  $\theta$  grid. While the c-selection features tell us what category of the syntactic argument are assigned those roles.

### **3.2 Case Theory**

Fillmore's seminal work, *The Case for Case* (1968), commonly known as Fillmore's case grammar (deep cases) where he introduces the notion of a 'universal set of atomic semantic roles' and suggested that case roles/frames should be recognised as one of the 'common universal cornerstone of language.' Fillmore also argues that case relationships needed for cross-linguistic analysis include at the very least: 'Agentive', 'Instrumental', 'Dative', 'Factitive', 'Locative', and 'Objective' that later came to be known as 'Agent', 'Experiencer', 'Instrument', 'Object', 'Source', 'Goal', 'Place' and 'Time'. These case labels except for the object, are more semantically lucid and less confusable compared to traditional case labels. These labels are also referred to as the 'syntactic-semantic relations' of case. The primary goal of case grammar is to establish a semantic grammar, as most linguists take syntax as the main objective. Using a modified form of valency theory, Fillmore argues that the verb establishes a set of cases in a sentence: these are like slots, which usually need not all be filled as shown in Examples (1-4).

The following examples are given by Fillmore 1968:

- (1) Mary opened the door with a key.
- (2) Mary opened the door.
- (3) A key opened the door.

(4) The door opened.

In sentence (1) subject 'Mary' gets the agent semantic case; the direct object 'the door' gets the semantic case as object; and the indirect object 'a key' gets the semantic case as instrument. In (2) it is the same as (1) except that there is no instrument. In (3) subject of the sentence 'a key' gets the semantic case as instrument and the direct object 'the door' gets the semantic case as object. In sentence (4) there one sole argument 'the door' which is in the subject position of the sentence and gets the semantic role of object. In other words, the verb 'open' requires at the minimum the 'object' to be specified in a sentence.

### **3.2.1 Case Theory in GB**

The GB model makes a distinction between morphological and abstract case. The distinction is motivated by the fact that the morphology may not always be transparent with regard to the abstract case of an entity. In some languages case is morphologically realised. In others it is not, but we assume that it is assigned in a uniform way whether morphologically realised or not (Chomsky 1986 a:74). In a language like English where he/him shows a morphological distinction but John/John does not, one must yet make a nominative/accusative distinction, abstract case is an important element in the syntax even when it may not be abstract case to all lexically realized NPs.

The study of Case came to play a significant role in syntactic theory around late 1970s and early 1980s. Chomsky in his GB model (1981) viewed the case aspect in a different way. According to him an NP derives case because it is governed and assigned by certain element in the sentence. He wants to explain case phenomenon in a structural way. For this, he proposes a theory called as Case Theory in the GB model. Here he proposed Case to be a prerequisite for an NP to be active in syntax. Case helps understand the distribution of the NPs/DPs and movements. In GB model case theory is an important sub-theory. In addition to the case theory, GB frame work contains several other sub-theories like the theta theory, bounding theory, binding theory, control theory, etc. 'Case Theory' came to be regarded as one of the six modules of GB. Case theory as a module is strengthened to explain the visibility criterion that was laid down by theta theory. In GB or P&P, core case assignment is largely based on structural relations, and structural case assignment was based on government, C-command, and M-command.

### 3.2.2 Case Assignment

The definitions of government, C-command, and M-command, which are crucial to case assignment, are listed below.

- i.  $\alpha$  governs  $\beta$  iff,  $\alpha$  C-commands  $\beta$  and  $\beta$  governs  $\alpha$  and  $\alpha$  is a governor (head) .
- ii.  $\alpha$  C-commands  $\beta$  iff,  $\alpha$  does not dominate  $\beta$  and  $\beta$  does not dominate  $\alpha$ , and the first branching node dominating  $\alpha$  dominates  $\beta$ .
- iii.  $\alpha$  M-commands  $\beta$  iff,  $\alpha$  does not dominate  $\beta$  nor  $\beta$  dominate  $\alpha$ , and the maximal projection dominating  $\alpha$  dominates  $\beta$ .
- iv. There is no node  $Z$  such that,  $Z$  is a potential governor for  $\beta$ ,  $Z$  C-commands  $\beta$  and  $Z$  does not C-command  $\alpha$ .

In a transitive sentence, a head  $x$  projects a specifier and a complement position. The internal argument takes the position of the complement (direct object) and the external argument takes the position of the specifier, which is the subject position. These arguments are known as NPs/DPs, where case and theta roles are assigned. The standard assumption of case assignment in a transitive clause is that the transitive verb is able to assign case only to one argument, i.e., the internal argument which it assigns accusative case. The external argument, which receives the nominative case, is assigned case by a functional category called finite Inflectional phrase. In order for the case to be assigned under government the external argument has to move up to the spec of its head (IP).

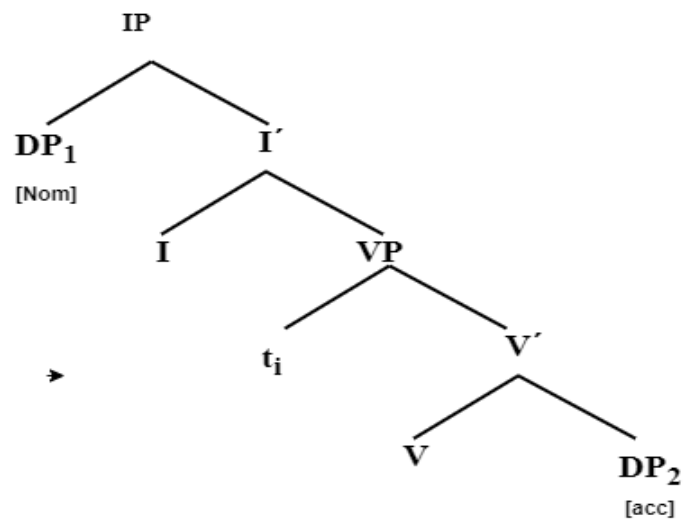


Figure:3.3

Thus the case marking in the ‘Case Theory’ can be briefly explained as follows:

- i. T/Infl assigns nominative case to the external argument of both transitive and intransitive clause under M-command.
- ii. V assigns accusative case to the internal argument under C-command.

While looking at the ergative case system, V seems to assign absolutive case to the external argument of an intransitive clause rather than T as expected by the Case theory because the external argument of an intransitive clause and the internal argument of a transitive clause gets the same case, i.e., absolutive case. This is one of the fundamental problems faced by Case theory.

### 3.2.3 Case filter

The notion that every NP has an inflectional property which may manifest phonetically in some languages or may not manifest at all, was adopted by Chomsky from Rouveret and Vergnaud (1980). The construct of the Case Filter by Chomsky (1981) posits that every NP should have Case. Every lexical NP must be assigned Case or get its Case checked to render itself visible. This prerequisite of an NP, if not met, results in an ungrammatical sentence. An apparent restriction on the Case filter is that it applies only to NP arguments. Non argument NPs is assigned default case so as to satisfy the case filter. The case filter necessitates the movement of argument. “Unlike traditional grammars where Case is viewed as marking on NPs that indicates their grammatical function, generative syntax treats Case as a licensing requirement. The Case filter is supposed to ‘filter’ out any derivations where this licensing requirement is not met” (Markman 2010, 847). Also, the notion and construct of abstract Case is essential to Case theory in facilitating the positions of NPs, so as to not occur in random positions.

For example:

\*I ate the mango monkey.

The above sentence is regarded as ungrammatical as the *monkey* has no governing head to assign abstract case and it is in the non-governing position. *Monkey* violates the case filter as it does not receive any case. The NPs have to in certain position to be case assigned.



### 3.3 Morphological case and Abstract Case

In generative grammar, the construct of a theoretical notion of abstract Case was crucial to provide a sense of uniformity. The presence of morphological case against abstract case is just a mere parametric difference in languages. Thus, in generative grammar, Case can be either abstract or morphological. Morphological case as the name itself suggests, is one which is indicated via a morphological marker. It can be in the form of affixes, inflections, etc. Not all languages have this morphological marker to indicate case. Some languages have their way of reflecting case through agreement. The point here is, not many languages manifest this morphological case. However, as we have seen earlier, the case filter requires every NP to have case in order to be visible. Thus, the theoretical construct of an abstract notion of case was pertinent. Now, every NP receives Case irrespective of whether Case is overtly realised on an NP or not. Thus, abstract Case is universal, whereas, morphological case is not. Morphological case is particularly important in the study of ergativity, as ergative case in most languages is morphologically marked (Dixon 1994). The main principle laid down by Case theory is that Case is realised in every language as ‘abstract Case’ but it varies from language to language to have a morphological realisation. “The degree of morphological realization of abstract case varies parametrically from one language to another” (Haegeman 1994, 158). The syntactic marking of the function of the DPs is a principle required in every language, be it abstract or morphological. In certain languages the constituent order of the sentence cannot determine a subject or an object or which grammatical relation the constituent expresses. Hence, morphological case marking on nominals or verbal agreement helps such a constituent to express its grammatical function. In other words, languages with extensive morphological case usually have relatively free word order.

Many languages have full-fledged morphological case. Some languages does not have morphological case at all. In English, morphological realization of case is reflected only in the pronouns. A schematic representation can be seen in Table 3.2.

Case	Pronoun
Nominative	I/you/he/she
Accusative	Me/you/him/her
Genitive	My/your/his/her

**Table 3.2**

English has abstract as well as morphological case marking. Pronouns exhibit morphological case marking. ‘I want John to sing’ vs ‘I want him to sing’. In both the sentences ‘John’ and ‘him’ gets accusative case. With ‘John’ the accusative case is not morphologically realised whereas in the case of the pronoun ‘him’, it is morphologically realised. It is an accusative form of the nominative pronoun ‘he’.

### **3.3.1 Structural Case and Non-Structural case:**

The construction of an abstract notion, such as abstract case, is crucial to explain the concept to movements (raising, passivisation, unaccusatives) etc. (Bobaljik and Wurmbrand 2009). Zaenen et al (1985), Marantz (1991), McFadden (2004), proposes that the Case filter is extraneous and abstract Case needs to be dispensed as they overlap with the EPP. They argue that the EPP and the semantic licencing of arguments can explain most of the ungrammaticality.

Structural and Non-Structural case play a significant role in the study of ergativity. A substantial amount of work on ergativity within the generative grammar focuses on this topic (Oyharçabal 1992; Polinsky 2017; Woolford 2006b) among many other. A large part of this thesis will dwell on this. This section will briefly introduce the basic concepts relating to structural and non-structural case. The standard assumption in generative grammar is that, there are two types of case assignment: structural and non-structural. Structural Case can be abstract and morphological. It is assigned to designated positions, in particular, to A positions. If it is not assigned, an NP in an A position violates the case filter. NPs in other governed positions are assigned inherent case on the basis of their theta roles. NPs not in governed positions are assigned default case. Structural case is fundamentally related to adjacency and is also frequently termed as case assignment based on adjacency. Further, structural case is not related to any thematic role or grammatical relation. Structural cases, are thus not preserved under transformations. Structural cases can be exceptionally assigned case

under certain circumstances, such as Exceptional Case Marking. Non-structural case, also known as inherent or lexical case, are basically the idiosyncratic properties of the lexical head (usually the verb) and are associated to a particular thematic role. They are basically the realisation of the theta-roles on the NPs/DPs. Since they are related to the theta roles, they are said to be assigned at the deep structure in GB (in Minimalism, however, d-structure is eliminated). Non-structural cases cannot be exceptionally assigned as the verb does not assign a theta role to the exceptionally marked noun. They are also preserved under transformations, unlike its counterpart. Inherent cases are also known as semantic case and sometimes as adverbial case (see Larson 1988). “If  $\alpha$  is an inherent case assigner, then  $\alpha$  assigns case to an NP iff  $\alpha$  theta-marks the NP” (Chomsky 1986, 194). The difference between structural and inherent case in accusative languages like English is that the nominative subject and the accusative object may have various kinds of theta-role whereas inherent case marking like ablative or instrumental can have only fixed theta roles. Chomsky (1986), states that inherent case differs from structural in three different ways. First, inherent case is assigned at the D-structure whereas structural case is assigned at the S-structure. Second, in inherent case, the configuration is the head-complement relation between the case assigner and the assignee. Third, a head, x that assigns the case to y should also assign a theta role to y. In Minimalism, case assignment can be replaced by case licencing. With the elimination of S-structure and D-structure in Chomsky (1995), the difference between S-structure and D-structure Case licencing becomes invalid. Hence, what is available now is just the configurational difference and the theta-assignment requirement differentiating the inherent and structural case. Inherent case is assumed to be assigned in a head-complement configuration.

### 3.3.2 Exceptional case marking

Exceptional Case Marking (ECM) is an important aspect of Case theory. It is a special kind of case marking an NP receives. Examine the Examples 5.

- (5)      a) I want [Bill to go]  
           b) I want [him to go]  
           c) \*I want [he to go]

Both ‘*Bill*’ and ‘*Him*’ in 5 (a) and 5 (b) are in the spec IP of the complement clause. A nominative case like *he/she* is not allowed in the spec of the IP of the complement clause as can be seen from the ungrammaticality of 5 (c). Although only nominatives can occur in the

spec of IP, Case theory however, says that only finite I assigns nominative. The subject of the non-finite complement clause therefore receives accusative case from the verb *'want'* since it has to release its case. The case is assigned outside the normal scope of government and this kind of unconventional Case assignment is known as ECM.

### **3.4 Case in Minimalism**

The Minimalist Program (MP) came into existence in the early 1990s, after Chomsky ((1993, 1995) the assumption is that human brain, which is the cognitive system, interacts with two external systems, the articulatory-perceptual system (A-P) (sound) and the conceptual-intentional system (C-I) (meaning). The computational system, of human language, interacts with these external systems A-P and C-I through two distinct interface levels, Phonetic Form (PF) and Logical Form (LF). The sound-meaning link is described as a derivation, wherein, the CHL takes lexical entries (the numeration) as an input and the two interface LF and PF as the output. LF and PF are two distinct features and one is not derived from the other (Chomsky 1995). The point in the derivation where the computation splits is called spell-out. (Earlier known as the S-structure). The minimalist program is not fundamentally different from the earlier version of the generative syntax (GB/P&P). The core ideas are of the generative paradigm and it seeks to explain the grammar in its simplest form, that is, to reduce UG to the minimum. Chomsky formulated two basic theories in the minimalist program: “economy of derivation” and “economy of representation”. The economy of representation, studies what the purpose of a sentence is and how a sentence’s structure should be kept minimal without altering the meaning of the sentence. The economy of derivation, studies how the grammatical transformations match interpretable data with uninterpretable data. Thus, the features of syntactic elements are interpretable or uninterpretable.

The basic differences between Case Theory in GB and MP are that, in Minimalism, case is checked rather than being assigned. In GB, Case is assigned via government under different structural configurations (c-command and m-command), in MP case is checked following a spec-head configuration. “one of the great early minimalist achievements consisted in reducing all of these to Spec-head” (Lasnik 2008, 25). Case features are a part of the lexicon, which is a prerequisite in MP. It is construed that a nominal enters the derivation fully inflected (for example, case), rather than the Case assignment which happens at a later stage in GB. In GB the case filter requires every NP to have a case. Similarly, in MP, every NP

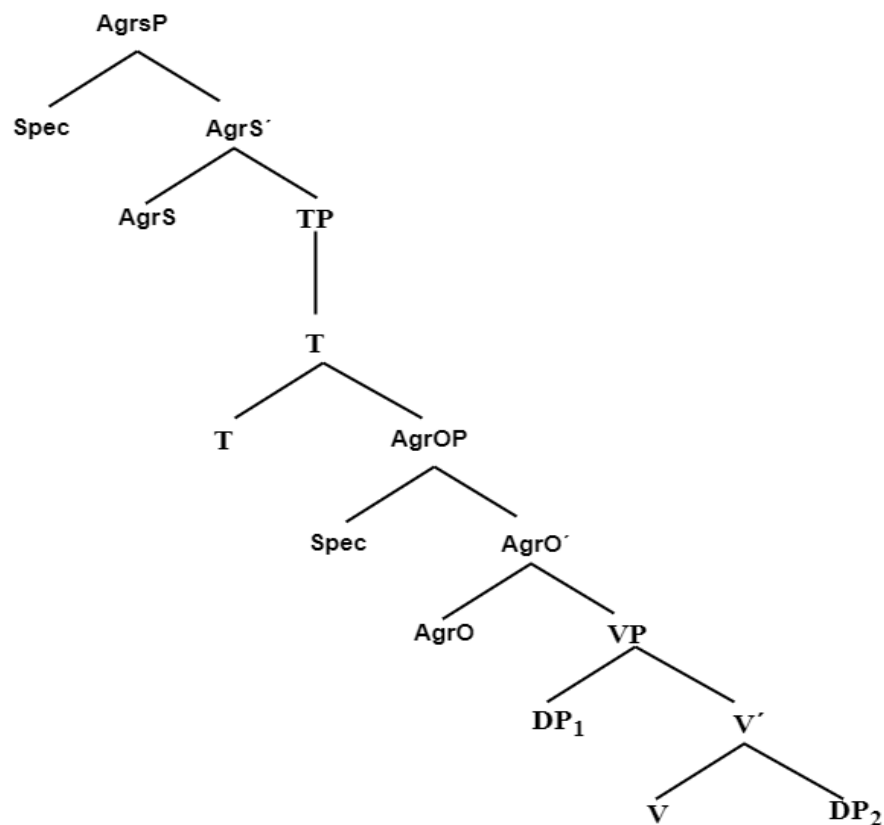
requires to check its case against a suitable head. Both the frameworks are no different with regard to the “obligatory case requirement”.

Case is valued through a syntactic operation called ‘Agree’. Structural Case features in the minimalist program are presumed to be uninterpretable features as they are not semantically inherent and do not have any semantic content. Uninterpretable features have to be deleted by checking them off against a feature of the same kind in a spec-head relationship before spell-out, for the derivation to be successful. Thus, the uninterpretable  $\phi$ -features of the functional categories are deleted by the interpretable  $\phi$ - features of the DPs (person, number etc.) in its specifier position upon agreement (structural case on the nominals are uninterpretable features). This agreement relation deletes the uninterpretable features in the narrow syntax and allows the derivation to converge at the LF (Chomsky 2000, 2001). “For Minimalism in practice, the major questions of Case Theory revolve around the differences between nominative and accusative case assignment, and thus, the possibility of developing a uniform theory of nominative and accusative case assignment” (Bobaljik and Wurmbrand 2009).

### **3.4.1 Agr Approach**

Pollock (1989) proposed that the structure of IP is more complex than it is presumed to be and it should contain two structures, namely TP and AgrSP. Following Pollock, in early minimalism, Chomsky (1991) proposed that nominative Case is checked in the spec of AgrS and that accusative Case is ‘checked’ in Spec ArgO. With the introduction of the Agr projections, there was a switch from ‘Case assignment’ to ‘Case checking’. Within this new shift, Case was conceived to be an uninterpretable feature that comes as an inherent feature of the NP from the lexicon which required to be checked off. In the earlier understanding of Case (GB), Case was a feature that with the introduction of the Agr projections, there was a switch from ‘Case assignment’ to ‘Case checking’. Within this new shift, Case was conceived to be an uninterpretable feature that comes as an inherent feature of the NP from the lexicon which required to be checked off. In the earlier understanding of Case (GB), Case was a feature that “One of the theoretical arguments in favour of AgrP was that it allows for a structural parallelism between subject and object Case checking. Unlike GB, where Nominative Case was assigned by Infl to Spec IP and Accusative Case was assigned by the verb to its complement, AgrPs allow for both Accusative and Nominative Cases to be licensed in the same structural configuration” (Markman 2010, 850). The other advantage of this approach according to, Visser (2006) is that, “it accounts for languages where the

transitive verb seems to agree with more than one argument.” Chomsky’s (1991, 1995, Chapter. 3) structure of case checking: V cannot get its case feature checked with the object (DP) within the VP because the object (DP) is not in the case checking domain of V. Also, V cannot enter into a checking relation with the subject (DP) although it is within the checking domain because a DP cannot get its case feature checked in its theta position. Thus, V moves up to AgrO via head movement before spell-out to get its strong accusative case feature checked. The object DP moves up to the spec of AgrOP. Similarly, the subject (DP) moves up to the spec of AgrSP and enters into a checking relation with T.

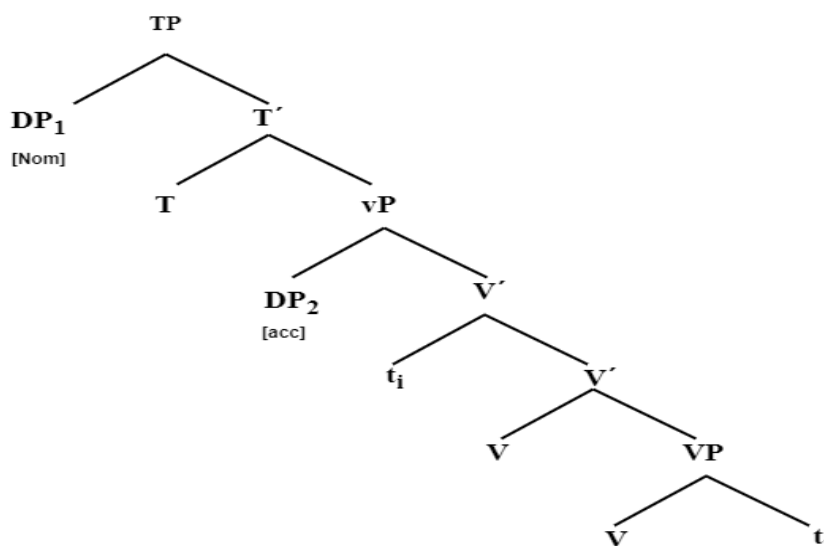


**Figure: 3.4**

Although the Agr approach did bring some uniformity between nominative and accusative case checking, by the mid-1990s, in Chomsky (1995), AgrPs were discarded. “One of the criticisms was that AgrS and AgrO existed solely to license Case and hence lacked enough independent motivation” (Markman 2010, 851). Also, the designated structural positions of the nominative and the accusative are not always valid, as we see instances of quirky subjects like datives in Japanese. “Nominatives are also found to occur on objects in languages like Icelandic” (Sigurðsson 2006). “Chomsky (1995, 2014) claims that the Agr-projections, which play a significant role in the Agr Case Theory, should be discarded on conceptual grounds,

for they do not receive any interpretation at the interface levels (i.e., PF and LF): they have no meaning and no phonological realization. They function only in syntax and their function is to mediate checking operations.” (cited from Ura 2001, 356).

In Chomsky (1995, chapter 4), the two-layered VP-shell projection, first hypothesised by Hale and Keyser (1991) was adopted. Case was checked in a spec head configuration. The ‘Bare phrase structure’ was introduced, which allows for multiple spec positions. The phrase structure is again built bottom-up with the operation “Merge” and “Move”. “Attract” facilitate s movement. “K attracts F if F is the closest feature that can enter into a checking relation with a sublabel of K” (Chomsky 1995, 273). In the derivation, the operation merge links various elements in the numeration step-by-step up in a phrase structure. Nominative Case is checked in the spec of TP under spec-head agreement. Accusative Case of the small v is checked by the object DP. Also, another spec v is projected to allow the object DP check the features of v. The small v is also responsible for assigning the agent theta-role to the external argument. T and v are both independently motivated heads and are responsible for tense and theta-role assignment. They come with case features and  $\phi$ -features which need to be checked. The nominative and accusative Case checking in Chomsky (1995) is shown:



**Figure:3.5**

Although this theory proved to be more fruitful than the earlier ones, it still failed to account for sentences where the verbal agreements were with the objects. For instance, in Icelandic there are constructions where the subject gets dative and the object gets nominative. The verb

agrees with the nominative subject but lacks a spec head relationship. “While empirically motivated and theoretically well-founded, spec subject of the transitive and intransitive clause in the nominative-accusative language are treated alike and to capture the nominative case checking in the intransitive, it is assumed that *v* is inactive or non-existent in an intransitive clause.

### **3.4.2 Case Checking in the Probe, Goal (Chomsky 2000, 2001)**

Chomsky (2000, 2001), later on, proposes a different treatment of case and agreement. The operation “Agree” was introduced, which operates downwards. *T* and *v* both have uninterpretable features, which in Chomsky (2000, 2001) are unvalued  $\phi$  features of *T* and *v* which enters the derivation. *T* and *v* are known as “Probes”. These unvalued features must be erased at spell-out. To erase these unvalued  $\phi$ -features the “probes” seek out a matching “goal”, which can value the features of the probes, eventually leading to deletion. These unvalued features make the probes ‘active’. In this version of the minimalist program, uninterpretable features mean the value of the particular feature is not explicated when it enters the derivation. The probe and the goal should be active and should contain matching features for the operation “Agree” to be successful. The uninterpretable case features make the “goal” active.

In this version, differing from the earlier theory, the Probes (*T* and *v*) do not have Case features themselves. They value the uninterpretable case features of the goal (DP) with which they agree. The valuation of the formal features can take place in situ where the DP originates and movement is not a necessary function as the operation ‘agree’ operates downwards, which means a Probe can operate downward. This downward operation helped explain verbal agreement with the objects which the earlier version of the minimalist program could not account. Here, the notion of “Agree” is mostly driven by the *T* and *v*’s need to match its unvalued features against a matching goal to erase the uninterpretable features before spell out.

The  $\phi$ -features of the goal are interpretable. Goal *N* is active only when it has structural case. Once the case value is determined, *N* no longer enters into agreement relation and cannot move. Both Goal and probe must be active for Agree to apply. Structural case is not a feature of the probe (*T* and *v*) it is assigned a value under agreement and is removed by spell-out in the narrow syntax. The *T* probe assigns the value nominative and the *v* probe assigns accusative. Case itself is not matched but is deleted under matching of the  $\phi$ - features”

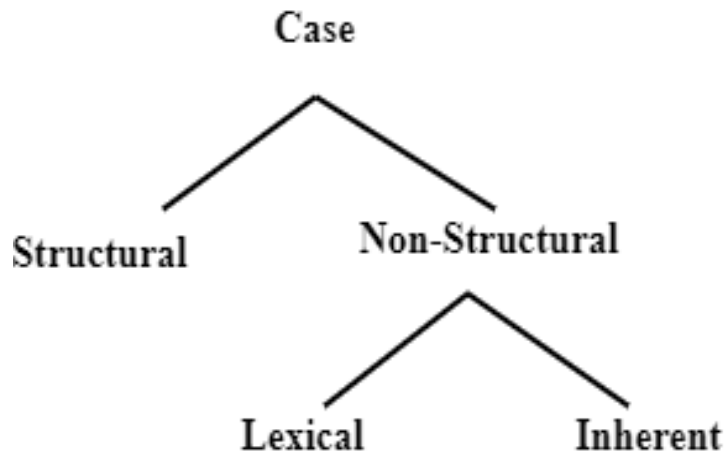


(Chomsky 2001, 13). The movement of the NP to the spec of TP is a result of the “edge features” (EPP). Chomsky assumes this to apply with the ergative-absolutive languages too, however, under different conditions. The theory nevertheless faces problems in accounting for languages with locative inversions (Bantu languages) and OSV word orders. The nominative case valuation of the intransitive subject is more or less the same as the previous version. ‘v’ is inactive or non-existent.

### **3.4.3 Inherent Case Hypothesis**

Woolford (1997, 2006b), Mahajan (1990) Sheehan (2017) Legate (2006, 2012), Aldridge (2004, 2008) and Mohanan (1994), Anand and Nevins (2006), Coon (2010, 2013) Butt (1995), among others, advocates the view of ergative as inherent case. NPs do not necessitate any case-alternations depending on its position like that of structural case. They are linked to theta-roles like instruments, experiencers, etc. (Chomsky 1986). Theta-roles are assigned at the base position and when an NP moves, it carries its theta role along. Theta roles are not fixed to any structural positions, likewise, inherent cases is assigned at its base position along with its theta-role and are not fixed to any structural position. Woolford is one of the first proponents to postulate ergative as an ‘inherent case’ akin dative case. Ever since, many linguists working on ergativity have accepted this to be standard. According to Woolford (1997) “Case theory already predicts the existence of a Case whose properties are exactly those of ergative Case. Case theory includes, in addition to its inventory of structural Cases, a series of lexical (also called inherent or quirky) Case that are assigned at D-structure in conjunction with theta-role assignment. Dative case is a lexical Case associated with goals/experiencers and lexical accusative Case is associated with themes. Note, however, that there is a missing Case in this series – the lexical Case associated with agents.”

According to Woolford (1997) non-structural case can be divided into two types, ‘lexical’ and ‘inherent’ as represented in Figure 3.6:



**Figure:3.6**

Lexical cases are idiosyncratic, which are lexically selected by the predicate. Only themes and internal arguments may have lexical case. Inherent case on the other hand is inherently associated with  $\theta$ -positions and only external arguments may receive such case. Woolford (1997) with data from Nez Perce and Kalkatungu, argues for an ergative as inherent analysis, i.e., ergative case is assigned to the transitive subject in association with an agent  $\theta$ -role. Bringing in parallels from nominative object in dative subject constructions, Woolford argues that the absolutes behave just like the nominative objects. In other words, both ergative and datives have the same effect on the objects which she assumes is typical of lexical case and not structural case. She proposes a four-ways case system.

- i. Ergative
- ii. Nominative
- iii. Objective
- iv. Accusative

Woolford (1997) thus postulates that ergative is an inherent case assigned by the verb in association with the agent  $\Theta$ -role. And the ergative subjects behave like dative subjects as shown below:

- a) They are not permitted in intransitive constructions.
- b) They typically occur with nominative (absolute) objects and not with accusative objects. This inherent case analysis is often rejected on the grounds that ergative may not necessarily associate with the agent theta-role. And it furthermore fails to provide a convincing account for syntactic ergativity.

Woolford (2006b) maintains her claims that there are two kinds of non-structural case: lexical and inherent. She further posits that the lexical and inherent case seems to be in a complementary position. Themes and internal arguments may have lexical case and DP goals and external arguments may have inherent case. These two non-structural cases are proposed to differ in behaviour and the way the case is licenced. Ergativity is considered to be similar to the inherent datives in terms of its syntactic behaviour. “Lexical Case is licensed only by lexical heads (e.g., V, P) and Inherent Case is licensed only by little/light v heads” (Woolford 2006b). Woolford uses certain diagnostic tests in defence of her proposal as to why ergative is inherent. Namely:

- a) Case Preservation under A-Movement
- b) Raising constructions
- c) Non-nominative Subjects of Tensed Clauses
- d) Allowing Nominative Objects
- e)  $\Theta$ -Relatedness

She further claims, “only little/ light v heads license inherent Case, while only a truly lexical head such as V (or P) can license lexically selected Case” (Woolford 2006b, 006). Legate (2012), also claims ergativity to be an inherent case by analysing the Warlpiri language lexicon. She takes it a step further and states that ergativity is not only limited to the agent theta role but can be extended to instrumental, causatives, experiencer etc. Mahajan (1990), suggests that the ergative has two functions: it is both a purely grammatical marker of a transitive paradigm (structural Case), and a semantic marker of volitionally (inherent Case). Mahajan’s analysis of ergativity is based on Hindi/Urdu which proposes the idea that a particular ergative NP can be both structurally and inherently case marked. It can be structurally marked because the NP needs to be identified with a particular grammatical category and undergo appropriate movements. And, also, inherently because the morphological ergative case marking is expected to come from a stipulation in the verb’s lexical entry.

Sheehan (2017) develops a parameter hierarchy for an inherent approach making four different kinds of predictions.

- i. Ergative case will occur only on arguments externally merged in spec vP.

- ii. Transitivity is not necessarily the defining criteria for ergative case as we may find ergative subjects without absolutive objects.
- iii. There will be no derived/non-thematic ergative subjects (no ergative expletives, raising to ergative or ergative subjects of passives, ditransitive or otherwise). This is similar to Marantz’s generalisation.
- iv. In instances where structural case is not available, ergative case will not be lost. (No change of case under ECM, no loss of ergative case under raising)

The Inherent Case Theory is often criticised on the basis that ergative case may occur on non-agents, but this account is also considered to be the most influential and accepted view.

### 3.4.4 Agr-less Approach

In Agr approach we have seen Agr projects AgrS and AgrO to capture the relation between Case and Agreement. This was the only reason for the Agr model apart from that there is no conceptual necessity for their presence in a syntactic structure. Chomsky (1995b) agreeing with Hale and Keyser’s assumption that there are two verbal shells; the upper shell is a projection of a phonetically null “light verb *v* and the lower shell is a projection of the verb. According to a double VP-shell hypothesis (Hale and Keyser 1993) the VP-structure of a sentence with a ditransitive predicate is as follows:

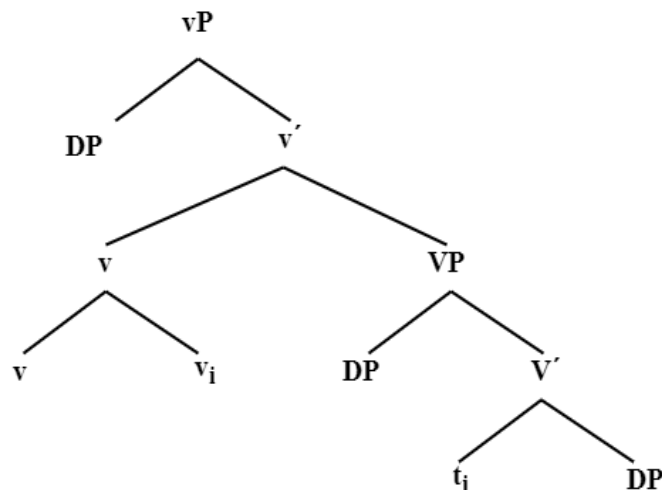


Figure:3.7

The light verb  $v$  assigns an external theta role and checks accusative case on the direct object, main verb  $V$  assigns the theta role to the internal arguments. Burzio's generalization on this approach is as follows:

- a) A verb which lacks an external argument fails to assign accusative case.
- b) A verb which fails to assign accusative case fails to theta-mark an external argument.

We will adopt Agr less approach to give the overview of case and agreement in Biate, in Chapter 4

### **3.5 Conclusion**

In this chapter we have briefly discussed how case is understood in the literature and highlighted some of the theories related to case. The chapter further describes how the assignment of case is GB as well as in Minimalism takes place. In next Chapter 4, we shall discuss the clause structure of Biate within Minimalist Program focusing on the assignment of case.

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