CHAPTER II

PREDICATES AND ARGUMENTS SELECTION
Chapter 2

Predicates and Arguments Selection

2.0. Introduction

Traditionally, a sentence is divided into ‘subject’ and ‘predicate’. According to Palmer (1994), the subject is ‘what is being talked about’ and the predicate is ‘what is said about it’. Matthews (1997) defines predicate as, ‘a part of the clause or sentence traditionally seen as representing what is said or predicated of’ the subject.

54.(a) John hit Bill

(b) John smiled

In (54a) and (54b), John is the subject ‘which is being talked about’ and the hit Bill and smiled are the respective predicates, in the sense ‘what is being talked about’. The former is a Noun Phrase (NP), and the latter is a Verb Phrase (VP). This is illustrated in figure 9.

\[ S \rightarrow \text{NP–VP} \]

**Figure 9** The structure of a basic sentence

Palmer (1994) provides an alternative view where, the sentence consists of a predicator and one or more arguments. The term ‘argument’ here refers to the participants involved in the event denoted by the predicator or verb. Thus, the structure of (54a) would be as in (55a). In case of (54b), since the verb does not have another NP, the predicator will be the predicate and the structure would be as in (55b).

55.(a) Arguments-Predicator-Predicate

(b) Argument-Predicate/Predicate

In (54a) the verb *hit*, is a predicate which takes two arguments, *John* and *Bill* and in (54b) the verb *smile* takes one argument *John*. Verbs, which take two
arguments, are called two-place predicate and verbs, which take one argument, is called one-place predicate, where ‘place’ roughly corresponds to ‘argument’. Ditransitive verbs are called three place predicates.

An argument position is usually the position of an NP, and the NP bears the nominal features like classifiers, case and so on. In English, the verb like can take an NP as in (56a) or an infinitival clause as in (56b).

56. (a) I like John.

(b) I like [to meet John].

In (56a), the verb like has two arguments I and John and both are NPs. In (56b), the infinitival clause to meet John is also in an argument position. This is evident from the fact that the entire clause can be substituted by a pronoun as in (56c).

(c) I like it/that.

Non finite constructions always come in complex constructions involving a main clause with a finite verb and an embedded clause with a non finite verb. The finite verb will take one NP as its subject and the entire infinitival clause as its complement or argument in the object position. Here, it becomes necessary to distinguish between an argument and a complement. Arguments are NPs in relationship with the predicate in a clause structure. Complement refers to only those NP/PP/clause that the verb selects. Thus, subjects cannot be the complements. The complements generally come inside the VP. Thus, all complements are arguments, but not all arguments are complements.

The arguments can be divided into core and peripheral. According to Van Valin, and Lapolla (1997: 26) the core arguments are the arguments of the verb ‘nucleus’ and the peripherals are not the direct arguments of the verb. The core arguments include the subject, direct object and indirect object. The peripheral arguments include adjuncts or the adpositional phrases. This is exemplified in (57) cited from Van Valin and Lapolla (1997:26).

57. John ate the sandwich in the library.
In the English example, *ate* is the nucleus and *John* and *sandwich*, the core arguments and the phrase *in the library* is in the periphery.

### 2.1. Basic syntactic relations: S, A, O

Comrie (1976), Dryer (1985), Dixon (1994) and Song (2001) describe the arguments, in transitive and intransitive sentences, in terms the universal primitives S, A and P/O. The subject NP of a transitive verb is represented as A and the object is represented by O. However, O is preferred instead of P in order to avoid the problem with traditional conception of ‘patient’ associated with P (Comrie, 1976). The subject of an intransitive sentence is represented by S.

58. S- Intransitive Subject

A-Transitive Subject

O- Transitive object

According to Palmer (1994), in English and many other languages, the single argument of an intransitive sentence (S) has the same grammatical marking as the agent, of an active transitive one (A). Since, English has a rigid word order; the case is manifested by the position of the arguments in the clause structure. In English, the preverbal NP gets the nominative case and the post-verbal takes the accusative case. Thus, *John* in (54a) and *John* in (54b) have the same nominative case. The object *Bill* in (54a) is in the accusative case. In the passive construction (59), the pre-verbal NP is the derived grammatical subject; it receives nominative case in the subject position but retains the thematic role of patient.

59. Bill was hit by John

The grammatical subject is *Bill*, whereas, *John* which is the logical subject in this construction becomes an oblique by-phrase. In (59), the subject NP is in the nominative case.
2.2. Grammatical roles and relations

In syntactic structure, the verbs play an important role in determining the number of arguments. The underlying nature of the verb, that is, whether the verb is transitive, intransitive or ditransitive, determines the number of arguments it can take. Traditional grammar defines the core arguments as the pure syntactic or grammatical relations or the Grammatical Functions. The arguments, which are case marked at the syntactic level, are to be mapped with specific, thematic role at the semantic level. In other words, the relationship between the predicates and their arguments bears both syntactic (Grammatical Function) and semantic (Grammatical roles) relation. Here, it becomes important to distinguish between *grammatical relation* and *grammatical roles*. The former refers to the terms like subject, object, indirect object which depends upon their relation with the verb at the syntactic level. The latter, however, refers to the semantics or the meaning of the arguments in the clause structure, such as agent, patient, experiencer, beneficiary, recipient, causer and so on.

According to Comrie (1976), any syntactic analysis of A, S and O, in a given language will require them to be established language-internally and also cross-linguistically. By language-internally is meant that the grammatical relation has to fulfill certain logical criteria. Again, cross-linguistically we can see whether languages from the same typological group have a considerable degree of overlap in terms of these relations. In any language, in order to establish such syntactic relations and their roles, there are different devises, like, word order, morphological marking or case features, verb agreement, tense feature and so on. For instance, in English, the word order is more or less fixed, so the grammatical relations are established based on the word order. In English, the NP preceding the verb is called the subject (*John* in 54a), whereas the one that follows is the object (*Bill* in 54a). However, in English the grammatical roles of the arguments are not determined by the word order. In (54a), *John* is the agent in the sense ‘he’ is the actor involved in ‘the act of hitting’, whereas the object *Bill* is the patient on whom ‘the action of
hitting’ was carried out. However, in (54b) the subject John does not have the thematic role of an agent but that of an experiencer. Thus, in example (54a) and (54b) we see that it depends upon the verb whether it can select an agent, experiencer or any other thematic role. In other words, grammatical relations or *Grammatical Functions* (GF) do not always have a one to one relationship with the *Grammatical roles* that of agent, patient and so on.

2.3. Grammatical function changing conditions: arguments in causatives and passives

Different languages have different grammatical function changing conditions like passives, anti-passives, causatives, etc where the *core* arguments A, S and O can undergo change of grammatical function. I shall discuss two of these function changing conditions namely, *causativisation* and *passivisation* that are relevant to the present study. Causatives can be seen as a device that changes the grammatical functions or grammatical status of the arguments in predication (Baker, 1988, Palmer, 1994). The subject of intransitive verbs changes to DO and that of transitive verbs changes to IO (Comrie, 1976). The derived grammatical function has the thematic role of a causee.

Thematically, the causer is the agent in the causative construction, while the causee incorporates the role of an agent, as well as that of an undergoer. The former role implies that ‘one who does the action’, while the latter implies that ‘one who is made to do it by the causer’.

<table>
<thead>
<tr>
<th>(a) X smiled</th>
<th>(b) Y made X smiled</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>S DO</td>
</tr>
<tr>
<td>[Agent]</td>
<td>[causer] [Causee]</td>
</tr>
</tbody>
</table>

*Figure 10* (a) Structure of basic intransitive sentence (b) The causativised intransitives sentence

The grammatical function of subject ‘X’, in figure 10(a), is changed to DO in the causative construction, shown in figure 10(b). Along with the change in the grammatical function the thematic role also changes to that of a causee, one who
did the action of ‘smiling’ and one who undergoes ‘the action of making oneself smile’. Causativisation can be thus a non-monotonic operation as termed by Ackerman and Moore (2001:2) where the argument is subject to change in the lexical semantics. Causativisation can be direct and indirect. The fundamental difference between direct and indirect causation is the valency of the causative verb. While the direct causative has the valency to assign two arguments: the causer and the causee, in indirect causation, the verb can take one more argument, an intermediary. The indirect causative verb takes one argument more than the base verb, an argument we can call the causer, and which serves as the subject of the causative verb. The subject of the base verb (i.e., the causee) and its direct object are also present (Falk, 1991:56).

While, in passivisation, the underlying O NP becomes S of the passive and the underlying A NP goes into a peripheral function being marked by a non-core case, this NP can be omitted (Dixon 1994:146). In passives, the object is promoted to the subject position, and the original subject goes to the peripheral position.

\[
\text{O} \quad \rightarrow \quad \text{S}
\]

**Figure 11** The grammatical function change in passivisation

(a) X killed Y  
A O S  
[Agent][Patient] [Patient]

(b) Y was killed (by A)

**Figure 12** (a) The basic active sentence, (b) The derived passive sentence

The object of the basic active sentence in figure 12(a) becomes the subject in figure 12(b). However, it retains the thematic role of patient in the basic active sentence. The change in the grammatical function does not change the semantic role of the argument.

**2.4. Thematic hierarchies of grammatical relations**

Hierarchy is a crucial factor in argument selection and organization. At the syntactic level, the subject is higher than the non-subjects, and at the semantic
level, the agent is higher than non-agent. In the following sub sections, I shall
discuss that factors involved in the organization of arguments in a hierarchy.

2.4.1. Subject (A/S)

In any construction, the subject is higher than the other arguments both
syntactically and semantically. Syntactically it is higher as it usually occurs at
clause initial position and also because it is the subject that is ‘being talked about’.
The hierarchy of the grammatical relations can be schematized as proposed by
Comrie (1976).

Subject>Direct object>Indirect object>Oblique

Figure 13 The hierarchy of grammatical relation proposed by Comrie (1976)

Semantically, it is higher because the role associated with the subject is that of
agent/actor; therefore, the arguments selected for the subject position also are
organized in a hierarchy as per agency. In this regard, Dixon (1979:85) and Palmer
(1994) proposed a scale of ‘potentiality of agency’.

1st person pronoun>2nd person pronoun >Demonstratives>3rd person pronoun
>proper noun>Human common nouns> Animate common nouns> Inanimate

Figure 14 The scale of ‘potentiality of agency’ Palmer (1994)

Croft (1991:155) following Dixon (1976) refers to it as ‘animacy hierarchy’. Croft (1991) illustrates the point that the argument which is higher on the animacy
scale has the highest potentiality of becoming the agent and thereby to become the
subject. Again, the choice of an agent or patient as subject and thereby the choice
of an active or passive construction depend on the requirement of an argument that
is higher on hierarchy must be the subject.

Apart from ‘animacy’, another important criterion of ‘agency’ is the ‘notion of
control’. The argument that exerts the higher degree of control over the ‘action’
will have the higher potentiality of agent hood. According to Cole (1983), ‘the
degree of control can be illustrated as a continuum between the instrumental case and accusative case’. This is shown as in figure 15 below.

Nominative>Instrumental>Dative>Accusative
←more Agentive → more Patient like →

**Figure 15** Degree of control as a continuum between Instrumental and Accusative (Cole 1983)

Over the years, linguists have tried to look into the principles that govern the selection of the arguments in a sentence. Fillmore (1968) proposed the thematic hierarchy as.

Agent< experience<instrument< object< source<goal<location<time

**Figure 16** Thematic hierarchy proposed by Fillmore (1968)

The argument with the semantic role of agent will be higher in the hierarchy than the other oblique arguments. As per Fillmore’s subject selection rule, if there is an agent it becomes the subject; otherwise if there is an experiencer it becomes the subject; if there is an instrument it becomes the subject and so on.

**2.4.2. Object (O)**

As per the hierarchy of grammatical relations, the direct object comes next to the subject. Direct objects are normally NPs that occur with transitive verbs. The direct object has certain properties (Blake, 1994:134).

60. (a) Its core function is to express the role of patient in a two-place predicates
    (b) Where a non-patient is expressed as direct object, the activity is presented from the point of view of its effect on the direct object.
    (c) The direct objects hold a position on the givenness hierarchy intermediate between the subject and the peripheral.

Blake (1994) illustrates the difference between a direct object and peripheral with the following example. [Blake, 1994:134 examples (39a-b)]

61. (a) The vandals stripped the branches off the tree.
(b) The vandals stripped the tree off the branches.

In (61a) the situation is presented from the point of view of effect of the activity on the branches, whereas, (61b) emphasizes the fate of the tree. Here, the encoding of direct object as a patient is associated with the notion of affectedness.

Fillmore (1968) labeled the semantic role of objects as objective that includes the following:

62. (a) An entity viewed as existing state or undergoing change
   (b) An entity viewed as located or moving
   (c) An entity viewed as affected or effected by an entity

Later, linguists made a distinction between theme and patient. Theme is used to encode the first two properties, and patient to encode the third type of entities (Blake, 1994:68).

In a double object construction, the recipient may displace a direct object position as in English.

63. (a) I gave the book to him
   (b) I gave him the book

Thus, the core object can have the thematic roles of patient, theme, recipient, and beneficiary.

2.4.3. Causee NP

In causatives, the original subject becomes the object and adds an additional subject to the causative constructions. Comrie (1976) and Song (2001) state that the grammatical relation, which the causee NP will assume in morphological causativisation, can be predicted by reference to the hierarchy. This is illustrated in figure 13 (in §2.4.1), repeated here.

Subject> Direct Object >Indirect Object>Oblique

Figure 13 The hierarchy of grammatical relation proposed by Comrie (1976)
Comrie (1976) suggests that ‘the original subject will be demoted to the first position which is not already occupied. That is, if the basic verb is intransitive with one core NP, the causee NP will assume the direct object relation because that grammatical relation is the next highest available with the subject taking the causer NP’. Accordingly, in case of a transitive verb with two NPs the causee will take the grammatical relation of the indirect NP with the subject taking the causer NP and the direct object retaining the direct object position.’

2.5. Approaches to argument selection

In a syntactic structure, the verb or predicate plays a crucial role in argument selection. Linguists have, over the years, tried to classify verbs through various approaches so as to come to some definite conclusion regarding the factors involved in argument selection, in a construction. Some of the well established approaches that have been referred to in the study of argument structure are the aspectual, proto-role and localist approaches of argument selection. The following subsections briefly discuss these approaches and provide the theoretical base of the thesis.

2.5.1. Aspectual approach

Zeno Vendler (1957) proposed four aspectual classes- activities, accomplishments, achievements and states that remained the most widely identified classes in argument realizations. Linguists like Levin and Hovav (2005:88) make the division into stative and non-stative. The two groups include stative, such as, *be in the garden, be tall, resemble one’s mother, know the answer*, and the three aspectual classes- activity, achievement and accomplishments, as non-stative.

Van Valin and LaPolla (1997:82-83) describe *arguments* in terms of participants in ‘state of affairs’. The ‘state of affairs’ can be of four types namely, situations, events, processes and actions. The situation corresponds to state, event corresponds to achievement, process to accomplishment and finally action corresponds to activity. According to Van Valin and LaPolla (1997:83), these state
of affairs can vary depending upon (i) the number of participants in a construction, (ii) whether there is a terminal point and (iii) whether the ‘state of affairs’ happens spontaneously or is induced.

Comrie (1976a) levels them as *stative* and *dynamic*. The stative predicates do not involve any change. Ramchand\(^{10}\) (2007:41) shares a similar view when she says that, with stative verbs there is non-dynamicity/process/change involved in the predication but simply a state of affairs.

64. Katherine fears nightmares

In (64) Katherine is the theme (undergoer) of the predication, i.e., the entity that the state description is predicated of, nightmare, is part of the description itself.

65. (a) Ariel is naughty
(b) Ariel looks happy
(c) The cat is on the mat.

Stative verbs not only take an NP as in (64) but also an AP (65a-b) and PP in (65c). Ramchand (2007) calls these arguments of stative verbs as *rhemes* to distinguish them from *themes* (undergoer). The path objects are the dynamic version of rhemes. For instance, the verb *jog* in English is intransitive and cannot be transitivised as in (66b).

66. (a) Karene jogged
(b)* Karene jogged the child
(c) Karene jogged two miles.

\(^{10}\) According to Ramchand (2007:41), in an event structure, apart from INITIATOR, UNDERGOER and RESULTEE, there are also arguments that imply Non Aspectual Arguments. The initiator is the direct argument related to the causing subevent (when it exists); the undergoer is the direct argument related to the process subevent; and the resultee is the direct argument related to the process subevent.
Dynamic predicates, on the other hand, may be either durative or non-durative or punctual. For instance, among dynamic predicates, accomplishments like *build a bridge*, *eat an apple* and *run to the store*, *realize your error* and *discover the solution* have an inherent temporal endpoint and are referred to as *telic*. Activities such as *play the piano*, *run*, *laugh*, in contrast have no temporal endpoint and are called *atelic*.

![Diagram](image)

**Figure 17** The classification of predicates into stative and dynamic

According to Van Valin and LaPolla (1997:83), situations like *a book being on the table* and activities like *singing* and *swimming* lack inherent terminal point. Events like *balloon popping* and processes like *ice melting* have terminal endpoint. Now, as has been mentioned earlier in this section, that these ‘state of affairs’ can be induced, brings in the notion of an agent participant. Their claim is that all these ‘state of affairs’ can have causative counterparts.

The aspectual approach is closely associated with the notion of ‘agentivity’ as states are mostly non-agentive and dynamics are agentive. This can be illustrated with the proto-role approach discussed in § 2.5.2.

**2.5.2. Proto-role approach**

Dowty (1991) provides certain subject and object selection rules or Argument Selection Principles by introducing proto-roles. In predicates with grammatical subject and object, the argument for which the predicate entails the greatest number
of proto-agent properties will be lexicalized as the subject of the predicate; the argument having the greatest number of proto-patient entailments will be lexicalized as the direct object (Dowty 1991: 576). Here, the term ‘proto’ refers to proto-typical agent or patient. Dowty (1991) states the following for the agent and patient proto-role:

67. **Properties of agent proto-role:**

   (a) Volitional Involvement in the event or state: *John is being polite to Bill* is ignoring *Mary* (cf. Dowty 1979:164-66).

   (b) Sentience (and/or perception): *John knows/believes* is disappointed at the statement.

   (c) Causing an event or change of state in another participant: *His loneliness causes his unhappiness.*

   (d) Movement (relative to the position of another participant): *The bullet overtook the arrow.*

   (e) Exist independently of the event named by the verb: *John needs a car.*

   By volition also means deliberation. Sentience is found with stative perception verbs and stative psych verbs (fear, be surprised at etc.). Causation is accompanied by movement. Causation, again, may also refer to stative causatives or dynamic causatives. Independent existence means that the referent is non-specific, and is not brought into being or destroyed by the event named by the verb but is presumed to exist before and after the event.

68. **Properties of patient proto-role:**

   (a) Undergoes change of state: *John made a mistake, John moved the rock, and John erased the error.*

   (b) Incremental Theme: *John crossed the driveway.*

   (c) Causually affected by another participant: *Smoking causes cancer.*
(d) Stationary relative to the movement of another participant: *the bullet entered the target.*

(e) Does not exist independently of the event: *John built a house.*

Now, coming to the proto-patient properties, the patient undergoes change which may include coming into existence and also going out of existence. Incremental Theme is a term that Dowty associates with direct object and refers to effected object, destroyed objects and objects that undergo definite change of state like *build a house, write a letter* etc. The objects of these verbs imply only an indefinite change of state. Again, there are also objects that are partially affected i.e., they undergo change of state in stages as in (69).

69. John drives from New York to Chicago.

Dowty (1991:569) illustrates that *John* undergoes a change of location from one place to another; but if this trip were interrupted before it were finished, we would not infer that part of John has arrived in Chicago, while the rest of him is still in New York. The prepositional phrases *from New York and to Chicago* refer to the beginning and end points of the path. They are called Path Argument Theme. Dowty (1991) in this connection distinguishes between telic and non-telic/атelic predicates.

70. (a) John drank a glass of beer (Telic) [Dowty 1991:567 example 19a-b]
(b) John drank beer for an hour (Non-Telic/Atelic)

Thus, telic predicates are perfective while non-telic arguments are ‘durative’ and ‘imperfective’ in aspect. The difference between (70a) and (70b) is that the NP *beer* in (70b) does not specify a definite quantity of beer and can be modified by a durative adverbial *for an hour.* A salient point that comes out is that definite and specificity properties are associated with the patient role.
This is where we can see that Dowty’s proto-role approach intersect with the aspectual approach (§ 2.5.1). Again, incremental theme may refer to affected or non-affected objects as shown in figure19.

These are called Representation-Source Themes and denote source in the following propositional phrase. Here, the direct objects Themes can be explained with the ‘Spatial notion’.

Proto-patients are causally affected. Movement is essentially the property of agent. The proto-patients are stationary. Predicates that take patient role include verbs of creating and destroying, which are affected arguments, and therefore, do not exist independent of the event named by the verb. Themes have more P-entailments as they undergo change of position and are causally affected (Dowty 1991). The box is stationary and relatively unaffected.

71. John removed the lamp from the box.

Thus, the proto-roles and their argument selection principles determine hierarchies of traditional roles, where proto-patient outranks obliques for direct object. [Dowty 1991:578 example 37]
Moving argument>source, goal, agr

**Figure 20** Hierarchy of Proto-patient over Obliques proposed by Dowty (1991)

In figure 20, Agr is an argument with no proto-agent and no proto-patient entailments. Dowty (1991:578) states that ‘at least one proto-agent entailment, in the absence of any of the proto-patient entailment is enough to qualify an argument for subjecthood, and conversely with proto-patient entailments for objects’.

Dowty (1991:578) states that ‘at least one proto-agent entailment, in the absence of any of the p-patient entailment is enough to qualify an argument for subjecthood, and conversely with proto-patient entailments for objects’. Regarding Dowty’s proto-role approach, Levin and Hovav (2005:55) remark that ‘this approach solves the problem of generalizations that need to be stated over semantic roles of different grain size. Natural classes of arguments can be picked out by marking reference to shared entailments: depending on the number of shared entailments, broader and narrower sets of arguments are picked out’. According to Levin and Hovav (2005:100), verbs that deviate from this prototype often show a greater degree of variations cross-linguistically. Verbs of perception and verbs of psychological state each include stative subclasses whose member show a range of argument realization.

### 2.5.3. Incorporation of proto-role approach in causatives and passives.

Dowtyian Proto-role theory (1991) was limited to transitive constructions, and mainly focuses on the A and O grammatical function in terms of proto-agent and proto-patients, respectively. Incorporating Dowtyian assumptions, however, Zaenen (1993) yields the following revised (syntagmatic) argument selection principle: ‘in predicates with [-o] or not objective and [-r] or unrestricted arguments, the argument for which the predicate entails the greatest number of Proto-Agent properties will have the intrinsic classification [-o]; the argument having the greatest number of Proto-Patient entailments will have the intrinsic classification [-r]’. These classifications are based on Bresnan and Moshi (1990). The basic idea here is that syntactic functions may be broken down into two binary
features: [±r] (±thematically unrestricted) and [±o] (±objective). With these two features, grammatical functions are grouped into natural classes:

<table>
<thead>
<tr>
<th>Thematic Restriction</th>
<th>Grammatical Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>non-objective [-o]</td>
<td>objective [+o]</td>
</tr>
</tbody>
</table>

thematically unrestricted [-r]  

thematically restricted [+r]  

**Figure 21** shows the grouping of [±r] (±thematically unrestricted) and [±o] (±objective) arguments.

The ‘+’ and ‘-’ values represent the marked and unmarked values of the features. A markedness hierarchy can be established on this basis: subjects are the least marked grammatical function and restricted objects are the most marked.

When grammatical functions are not tied to specific selectional restriction, they are thematically unrestricted. On the other hand those which can only be paired with arguments of specific thematic role are thematically restricted. The subject function can be linked to any thematic role and can also occur as non-thematic thus, are thematically unrestricted. But, the oblique functions are thematically restricted. The object functions may be both. In thematically unrestricted class, the non-objective [-o] is the subject and [+o] is the object. Each thematic role in an argument structure is associated with an intrinsic feature classification. Thus,

- Patient like role [-r]
- Less patientlike [+o]
- Other roles/more agentive [-o]

**Figure 22** shows the mapping of proto-role and their intrinsic value.

This has been simplified to [-o] for the subject and [-r] for objects. In other words, the [-o] and the [-r] arguments are understood in terms of semantic or intrinsic role of subject and object, respectively. I have referred to [-o] and [-r] as proto-agent and proto-patient roles in the thesis.
Understanding the difficulties in assigning the appropriate semantic value of the derived arguments, Dowty (1998), comes with the theory of Grammatical Status Loading that states: ‘an argument is the number of proto-agent properties minus the number of proto-patient properties’. Thus, in the thematic hierarchy, the argument with the greater loading will outrank the other. Similar approach is reflected in Ackerman and Moore (2001:5), according to whom ‘in passive constructions, the argument with the highest loading is suppressed’. In other words, the proto-agent is higher in the hierarchy than the non-proto-agents. Since, passivisation defocuses the agent role, the agent is suppressed, and the patient role is foregrounded or promoted. Now, the basic object argument is never always a proto-typical patient. Rather, there is a degree of continuum between more affected and less affected patients. Similarly, the derived passive subject manifests the degree of affectedness in continuum. In this connection, linguists like Baker (1988), Bresnan and Moshi (1990) and Alsina (1996) have looked into passive as a manifestation of an underlying asymmetry among objects. The theory of object asymmetries holds that arguments are ranked by prominence which is determined by their thematic roles (Alsina, 1996). The derived passive subject retains the underlying property or ‘property U’ of basic object, namely, the syntactic property of passivisation, reciprocalisation, object agreement and adjacency to verb (discussed in detail in § 5.3.5 in Chapter 5).

The core arguments can be analysed in terms of agent and patient proto-properties. But when the grammatical function undergoes change, there arises the necessity of understanding the intrinsic role of the derived argument. The causee and the passive subject are the derived arguments and result of grammatical function changing rules. The former changes from A to DO, and the latter changes from O to S. Here, the focus is on the intrinsic role of these arguments either [-o] or

---

11 According to Bresnan and Moshi (1990: 150-152), in asymmetrical object type languages only one of the post verbal NPs gets the ‘primary object’ syntactic property of passivisation, reciprocalisation, object agreement and adjacency to verb.
Thus, the derived passive subject being a monotonic operation is expected to bear the intrinsic classification of [-r].

In the thesis, I have incorporated the proto-role approach in analyzing the causee and derived subject of passive (see Chapter 5). As per the proto-role approach, the role of causee lies between the proto-agent and the proto-patient. In other words, the thematic role of causee can be understood in the control dimension and the notion of affectedness. According to Cole (1983), ‘the degree of control can be illustrated as a continuum, between the instrumental case and accusative case’. This is shown in figure 15 in § 2.4.1. Similarly, as per the proto-role approach, the role of derived passive subject, can be understood by its patientlike role, which Zeanan terms as intrinsic value of [-r].

2.5.4. Localist/spatial approach

Apart from the proto-roles of agent and patient, an understanding of the localist or spatial approach becomes crucial in order to explain certain arguments with the thematic roles of goal/theme and so on. Jackendoff (1983:188) proposed the Thematic Relation Hypothesis which states: ‘in any semantic fields of events and states, the principal event, states, path, and place functions are a subset of those used for the analysis of spatial motion and location. The fields differ in only three possible ways:

72.(a) what sorts of entities may appear as Theme;

(b) what sorts of entities may appear as reference objects (i.e., locations); and

(c) what kind of relation assumes the role played by location in the field of spatial expressions?

Mohanan (1994) states the semantics of case and spatial relations summarizing the theories put forward by Jackendoff (1972), Anderson (1977) and many others. According to Mohanan (1994), spatial relations can be expressed as static and dynamic locations with cases and prepositions. [Mohanan 1994:165 example 41-42]
73. Static Location [be]
   (a) Contact [at x]
   (b) Containment [in x]
   (c) Proximity [near x]

74. Dynamic Location [move]
   (a) Source [from x]
   (b) Goal [towards x]

This is illustrated with English prepositions in Jackendoff (1986) as in (75).

75.(a) John remained at his post [Be at p]
    (b) John went towards the market. [Move towards m]
    (c) John went to the market. [Move towards m & be at m]
    (d) John went into the room. [Move towards r & be at r]
    (e) John was in the market. [Be in m]
    (f) John came out of the market. [be in m & move from m]

Now, preposition like from in English can have both spatial point as well as temporal point as in (76a) and (76b), respectively. Again, non-spatial relations refer to abstract locations or mental states as shown in (76c). [Mohanan 1994:167 example 46a-c]

76.(a) John flew from Boston to Chicago
    (b) John sang from dawn to dust
    (c) John swung from deep depression to intense joy.
This is illustrated in figure 23 below.

\[ \text{Location} \]
\[ \text{Time} \quad \text{Space} \]
\[ \text{Concrete} \quad \text{Abstract} \]

\textit{from dawn to dust} \quad \textit{from Boston to Chicago} \quad \textit{from deep depression to intense joy}

Figure 23 The classification of the concept of location

\section*{2.6. An overview of argument (A, S, O) marking in Indo-Aryan languages}

In Indic languages, the arguments are case marked, and the grammatical marking when mapped against the semantic role, it is seen in most cases that they do not have one to one correspondence. Case, thus, forms an integral part in argument realization, in Indo-Aryan languages. This section gives an overview of the status of case in some of the Indo-Aryan languages and the semantic usages of the core cases (A, S, O markings).

\subsection*{2.6.1. A and S markings}

Canonical A/S case marking is normally nominative but South Asian languages allow non-nominative subjects besides the ergative (Verma and K.P.Mohanann 1990, Mohanan1994). The ergative subject marking, for instance in Hindi, is dependent on the perfective aspect as in (77a-b).

[Mohanan1994:70 example no.15a and 15b]

\begin{align*}
77. \text{(a)} & \quad \text{ram-ne} \quad \text{ravi-ko} \quad \text{pit-aa} \\
& \quad \text{ram-ERG} \quad \text{ravi-DAT} \quad \text{beat-PERF} \\
& \quad \text{‘Ram beat Ravi’} \\
77. \text{(b)} & \quad \text{ram} \quad \text{ravi-ko} \quad \text{piit-taa} \quad \text{hai} \\
& \quad \text{ram.NOM} \quad \text{ravi-ACC} \quad \text{beat-IMPERF} \quad \text{be.PRES} \\
& \quad \text{‘Ram beats Ravi.’}
\end{align*}
In (77a), the verb in the perfective form pitaa ‘beat-PERF’ takes an ergative subject ram-ne. Whereas, the imperfective form of the verb piittaa hai in (77b) takes a nominative subject.

Dative is associated with thematic role of experiencer in most Indo-Aryan languages (Masica1991, Verma and Mohanan 1990). For instance, in Bangla, the subject, apart from the canonical nominative case also takes other non-nominative cases. [Masica 1991:340, example no.57 and 60]

78. (a) ami choto mee-ke ekki kukur dilum
    I.NOM small girl-ACC one dog give-PAST
    ‘I gave the little girl a dog.’

(b) ama-ke choto mee-ke ekki kukur di-te hobe
    I-DAT small girl-ACC one dog give-NF be.FUT
    ‘I have to give a dog to the little girl.’

The different case markings show the different semantic roles that the argument takes. In (78a), it is the verb de ‘give’ in the past tense form that takes a nominative subject. In (78b), it is the verb di-te ‘to give’ is in the non finite form followed by the auxiliary verb hobe ‘be.fut’, indicating intension that takes the dative subject. The semantic role of the former is that of agent, and in the latter case, it is an experiencer.

Experiencer subjects occur with psych verbs and N+V complex predicates (Butt 2004). [Mohanan1994:72 example no. 22a]

79. (a) ram –ko acanak ser dikh-aa
    ram-DAT suddenly lion appear-PERF
    ‘Ram suddenly saw a lion (unintentionally).’

(b) ram ne ser-ko dekh-aa
    ram ERG lion-ACC see-PERF
    ‘Ram saw the lion (intentionally)’
In (79a) the verb *dikh* ‘appear’ takes a dative subject case *ram-ko* and in (79b) the verb *dekh* ‘see’ takes the ergative subject case *ram-ne*. In the former case, the action is not intentional or volitional, and hence the subject is an experiencer. While, in case of the latter, the subject is an agent. Similarly, the verb *maarna* ‘to kill/hit’ in Hindi, entails proto-agent whereas, the verb *marna* ‘to die’ entails proto-patient.

[Mohanan1994:72 example no. 22b]

80. *us-ne /$^h$yah jaan buj kar cillaa-yaa*

he-ERG/he-NOM deliberately shout-PERF

‘He shouted deliberately’

In (80), the adverb *jaan bujh kar* ‘deliberately’ can only occur with an ergative subject, not with a nominative one. The nominative subject in such construction will be ungrammatical.

In Bhojpuri, for instance, verb like *mahaknaa* ‘smell’ encodes the non-agentivity involved in the proposition by marking the NPs differently to reflect the different thematic roles (Verma and Mohanan 1990). [Verma 1990:87 example no 2a-b]

81.(a) *ham phuul mahaknii*

I-NOM flower-ACC smell-3SG.PAST

‘I smelled the flowers’

(b) *hamra gais mahakal*

I-NOM gas-NOM smell-3SG.PAST PERF

‘I smelled gas (in the sense that I got a whiff of gas) ’

In Assamese also, the subject takes the nominative, ergative and dative cases (Barbora 2005). Analysis of the above Indo-Aryan data shows that the canonical marking of the A/S arguments is dependent upon factors like agency, volition,
causation and initiation. The non-canonical A/S markings deviate from the prototype and occur with verbs that generally differ in aspectual properties.

2.6.2. Object markings

In most Indo-Aryan languages, the accusative form is identical with the dative, for instance: *ko* in Hindi, *ke* in Bangla, *ok* in Assamese etc. In Hindi, the appearance of accusative *ko* is connected with sensitivity to animacy and definite and specific interpretations (Masica 1991, Mohanan 1994, Butt 2004:162).

[Mohanan, 1994:87-88]

82. (a) ravi ne kacca a kelaa kaat-aa
ravi ERG unripe banana-N cut-PERF
‘Ravi cut an unripe banana.’

(b) ravi ne kacce kele-ko kaat-aa
ravi ERG unripe banana-ACC cut-PERF
‘Ravi cut the unripe banana.’

Moreover, *ko* is associated with the notion of affectedness (Saksena 1982). In (Saksena 1982), the alternation of instrumental *se* and accusative *ko* has been analyzed in terms of affected agent.

83. mai-nee ram-ko/se kitab parh-vaa-ii
I-AGT ram-D/INST book read-IC-PAS(F.)
‘I had Ram read the book.’

In (83), the dative *ko* with the causee NP is an affected agent whereas, the instrumental *se* with the causee NP implies non-affected agent.

In many Indo-Aryan languages, the dative is identical in form to the accusative, but it differs from the accusative in that it marks indirect objects in double object constructions (Butt 2004:163).
However, Mohanan (1994:92) states that a notable pattern in the distribution of accusative and dative that appears in the passive construction supports the assumption that accusative is a direct object case and dative is an indirect object case. According to her, only dative case on indirect case is preserved in passivisation while, the accusative is altered to nominative in passivisation. This is illustrated in (84).

84. (a) *ram* anil-*ko* uthaaegaa
   - *ram-*NOM anil-ACC lift/carry-FUT
   ‘Ram will carry Anil’

(b) *anil* ram se uthaayaa jaaegaa
   - *anil-*NOM ram INSTR carry-PERF go-FUT
   ‘Anil will be carried by Ram.’

In (84a), we see that the accusative case of the direct object in (84b) is altered to nominative in the passive construction.

85. (a) *ram ne* anil-*ko* haar bhejaa
   - *ram-*ERG anil-DAT necklace send-PERF
   ‘Ram sent a/the necklace to Anil.’

(b) anil-*ko* haar bhejaa gayaa
   - anil-DAT necklace s end-PERF go-PERF
   ‘Anil was sent a/the necklace.’

(c) haar anil-*ko* bhejaa gayaa
   - necklace-NOM anil-DAT send-PERF go-PERF
   ‘The necklace was sent to Anil.’

The dative case in (85a) retains its case feature even in passivisation as in (85b-c). This also explains why, dative and accusatives needs to be identified as two distinct cases in most Indo-Aryan languages.
Butt and Ahmed (2007) have emphasized on both control and spatial concepts in understanding of case. [Butt and Ahmed 2007: 6, example 14-15]

86. (a) nadya  
lahor sē  a-yi

nadya.F.SG.NOM  lahor ABL  come-PERF.F.SG

‘Nadya came/arrived from Lahor.’

(b) nadya-ne  subha  sē  kam  ki-ya

nadya.F.SG-ERG  morning ABL  work do-PERF.M.SG

‘Nadya has been working since morning.’

In (86a), the ablative sē refers to the spatial usage, while in (86b), it refers to temporal usage. The argument marking in the object position is dependent upon animacy, specificity and affectedness, while, the non-canonical object markings are spatial factors. The non-canonical object can be treated as non-aspectual argument distinguished from the proto-typical patient role.

2.7. Observation

The arguments can be assigned case and thematic role depending upon the nature of the verb. The case and the thematic role usually do not have a one to one relation. What can be considered consistent cross linguistically are the positions A, S and O. An NP, be it in the dative case or in the role of an experiencer has to fulfill the certain criteria, in order to be considered as the subject of a transitive verb (A), or subject of an intransitive verb (S). In Indo-Aryan languages, the thematic roles are dependent upon factors like agentivity, animacy, specificity, affectedness and spatial notions.

AS being an Indo-Aryan language, is expected to have similar phenomenon. The thesis proceeds with the hypothesis that the primary division of verb types into stative and dynamic and volitional and non-volitional determines the assignment of different thematic roles to the arguments. The verbal properties in AS, when arranged in a continuum between stative and dynamic, reveal the existence of a
number of hierarchies and sub-hierarchies. Arguments, when analyzed with respect to their proto-properties, are expected to explain why they are capable of taking so many case features. And also why there is no one to one correspondence between the case features and the thematic roles. In the subsequent chapters I have tried to explore the argument selection in AS from this perspective.