Chapter-1

Introduction
Chapter – I

INTRODUCTION

1.0 Theoretical Background
American structural linguistics concentrated on the structures of phonemes, morphemes, phrases and sentences and ignored semantics. While developing generative grammar, Chomsky suggested that the relation between syntax and semantics cannot be ignored in a grammar that is descriptively and explanatorily adequate. The notion of “deep” structure that he suggested in 1965, captured an important aspect of meaning of the sentence under investigation. Despite his observation on the nature of grammatical rules that relate syntactic structure to semantics, Chomsky (1965) did not propose any explicit mechanism for the analysis of meaning. Semantics was integrated with the generative grammar at the level of “Deep Structure”. But he observed, “In general, as syntactic description becomes deeper, what appears to be a semantic question falls increasingly within its scope” (Chomsky 1964:36). Though Chomsky did not directly contribute to the development of the semantic interpretation rule (SIR), he accepted the proposal of Katz and Fodor (1963), which determined how the structural combinations of lexical items assigned meaning to the sentences as a whole. They claimed that these rules help the speaker in disambiguating ambiguous sentences and in understanding paraphrase relation between sentences. Katz and Postal (1964) proposed the hypothesis that all information necessary for the application of the projection rules is present in the underlying syntactic structure. Chomsky clearly stated that transformational rules do not affect meaning. By assuming that everything necessary for semantic
interpretation is present in the deep structure; they put the whole burden of semantic interpretation on deep structure\(^1\).

Gruber (1976, (originally 1965)), developed this approach of semantic interpretation further by claiming that the underlying structure of a sentence generated before semantic and syntactic interpretation can be deeper than the level of “Deep structure” in the sense that it could be derived prior to the insertion of lexical items in the base structures. This mechanism was termed “Pre-lexical Categorical Structure” (pp. 5-8). Gruber developed this approach to investigate the relationship between a verb and its argument(s). He argued that a verb needs one or more argument(s), each of which must have a definite kind of relation with the verb. This idea led him to the introduction of concepts such as ‘agent’, ‘theme’, ‘instrument’, ‘experiencer’, ‘accompaniment’, ‘location’, ‘goal’, ‘source’, ‘direction’, etc. The advent of this notion led to several questions which remained unanswered in the Standard Theory (Chomsky 1965). Gruber used these relationships to account for the well-formedness of a sentence. He claimed that sentences such as (1a) and (1b) are synonymous not only because they have the same argument(s) and verb, but the same relation with the verb.

\begin{enumerate}
\item Akbar killed Aamir.
\item Aamir was killed by Akbar.
\end{enumerate}

\(^1\) Later on, for example, Chomsky (1977:170) admitted that the term deep structure was, in some ways “overestimated”, and that surface structure was associated “directly with semantic interpretation” (ibid, 171).
In (1a), the subject NP *Akbar* is the agent who is the performer of the action. The object NP *Aamir* is the patient who is the target of the action. In (1b), the NP *Aamir* is the subject; still it is the patient because the relation between the subject *Aamir* and predicate *was killed* is the same as in (1a). In (1b), NP *Akbar* is the object to the preposition *by* and still it bears the theta role of agent in relation to the verb. (2) is different from (1a,b) because the thematic relations between the predicate and its NPs are different in it.

2. Aamir killed Akbar.

In (2), the NP *Aamir* is the agent as it does the action; whereas NP *Akbar* is the patient as it is the entity which is affected by the action. Thus, we notice that in (1) and (2), it is the thematic relations of NPs with the verb which helps us in determining their meaning.

Gruber further noticed an important process which he termed as incorporation\(^2\) (p: 9-36) in which certain elements that are overtly expressed at the pre-lexical level are implied by the verb. For instance, we may look at (3a) and (3b).

3a. Did the pencil pierce through the cushion?

b. No, it did not pierce it.

In (3a), *through* is overtly mentioned but in (3b), it is implied. Gruber (1976:9) argued that in (3b) *through* is incorporated in *pierce*. He emphasized that the lexical item must be the neighbour of the one into which it is incorporated. He argued that incorporation takes place if and only if the predicate of a sentence has the ability to reflect the incorporated element.

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\(^2\) This notion of “incorporation” is different from Baker’s (1988) use of the term.
4a. Akbar is eating something edible.
   b. Akbar is eating.
   c. Akbar is eating a mango.
   d. Akbar is eating a marble.

In (4a), *Akbar* is eating some sort of food which is not specified. The unspecified object NP can be incorporated in the verb, as in (4b). It is clear that such incorporation does not change the meaning of the sentence because the unspecified NP is recoverable from the verb. In (4c) and (4d), we have specified objects i.e., *a mango* and *stone* respectively. If they cannot be recovered from the verbs; they have to be overt\(^3\). This notion of “incorporation” is different from Baker’s (1988) use of the term. As will be discussed later on, Chomsky (1995a) uses the term theta-absorption for a phenomenon as in (4b).

Fillmore (1968: 21-26) suggested a modification to the theory of transformational grammar by introducing a universal system of “deep structure cases” of “a purely syntactic nature” which was somewhat similar to Gruber’s concept of relationship between a verb and its arguments. He proposed cases such as agentive, instrumental, dative, factitive, locative and objective and left the door open for other cases. Since he tried to associate these conceptual cases with the case forms which are found in natural language in the forms of inflections,

\(^3\) As will be discussed later on, Chomsky (1995a) uses the term theta absorption for a phenomenon as in (4b).
prepositions or postpositions, he needed subjectivisation (or subject-selection) rule and unique case assignment rule.

Jackendoff (1972: 29-36) reviewed the concept of relationship proposed by Gruber and Fillmore and preferred the fundamental notion of thematic relations to that of case relations on the ground that the unique case assignment rule could not account for the possible ambiguity of (5) in which Max can be an agent, a theme or both an agent and a theme at the same time.

5. Max rolled down the hill.

Max could roll down the hill voluntarily and be the victim of undergoing the motion as well. Fillmore’s case assignment rule needed a complex solution to this problem in comparison to which Gruber’s solution was simpler. Jackendoff (1972) accepted Gruber’s proposal of the centrality of the theme and called the whole system thematic relations. In his view, the concept of dual thematic relation was needed to explain the conceptual relation between verbs of converse relation such as buy and sell.

Jackendoff (1983) further contributed to the Gruber’s theory of thematic relation. He agreed to Gruber’s analysis and argued that verbs may or may not differ in their “semantic function” at the conceptual level and this could explain the similarity between verbs of converse relation such as buy and sell.

His concept of ‘functional structure’ represented the relation between a predicate and its arguments at the conceptual level. Jackendoff (1990: 22) refined his concept of thematic relations by decomposing conceptual structure into conceptual constituents, each of which belongs to one of a
small set of “conceptual parts of speech” such as [Thing], [Event], [State], [Action], [Place], [Path], [Property] and [Amount]. He argued that each major syntactic constituent maps a conceptual constituent into the meaning of a sentence, thus establishing a relation between syntactic and conceptual structures. The following example illustrates this relation.

6. Akbar ran towards home.
In (6) Akbar and home correspond to Thing-constituent, the PP towards home corresponds to a Path- constituent and the entire sentence corresponds to an Event-constituent. He pays attention to whether the verb shows action, event or state. Depending upon the conceptual constituent of the verb, the number and types of arguments differ. For instance, CHANGE is one of the conceptual constituent of action verb, which denotes the semantic function, of taking thing as an argument from an initial to a final stage.

7. Akbar goes to school.
In (7), Akbar and school correspond to Thing-constituent. Likewise CAUSE, another conceptual constituent of a verb, takes ‘thing’ as an argument in the initial and final stage.

8. Akbar forced Aamir to go away.
In (8), Akbar and Aamir are things and forced and to go away are action and event respectively. Finally Jackendoff (1990:46-48) came to the point that thematic roles are part of the level of conceptual structure, and not of syntax. He claimed that the terms Theme, Agent and so on are not primitives of a syntactic theory, rather they are relational notions defined structurally over conceptual structure. Argument structure can be termed as an abbreviation for the part of conceptual structure that is “visible” to the syntax.
1.1 Theta Theory as a Principle of Grammar

Chomsky (1981) included the theta theory as one of the “subsystems of principles” which is “concerned with the assignment of thematic roles (θ-roles)”. Initially he considered Jackendoff’s work on this topic “quite interesting” from the point of view of “descriptive semantics” but later on he accepted it as a “unifying notion”. The theory claims that each and every NP receives a specific theta role. Chomsky (1981:35) used the term “NP argument” to include names, variables, anaphors, pronouns but not idiom chunks or elements inserted to occupy an obligatory position of syntactic structure (e.g., expletives it or there). He asserted that an argument must receive a theta role from a head. The overt anaphors, R-expressions and pronominals (including empty elements such as PRO and pro) are all arguments because they have theta roles. The position to which a theta role is assigned is an argument position or A-position and this argument position is termed as a theta position. According to the projection principle, the object position is a theta position while the subject position [Spec, IP] may or may not be a theta position. If it is filled by an expletive, it is not a theta position; if by an argument, it is a theta position. [Spec, IP] is, therefore, a potential theta position. An actual or potential theta position is an A-position. A'-position (A-bar position) is a position where no theta role is assigned to an NP. [Spec, CP] is an A'-position. The relation of argument(s) with its predicate is local. It is the tightest of all grammatical relations. Only immediate sister nodes may enter in the relation and nothing else. The verb of the main clause cannot

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5. See Chomsky (1981: 50)
assign a theta role to the subject of an embedded clause but it can assign a theta role to the whole clause. The direction of the theta role assignment is dependent on the theta directionality parameter setting of a language.

As pointed out above, the theta theory is one of the core principles which decide which element will merge to form a derivation. As it determines the thematic relation of an NP with the verb, it plays a role in the semantic interpretation of the sentence. While answering question on the increasing role of the theta theory, Chomsky (1982: 85-86) observed, “thematic role seems to be the only notion so far that has any interesting characteristic… it is a fundamental notion and … in fact the choice of complements to an element in the lexicon really has to do with thematic role”. During the discussion on the operation merge Chomsky (1995a: 246-248) explains that the head of a phrase (e.g., V of VP) selects its specifier and complement to have a “convergent derivation” (e.g., VP). The structure converges only if the argument has a theta role in relation to the lexical property of the verb.

1.2 Assignment of Theta Roles
According to Chomsky (1981: 34-48) each theta role is determined by the lexical property of its head that governs it. The lexical head takes a phrasal category (NP, VP or PP) as a complement. The lexical head (i.e., V of VP) which governs its complement is called a governor. Government is a more “local” variety of command (Chomsky 1981a, 1986a, Rizzi 1990) which applies throughout the module of grammar. The Government theory says that:

“A govern B if A c-commands B and there is no barrier for B c-command by A.”
This principle has been redefined in terms of m-command which is as follows:

“A m-commands B if A does not dominate B and B does not dominate A and the first maximal projection of A dominates B.”

Government and Command are two fundamental concepts which apply throughout the module of grammar. They are essential for the assignment of theta roles.

There are two main categories of government: (a) antecedent government of A by an antecedent of A, and (b) head government of A by a head. These governments are termed “Proper Government”. It is necessary to discuss the concept of head government here because it is relevant to the theta theory. As mentioned earlier, the locality relation between the head and its argument is very essential for the assignment of theta roles to NPs. As the lexical head and its complements are bound by local relationship, a verb may theta-mark its complements only within its maximal projection, i.e., VP. The status of [spec, IP] is different. It may or may not be a theta position, depending on lexical choices. For examples, the verb ‘seem’ does not assign an agent theta role to its subject in (9a):

9a. Akbar$_{x}$ seems [t$_{x}$ to have hurt himself.]

b. It seems [that Akbar has hurt himself.]

In (9a), the subject of ‘hurt’ is a trace which is the trace argument of Akbar. The trace is the agent of hurt; as it is bound to Akbar, (i.e., Akbar$_{x}$…t$_{x}$ forms a theta chain), Akbar$_{x}$ is assigned the same theta role as t$_{x}$. In (9b) Akbar, the subject of the embedded clause, is assigned the agent theta role by ‘has hurt’. As the subject of the main clause is in a
non-theta position in (9b), it is occupied by the expletive ‘it’. Under the VP Internal Subject Hypothesis (VPISH), the VP will have the subject of the sentence as its specifier, which means all the theta-marked NPs or clause will be inside the VP. We may look at (10a) which will have (10b) as its structural representation to clarify the point.


b. 

In (10b), within the VP-shell, spec NP ‘Akbar’ is assigned the theta role of agent, NP ‘book’ is assigned the theta role of theme and PP ‘from Aamir’ is assigned the theta role of source.
1.3 Relevance of Theta-criterion

According to Chomsky (1981:36), theta-criterion is defined as follows:

“Each argument bears one and only one theta-role, and each theta-role is assigned to one and only one argument.”

It means that there must be one-to-one correspondence between arguments and their theta-roles in a sentence. We cannot have more arguments than the number of theta-roles and more theta-roles than the number of arguments. Furthermore, since theta-roles express particular thematic relations, the arguments will have to be appropriate in relation to the lexical properties of the verb. For examples, we may look at (11).

11a. Thematic structure⁶ of kill, <Agent, Patient>

b. Akbar killed Aamir.

(11a) presents the lexical properties of the predicate kill, i.e., it must have two essential arguments, agent and patient. In (11b), there is one-to-one correspondence between arguments and their theta roles. As the theta-criterion is satisfied in (11b), the sentence is well-formed. We may now look at (12-14):

12. *Akbar killed.


14. Aamir was killed.

(12) is incorrect because it lacks one argument, the patient Aamir. Likewise, (13) is ill-formed because it has no agent. However (14) is well-formed even though it has only one overt argument. It is because the passive form of the predicate, was killed, suggests that some agent brought it about. In other word, in (14) the agent is covertly indicated; it

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⁶What is called “thematic structure” by Chomsky (1981, 1995a) is called “semantic structure” by Jackendoff (1990) and “argument structure” by Grimshaw (1990).
is understood. (15) Shows the other side of the problem: it is a sentence with more essential arguments than needed by the verb.

15a. *Akbar killed Aamir, Anees.

In (15a), Anees does not get a theta role because killed needs only two essential theta roles which have been already assigned to Akbar and Aamir. Since there are three arguments in (15), it violates the first part of the theta criterion: the requirement that every argument must have a theta role. Thus, theta criterion filters out this sentence as ungrammatical. However, if Aamir and Anees are combined as one NP, i.e., Aamir and Anees, the whole structure gets the theta role of patient. For this reason, (15b) is grammatical.

15b. Akbar killed Aamir and Anees.

It is clear from the description given above that the predicate is the central part of a sentence and every predicate needs one or more arguments for the completion of that sentence depending on its lexical properties. If any argument is missing, the sentence is incomplete. For the well-formedness of a sentence the required number of essential arguments should be there. We can take another example to illustrate this point. The verb put needs three arguments: agent, theme and location, as in (16a).

16a. Put < agent, theme, location>

b. He put the book on the table.

c. *He put the book.

7. We put something on or at some location, which may or may not be specified by a PP. For example, (i) has no PP but it is well-formed:

(i) He put the cup down.

Here, down, is an adverb (which means ‘a specified place below’) is used in place of a PP, it may be treated as the residual preposition of a PP (e.g. down the stairs).
(16c) is ungrammatical because it does not have the locative argument. But there is another verb ‘*keep*’ which in one sense is a near synonym of ‘*put*’; it means ‘to continue or cause to continue in a specified position, condition or course’. In this sense, it needs only two overt arguments. Thus, (17a) is well-formed though (17b) is also correct with ‘*himself*’, where *with himself* is a location.

17a. He kept the book.
   b. He kept the book with himself.

(17a) is complete; it conveys the sense of (17b). In other words, the verb ‘*keep*’ implies here, ‘in his possession’.

The assignment of theta role to an NP in a sentence is subject to a condition. It is only the argument of the head of a VP which can occupy a theta position in a structural configuration. Earlier, except the subject argument, all arguments were internal to the VP. Now, because of the VP Internal Subject Hypothesis (VPISH), even the subject originates internally within the VP. Since expletive *there* and *it* are non-arguments, they do not originate in the VP; they occupy only non-theta-positions and are not theta-marked. It is the theta criterion, which puts constraints on the movement of NP from a theta position to another theta position. If movement is permitted, the moved NP will have two theta roles, one assigned by lexical head and another, by virtue of being in a new theta position, which will violate the theta criterion.
1.4 Jackendoff’s Criticism of Chomsky’s Theta Criterion

Chomsky’s theta criterion has the special status in theta theory as it accounts for the theta role assignment in a sentence. However, Jackendoff challenged the uniqueness of theta criterion. He brought forth his point by applying it at the conceptual level. In terms of conceptual structure he describes theta criteria as follows (1990: 59):

a. …each subcategorized NP (plus the subject) corresponds to exactly one argument position in conceptual structure, and…

b. each open argument position in conceptual structure is expressed by exactly one NP.

In favour of his claim, he pointed out the cases where an NP may have more than one theta role and where multiple NPs may hold a single theta role.

He argued this point by referring to the verb of transaction such as buy and sell, where two actions seem to be going on at the same time. For instance, we may consider the verb buy in (18).


From the point of view of the transfer of the book in (18), the NP Akbar is the agent and the NP Aamir is the source. However, if we look at the action from the other point of view, a book is central to the action; it involves its transfer from Aamir (source) to Akbar (goal). In other words, the NP Akbar has two theta roles- agent and goal. If we look at (18) from another angle, the problem is even more complex. The lexical property of buy is such that it refers to not only transfer of the possession of book from Aamir to Akbar but also the transfer of money from Akbar to Aamir. In other words, Akbar has three theta roles (agent, goal and source) and

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8 To buy means ‘to obtain something in exchange for payment of money’, etc.
Aamir has two theta roles (source and goal). Such counter-examples seem to challenge the uniqueness of the theta criterion.

If we look at (19) two NPs seem to have the same theta role.

19. *The bucket* has water *in it.*

That is, the theta role of location is assigned simultaneously to the NP ‘*the bucket*’ and PP *in it* respectively. Though such sentences seem to be convincing counter-examples to the uniqueness of the theta criterion, they are not so if we look at them carefully. If we look at (18) from the point of view of action ‘Akbar wills the transfer of *book* from Aamir’. Thus the former is the agent and the latter is the source from whom the book is obtained. Again if the focus is on the transfer of the *book*, and not on the actor, the NP *a book* is the theme, it is transferred from *Aamir* (source) to *Akbar* (goal). We think of two theta roles of *Akbar* if and only if we look at the sentence simultaneously from two different angles, the action tier and the thematic tier. If we look at it from either angle at a time, the problem does not arise, as is suggested by Culicover and Wilkins (1984). The question of assigning a third theta role to *Akbar* arises only if we break the verb *buy* into its semantic primes and consider it as an amalgamation of two actions, one referring to the transfer of *book* and the other to the transfer of *money*. In (19), NP *the bucket* is assigned the theta role of location. The argument *in it* is also assigned the same theta role but it is not an essential argument; it is an adjunct. As it is a non-essential component of its thematic structure, it cannot be a real counter-example to the theta criterion.

As mentioned above, Jackendoff argues that the theta roles are not the diacritic markers on a sentence as proposed by Chomsky; they are
structural relations which represent conceptual structures. He defined thematic relations in terms of conceptual constituents, each of which belongs to a small set of major categories such as [Thing], [Event], [State], [Action], [Place], [Path], [Property], and [Amount]. Each of these abstract entities can be elaborated into a function argument to assign a particular theta role. Within the limits, each category permits a variety of specific elaboration of the surface theta roles. The organization of these functions, as suggested by Jackendoff (1990: 43), is given in (20):
(20)  a. [PLACE] \rightarrow [\text{Place \ PLACE-FUNCTION ([THING])}]

b. [PATH] \rightarrow 
\begin{align*}
\text{Path} & \left\{ \begin{array}{l}
\text{TO} \\
\text{FROM} \\
\text{TOWARD} \\
\text{AWAY - FROM} \\
\text{VIA}
\end{array} \right\} (\text{[THING]}), (\text{[PLACE]})
\end{align*}

c. [EVENT] \rightarrow [\text{Event \ STAY ([THING], [PLACE])}]

d. [STATE] \rightarrow 
\begin{align*}
\text{State} & \left\{ \begin{array}{l}
\text{BE ([THING], [PLACE])} \\
\text{ORIENT ([THING], [PATH])}
\end{array} \right\}
\end{align*}

e. [EVENT] \rightarrow [\text{Event \ CAUSE ([THING \ EVENT])} [\text{EVENT}]]
In (20), the category PLACE is elaborated as a place function plus an argument that belongs to the category [THING]. For example, in syntactic constituent *under the tree, the tree* designates a reference object and *under* expresses a place-function that maps the tree into the region beneath it. Similarly (20b) is an extended path or trajectory, it is treated as one of five functions that map a reference Thing or Place into a related trajectory. Category event in (20c) can be elaborated as either of the two event-functions GO or STAY, each of which takes two arguments. (20d) presents three state-functions. Finally, (20e) extends an event as the Event-function CAUSE plus two arguments.

Jackendoff (1990: 46-48) treats these functions as conceptual primitives. Keeping in mind these primitives, he defines thematic roles in the following manner:

(a) *Actor* is the first argument of CS\(^9\) and AFF.

(b) *Patient* is the second argument of [-AFFECT].

(c) *Theme* is the first argument of event and state function other than CS.

(d) *Goal* is the first argument of [TO].

(e) *Source* is the argument of [FROM].

(f) *Beneficiary* is the second argument of [+ AFFECT].

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\(^9\) Jackendoff (1990) uses CS as an abbreviation for ‘Conceptual Structure’. AFF (affect) is an additional mainstream function alongside the thematic functions (p.127).
The process of theta assignment is shown in (21).

21a. Akbar forced Aamir to go away.

b. \[
\text{CS + [Akbar]_1}
\]
\[
\begin{aligned}
\text{GO [Aamir]_2, [Away]}
\text{AFF [Aamir]_2}
\end{aligned}
\]
\[
\text{AFF- ([Akbar], [Aamir]_2)}
\]

c. \[
\text{force}
\]
\[
\begin{aligned}
\text{V}
\text{— NPj to S_k}
\text{GO ([THING_2])[AWAY]}
\text{EVENT}
\text{CAUSE ([THING_1])}
\text{EVENT}
\end{aligned}
\]

(21b) is an attempt to represent the conceptual structure for (21a). It indicates that *Akbar*, the actor is also an instigator, exerting force on *Aamir* to leave with a successful outcome. The patient or beneficiary is
the actor of the potential effect. The NP Akbar corresponds to the first argument of CS+ represented by the [THING1] and is assigned the theta role of actor; it is mapped onto the subject position of the main clause. The NP Aamir is the second argument of [AFFECT] represented by [THING2] and is the theta role of patient or beneficiary; and it is mapped onto the object position of the main clause. In the embedded clause the verb to go is indicated as [EVENT-GO], which corresponds to [EVENT-function] that shows a motion. This function has the arguments [AKBAR] and [AAMIR]. Akbar corresponds to the first argument of [GO] represented by [THING] and is assigned the theta role of actor whereas Aamir is the second argument of [GO] and is assigned the theta role of patient or beneficiary. The NP Aamir in the structure is marked by [AFF] indicating that he does not want to go but he had to leave. The NP Akbar in the sentence is marked by [AFF-] indicating that he is not an affected entity. NP Aamir is marked by [AFF] at one place indicating that he has to leave. The verb force is conceptually interpreted as the [EVENT-CAUSE] which corresponds to [EVENT-FUNCTION] that expresses a motion. (21c) is the lexical entry for force. (21c) shows that the argument [THING1] of the [EVENT-CAUSE] is co-indexed with the argument [THING2] of the [EVENT-GO] function because it is an event and its actor [THING1] is bound to the patient of the superordinate event.

Jackendoff’s conceptual relations led him to posit abstract relations between the components of a predicate and its argument(s) which creates a lot of confusion. Jackendoff faces a problem in regard to the decomposition of a complex event as illustrated in (21). As Culicover (1987) points out, it is difficult to justify their decomposition into two events in a conceptual structure in a principled manner. The logic
regarding the mechanism of fusion and linking, adopted by Jackendoff (1990) is not always clear and even where it is, it is too complex and abstract to be handled smoothly. For these reasons I ignore his theory in favour of the most widely accepted concept of theta roles developed by Chomsky in (1981, 1993, 1995a and 2000).

1.5 Theta theory in the Minimalist Program

Chomsky (1982)\(^{10}\) observed that “thematic role is a fundamental notion in semantics and may be, serves as a unifying notion”. What he means to say is that every lexical verb carries along with it “a certain set of thematic roles, theta roles, which have to be filled. That is a lexical entry and from that we can determine everything in the base structure except for what can be determined by case theory and except for some idiosyncrasies like SVO and SVO order, which just seems to be a parameter” (p. 86). In short, in the Principles and Parameters theory, (i.e. GB) Chomsky considered theta theory to be a “fundamental theory”.

In 1995, Chomsky gave a minimalist perspective which questions “almost everything” (Chomsky 2002:151)\(^{11}\) but he asserted that there is “something there that is stable” (p. 152). He argues that argument structure will remain as will the properties of scope and reconstruction” (ibid). He talks about “the thematic properties of lexical heads” (e.g. verbs). He observes that a verb with no θ-roles to assign to a complement

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\(^{10}\) See his interview with Huybregts and Riemsdijk in Chomsky (1982: 86-87).

\(^{11}\) See his interview with Adrianna Belletti and Luigi Rizzi in Chomsky (2000:113-114, 151-152)
will not be able to take a complement and a verb with obligatory θ-roles to assign will have to occur in a configuration with enough arguments to receive these θ-roles (pp. 30-31). He also observes that, at least in part, selectional restrictions will also be determined by thematic properties of the verb. In other words, to receive a particular θ-role, the inherent semantic features of an argument will have to be compatible with that θ-role.

Chomsky (1993, 1995a :315) virtually accepts the configurational approach to θ-theory as proposed by Hale and Keyser (1993)\textsuperscript{12}. He also observes that an argument without a θ-role violates the principle of Full Interpretation (FI); it causes derivation to crash (p.315). That is one of the reasons why he asserts the significance of VP Internal Subject Hypothesis. He argues that, if a subject is directly inserted in [Spec INFL] configuration, and is not raised from VP, it constitutes a violation of FI (p. 314). The shortest derivation condition entails that the violation of θ-criterion causes the derivation to crash by failure to satisfy FI. At the same time Chomsky asserts that θ-role is not a formal property that permits the last resort movement as case and agreement features do.

In the Principles and Parameters theory (Chomsky 1981, 1986 and others), assigning θ-roles was a fairly straightforward affair; it was at the D-structures. But the Minimalist Program (Chomsky 1995a and subsequent publications), D-structure does not exist at all and LF is assumed to be the sole interface with semantics. Consequently θ-

\textsuperscript{12} Hale and Keyser (1993:53) assert that proper representation of “predicate-argument structure is itself a syntax”, though later on they observe: “In an important sense there are no thematic roles. Instead, there are just the relation determined by the categories and their projections.” (p. 68). In a sense, Chomsky (1993) agrees to this configurational approach. However, Chomsky (1995a:389) observes that θ-role could not be identical with structural configuration” as it raises some empirical problems.
relatedness is considered to be “a base property” (Chomsky 1995b). In other words, all θ-roles are assigned within the lexical projection. It follows from this assertion that the θ-theory does not interact with movement. In other words, movement can never create a θ-configuration. That is what Chomsky (1995a: 312) asserts that “…there should be no interaction between θ-theory and theory of movement”. In other words, θ-role cannot license movement. He also makes it clear that the domain of thematic assignment and morphological checking are different. We propose to discuss the thematic relations between predicates and their arguments in English and Urdu in the light of these theoretical developments in Chomskyan syntax

1.6 Aims and Objective of the Thesis
We begin with the hypothesis that Urdu and English are somewhat different in regard to the number and nature of overt essential arguments that a predicate may take even though there is no difference between them in so far as the basic underlying thematic relation is concerned. For example, as discussed above, in English the verb put needs three arguments: agent, theme and location, as in (22a).

22a. Akbar put the book on the table.
   b. *Akbar put the book.
(22b) is ungrammatical because it does not have the location argument. On the other hand, the verb keep, which conveys approximately the same sense as put in some respect, needs only two overt arguments. Thus, (23a) is well-formed in the sense of (23b).

23a. Akbar kept the book.
   b. Akbar kept the book with himself.
In Urdu there is only one verb *rakhna:* which conveys the sense of both *put* and *keep.* Though *rakhna:* is semantically the equivalent of *put,* it is different from *put* in regard to the number of overt arguments it takes; it may have only two arguments, as in (24a,b).

24a. Asad ne kita:b rakh di:
   Asad book put

b. Asad ne kita:b rakh li:
   Asad book kept

(24a, b) can be expanded by adding an overt argument as in (25a, b) respectively:

25a. Asad ne kita:b Tebal par rakh di:
   Asad book table on put
   ‘Asad put the book on the table.’

b. Asad ne kita:b apne pa:s rakh li:
   Asad book him with kept
   ‘Asad kept the book with him.’

(24a) has an implicit reference to a locative NP whereas (25a) has an explicit postpositional phrase (PoP) *Tebal par* ‘on the table’. In (24b) *li:* (the explicator verb) conveys the sense that the book was kept by the agent whereas in (25b), the location is explicitly expressed by *apne pa:s* ‘with him’. (24a, b) are complete without an overt location argument.

As proficiency in English has become essential for us, it is now necessary to know to what extent it is structurally similar to or different from our mother tongue, i.e. Urdu. It is thus necessary for an Urdu speaker to know the points of similarity and difference between Urdu and English in regard to the number and nature of arguments their predicates may take overtly. Because of the type of difference mentioned above in (24), an
Urdu-speaking child learning English as a second language may use more or fewer arguments than are needed in English in a sentence.

In short, the intent of this thesis is to present a comparison between the two languages – Urdu and English- with regard to the number and nature of arguments needed by some frequently used verbs in these languages. This thesis will analyze their thematic structures in order to find out similarities and differences between them. It will discuss not only the number of arguments but also, their nature, i.e., whether the arguments concerned are NPs, PPs (or PoPs for Urdu), or clauses. It will pay special attention to those verbs which may not need all essential arguments on surface. It is our hypothesis that Urdu and English are not identical in this respect.

A large number of studies have been done on the number and nature of arguments in English, e.g. Grimshaw (1990), Jackendoff (1990), Stowell (1991), Marantz (1992), Zubizarreta (1992), Williams (1992, 1994), but to the best of my knowledge, no exhaustive work has been done on Urdu even though some work has been done on Urdu verbs within the framework of the traditional grammar, such as Platts (1920) and Schmidt (1981, 1999). Even Butt (1995) and Agha (1998), who have worked on some aspects of Urdu verbs from the transformational generative point of view, have not discussed this issue. In short, no attempt has been made from the point of view of thematic relation between the predicate and its arguments in Urdu. Even though some references have been made to the application of theta theory in Hindi, (e.g. T. Mohanan, 1990), they do not cover the areas I propose to look into. We hope this study will
concentrate on various aspects of thematic relations and cover some new ground.

1.7 An Outline of the Thesis

The second chapter of this thesis contains the details about the possible theta roles of verbs in Urdu and English. Some transitive verbs of Urdu and English differ in regard to the number of essential argument(s) they take. The chapter attempts to examine whether the difference is due to some well-defined factors mainly in terms of their structural properties or they are idiosyncratic. For example, some arguments in English may be realized as a PP (rather than NP) and those in Urdu as PoP, as in (26a) and (26b) respectively.

26a. Asad bought the book [PP for me].

b. Asad ne [PoP mere liye] kita:b Khari:di:
   Asad me for book bought

In some cases, an argument may be realized as NP in Urdu but PP in English, as it is clear from (27) and its English counterpart respectively.

27. Asad [NP dehli:] gaya:
   Asad Delhi went
   ‘Asad went [PP to Delhi].’

In some other case Urdu may have a PoP as an argument but English has an NP in its place, as (28) and its English counterpart illustrate the point.

28. Asad [PoP kamre mê] da:Khil hua:
   Asad room into went
   ‘He entered [NP the room].’
I have grouped verbs of Urdu and English according to the number of the essential arguments they take, such as:

i. Verbs that need only one essential argument (e.g. *sona:* ‘to sleep’).

ii. Verbs that need two essential arguments (e.g. *ma:rna:* ‘to kill, to beat’).

iii. Verbs that need three essential arguments (e.g. *bata:na:* ‘to tell, to point out’).

Some verbs take NPs or PPs as arguments while others need a CP or IP. For instance, we may look at (29) and (30):

29. [akbar ne] [a:m] [kha:ya:]
   Akbar mango ate
   ‘Akbar ate a mango.’

30. [ye mumkin hai [cp ke [ip Asad a:j a:ye:ga:]]]
   It likely is that Asad today come will
   ‘[It is likely [cp that [ip Asad will come today.]]]’

In (29) both arguments are NPs, while in (30), the theme argument, *that Asad will come today,* is a CP (i.e., a clause beginning with a complementizer).

The *third chapter* discusses the role of overt-realization of theta roles for the well-formedness of a sentence. For instance, a verb may need three arguments for having a well-formed sentence but sometimes only two of them may be overtly realized. When an argument is covert, it is assumed rather than overtly expressed. It has been discussed with the help of the concept of “theta absorption” (Chomsky 1995) as against the concept of “incorporation” as developed by Mark Baker (1988). We will discuss
verbs that absorb theta roles with a view to finding out whether the process in Urdu is different from that in English.

*Chapter four* shows how theta theory feeds case theory. It is important to do so because all lexical NPs must have case and the case visibility condition must be fulfilled for an NP with a $\theta$-role to be legitimate. An attempt is made to show that a $\theta$-role may not be realized uniformly by a single case marking and a single overt case marker may be used for NPs with different $\theta$-roles.

The *fifth chapter* includes the summary and conclusions of this research.