
UNIT 3 GRAMMATICAL FUNCTIONS, CASES, AND THEMATIC ROLES

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3.0 OBJECTIVES

The objectives of this unit are that at the end of this unit you should be able to

- understand grammatical functions such as Subject, Direct Object, Indirect Object, Prepositional Object,
- identify different cases in English, such as Nominative, Accusative, Genitive,
- identify thematic roles of argument noun phrases,
- distinguish between grammatical functions, cases, and thematic roles,
- understand the significance of grammatical functions, case, and thematic roles for other aspects of sentence structure.

3.1 INTRODUCTION

3.1.1 Understanding grammatical functions

In Units 1 and 2, we learned about different syntactic constituents such as phrases, clauses, and sentences. In this unit, we shall be concerned with certain kinds of relations and roles in which some of these syntactic constituents, particularly certain kinds of phrases and clauses, participate. These relations and roles are also significant for other aspects of the syntax of English, as we shall soon see.

To begin with, we shall examine the notion of a **grammatical function**. Earlier, we have used this term in passing, during our discussion of complement clauses. We shall now see that a grammatical function is a very general kind of relationship, in which not only complement clauses but also noun phrases and occasionally other kinds of syntactic constituents figure in an important way.

The first kind of grammatical function that one encounters in an English sentence is the **subject**. (This has already been mentioned informally in an earlier unit.) A typical sentence in English can be immediately divided into two parts, namely, the subject and the predicate. The subject is the noun phrase (NP: see Unit 1) that the predicate says something more about. If the main verb in the predicate is an action verb such as *hit*, *kill*, *call*, or *eat*, then the subject denotes the person or being performing the action expressed by the verb.

Another kind of grammatical function is the **object**, or more specifically the **direct object**. The direct object NP denotes the most important entity (or set of entities) towards which the verb is directed, with or without a resulting change of state in it (or them). We have also seen direct object complement clauses in Unit 2: such a clause denotes the object of a verb such as *to know* or *to believe*.

A third kind of grammatical function is the **indirect object**. An indirect object NP denotes the goal, recipient, or beneficiary of the action of the verb on the direct object. Consider the sentences below:

- (1) a. Ali gave Salma a box of sweets.
b. Sita bought her niece a toy car.

In (1a), *Ali* is the subject, *a box of sweets* is the direct object, and *Salma* is the indirect object since she is the recipient of the box of sweets. In (1b), *Sita* is the subject, *a toy car* is the direct object, and *her niece* is the indirect object since Sita's niece is the recipient or beneficiary of Sita's purchase.

A fourth kind of grammatical function is the **prepositional object**, or **object of a preposition**. In Unit 2, we have seen subordinate adverbial clauses that constitute prepositional object complements. Of course, noun phrases (including wh-phrases) in general can be objects of prepositions, as the following sentences illustrate:

- (2) a. Ram is in [the garden].
b. Bobby put the flowers on [the table].
c. With [which company] are you collaborating in this joint venture?

Grammatical functions such as these play a crucial role in English syntax, since -- we shall see in what follows in this unit and the subsequent ones -- their occurrence often determines the operation of other rules and principles of grammar as well.

3.1.2 Understanding Case

The **Case** of a noun phrase is another feature that plays a role in the regulation of syntactic rules such as movement transformations and agreement. Consider the sentences (3a - c) below:

- (3) a. He is intelligent.
b. Sita saw him yesterday.
c. This is his house.

The underlined forms in these sentences are all forms of the masculine third-person singular pronoun (*he ... him ... his*); however, they differ in their Cases. In the sentence (3a), the pronoun *he* is in the **Nominative Case** (since it is the subject); in

(3b), the pronoun *him* is in the **Accusative Case** (since it is the direct object of the verb *saw*); and in (3c), the pronoun *his* is in the **Genitive or Possessive Case** (since he is the "possessor" of the house). Note also that these different Case-forms of the pronoun are not interchangeable:

- (4) a. *Him/*His is intelligent. (in the sense of: He is intelligent.)
 b. I saw *he/*his. (in the sense of: I saw him.)
 c. This is *he/*him house.

Nouns in English have just two distinct Case-forms: the Nominative(-Accusative), without any extra marking, and the Genitive (or Possessive), with the suffix *-s* in the singular and *-s'* in the plural.

In Section 3.3, we shall examine the syntactic features of Case in greater detail, and we shall find that it is closely linked with other syntactically significant elements such as Infl and the Verb, and also that it regulates an important kind of movement transformation. We shall also see that Case is an obligatory feature of every noun phrase in every grammatical sentence in English, and that the generative grammar of English therefore seems to have a kind of "filter" that lets only Case-marked noun phrases through.

3.1.3 The notion of a thematic role

The concept of **thematic roles** or **thematic relations** is probably new to you. Thematic roles are, in a sense, closer to the actual meanings of noun phrases than either grammatical functions or Cases are. To see what we mean by thematic roles, consider the following pair of sentences:

- (5) a. The door opened.
 b. The security guard opened the door.

In the sentence (5a), the noun phrase *the door* is the subject, whereas in (5b) it is the direct object. In both the sentences, however, it is the entity that is the most directly affected by the action of opening. We therefore say that *the door* bears the **thematic role THEME** (sometimes called **PATIENT**) in both (5a) and (5b), whereas the noun phrase *the security guard* in (5b), as the entity that consciously performs the action of opening the door, has the thematic role **AGENT**.

There are several more thematic roles such as **EXPERIENCER**, **INSTRUMENT**, **GOAL**, **BENEFICIARY/RECIPIENT**, **SOURCE**, and **LOCATION**. In generative grammar, it is assumed that the lexical items (roughly, distinct "dictionary words") used in a given language are listed in a large **Lexicon** for the language as individual lexical entries. For many of these lexical items -- and especially for verbs -- the thematic roles borne by the subject, direct object, ..., etc. are specified in each individual lexical entry. This has certain further implications for the syntax of the language, as we shall see in Section 3.3.

3.2 GRAMMATICAL FUNCTIONS

3.2.1 Subject

The subject of a sentence carries the most crucial grammatical function: it expresses what the rest of the sentence, specifically the predicate phrase, is about. The subject has traditionally been defined as the "doer" of the action expressed by the verb. In actual examples, however, this definition of a subject proves to be rather inadequate. Consider the following sentences:

- (6) a. Sita is a doctor.
b. My brother finally fell asleep.
c. Ali already knows a lot about computers.

None of the verbs in these sentences are verbs of (voluntary) action, and thus, strictly speaking, the subject cannot be called the "doer" of any action. The sentence (6a) says something about Sita's profession, the sentence (6b) tells us about a bodily state that my brother entered into, and the sentence (6c) says something about a mental state that Ali possesses (through conscious effort on his part or otherwise). And yet there is no doubt that *Sita*, *my brother*, and *Ali* are all subjects of their respective sentences, because for every one of these the rest of the sentence, i.e., the predicate phrase is about Sita, my brother, and Ali, respectively.

Consider also the following sentences:

- (7) a. All of a sudden the door opened.
b. The dog was run over by a car.

In the sentence (7a), *the door* is the subject, but it is incapable of performing the action of opening voluntarily: some person or physical force has to be responsible for its opening. The sentence (b) is a sentence in the **passive voice**: the verb *run (over)* is in its passive form (in the shape "Auxiliary *be* + Past Participle"), and its subject is therefore what would normally be the direct object in the active counterpart of the sentence.

3.2.2 Direct object

A direct object, unlike a subject, is not an obligatorily present grammatical function in English. It occurs only with transitive verbs such as *see*, *hit*, *kill*, *eat*, and *read*; and even with verbs such as *eat* and *read* it may be understood rather than always overtly expressed. Consider the following pairs of sentences:

- (8) a. Sita is reading.
b. Sita is reading the newspaper.
- (9) a. The children finally ate at two o'clock.
b. The children finally ate their lunch at two o'clock.

In the sentences (8a) and (9a), the direct object is unexpressed but understood to be 'something that can be read' and 'something edible', respectively, while in the sentences (8b) and (9b), the direct object is overtly expressed. In one sense, the direct object has a closer syntactic relationship with its main verb than, e.g., the subject of a sentence does; this is borne out by the fact that the nature of the direct object can be (at least partially) conjectured from the verbs *read* and *eat* in the sentences (8a) and (9a), respectively. In structural terms, the direct object NP is a sister of the V in the syntactic tree.

As we have seen in the previous subsection (3.2.1), the subject of a passive sentence occurs as the direct object of its active counterpart. Consider the following pair of sentences:

- (10) a. The mangoes were eaten (by the children) yesterday.
b. The children ate the mangoes yesterday.

The phrase *by the children* in the passive sentence (10a) is optional. The subject of a passive sentence, such as *the mangoes* in (10a), is often called a "logical object" since it still remains the set of things that were eaten, while the (optional) NP that occurs with the preposition *by* in (10a), and which is the subject in (10b), is often called a "logical subject", since *the children* remain the eaters of the mangoes. The

prepositional objects are indirect objects, however. Consider the following sentences:

- (14) a. I am going to my workplace.
b. Put the flowers in the flower-vase.
c. The rock rolled down the slope.

None of the underlined prepositional phrases in the three sentences above are phrases containing indirect objects. Yet the NPs *my workplace*, *the flower-vase*, and *the slope* are all prepositional objects, of the prepositions *to*, *in*, and *down*, respectively.

Sometimes a *wh*-expression that is a prepositional object can be moved by the transformation of Wh-Movement, leaving the preposition "stranded" by itself. This has occurred, for instance, in the following sentences:

- (15) a. What_x did she do that for for t_x ?
b. Which cousin_y are you planning to go to the movie with t_y ?

We have seen *wh*-traces before, in Unit 2. Here, the prepositional objects, being *wh*-expressions, have left *wh*-traces behind in their original sites as they have moved to the very front of the questions.

3.3 CASE

3.3.1 Case assignment and Case Theory

We have a preliminary understanding of Case by now. However, we must also note that distinct syntactic Cases may not necessarily be expressed by means of distinct (morphological) Case-forms. For instance, a common noun such as *book* or *cat* has only one Case-form for both the Nominative and the Accusative Cases:

- (16) a. That book is interesting to read.
b. I've read that book before.
(17) a. This cat roams around in the neighbourhood.
b. Take this cat outside.

Every noun phrase in an English sentence must necessarily carry a syntactic Case, even though not all syntactic Cases are expressed by distinct Case-forms. The requirement that every noun phrase must bear a syntactic Case is prompted by the fact that noun phrases must rightfully "belong" within sentences: a hanging noun phrase bearing no Case in a sentence would be irrelevant to the sentence. This requirement is often labelled the **Case Filter** by generative grammarians:

- (19) **Case Filter:** *NP if the NP does not have syntactic Case.

This is to be read as: "A noun phrase is ungrammatical in the language if it does not have syntactic Case". Another way of getting the work of the Case Filter done in English is to say that every noun phrase must be assigned a syntactic Case by some other element in the sentence. The Case Filter and matters of Case-assignment belong to a sub-part of generative grammar called **Case Theory**. The theory ensures that NPs bear meaningful and coherent relationships with the other elements in a sentence, and especially with Case-assigning elements in the sentence. As it happens, some of the most crucial syntactic elements of a sentence are Case-assigners. The verb, for instance, assigns Accusative Case to a direct object (if it is an active transitive verb), and an *NP* element (which we have seen in Unit 2) carrying Tense assigns Nominative Case to the subject of its clause. The necessary condition for

Case-assignment is a special kind of relationship called **government**. The head of a phrase governs its Complement, and its Specifier as well. Thus, a verb governs its direct object complement (and any other complement(s) it might have, such as a prepositional phrase), and a tensed (i.e., finite) Infl element governs the subject NP in its Specifier. For government, in turn, the governing element must **c-command** the element that it governs (for the definition of c-command see Unit 1).

3.3.2 Case and NP-Movement

Case plays a central role in another salient kind of movement transformation besides Wh-Movement, viz., **NP-Movement**. The **Passivization** transformation, which derives a passive sentence from a deep structure which is close to its corresponding active sentence in certain respects, is now held to be a sub-type of the transformation NP-Movement. Thus, a passive sentence like (20b) below is derived from a deep structure representation that is something like (20a) -- the prepositional phrase *by the children* is in parentheses, which indicate that the phrase is optional:

- (20) a. $\frac{\text{Past + be eaten the mangoes (by the children)}}{\uparrow \quad \quad \quad |}$

 NP-Movement (Passivization)
 b. The mangoes were (= be+Past 3 pl.) eaten (by the children).

Another kind of NP-Movement is **Subject-to-Subject Raising**, also called **Raising-to-Subject**. This involves the "raising" or "upward movement" of the subject of a complement clause to the (empty) subject position of the next higher clause. Raising-to-Subject is responsible for the meaning-relationship between the following pair of sentences, with the sentence (21b) the outcome of Raising-to-Subject:

- (21) a. It seems [_{IP} Ram is exhausted].
 b. Ram_X seems [_{IP} t_X to be exhausted].

In (21b), the complement clause of the verb *seems* has a **NP-trace** in the position of its subject, a trace left by the proper noun *Ram* in its movement to the position of the subject of *seems*, which would otherwise be empty. The NP *Ram* has to move upward to be assigned nominative Case: the INFL of the infinitival complement clause IP, being non-finite, is unable to assign Case to its own subject, and fortunately the verb *seem* does not select any subject -- hence the subject *it* of the tensed verb *seems* in (21a) is a "dummy" or "expletive" *it*, without any particular reference to any real-world entity. The subject of the complement clause, once it has been "raised" to the position of matrix-clause subject, can get Case from the finite INFL element (*Present 3 sg.*) of the matrix clause.

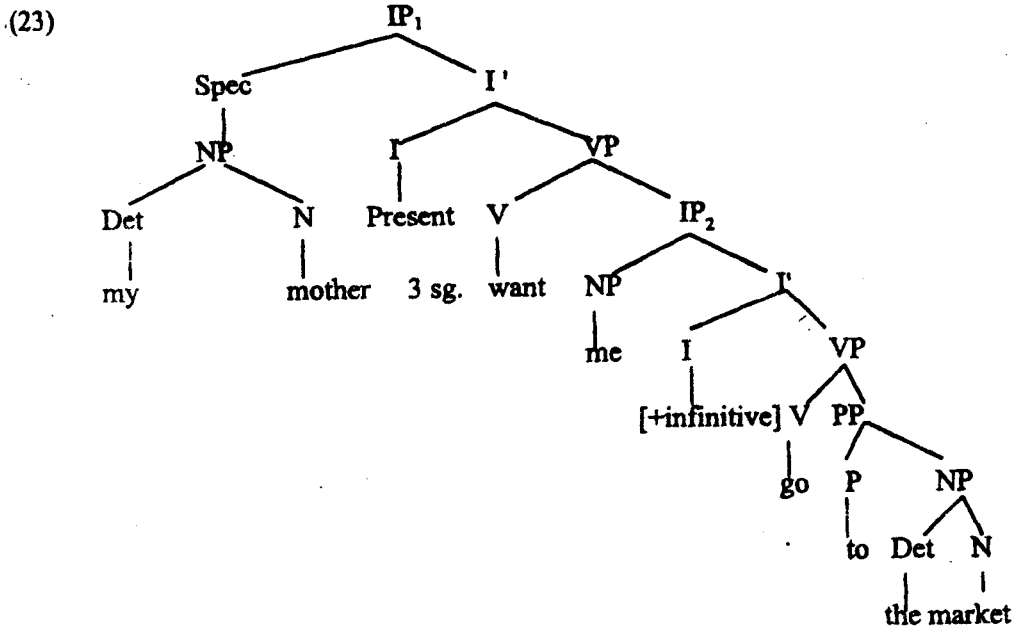
3.3.3 Exceptional Case-Marking

So far, we have seen how Case can be assigned to NPs, either in their base-generated positions or after they have undergone different kinds of NP-Movement. However, there is a class of constructions in which certain NPs are unable to get Case through the regular channels that we have seen up till now. The assignment of Case to these NPs is a special kind of mechanism which is called **Exceptional Case-Marking** (or **ECM** for short). Let us look at the following examples:

- (22) a. My mother wants [_{IP} me to go to the market].
 b. Harish believes [_{IP} himself to be intelligent].

In the sentence (22a), the subject of the infinitival complement clause, *me*, bears the Accusative Case instead of the expected Nominative Case for the subject of a clause. The same holds of the subject of the infinitival complement clause, *himself*, in the

sentence (22b). The question is, what is it that assigns the Accusative Case to the complement-clause subject? The structure of the sentence (22a) is as follows:



In this case, the verb of the matrix clause IP_1 , *want*, exceptionally marks the subject of the complement clause IP_2 with the Accusative Case so that it takes the shape *me* rather than *I* -- note that the infinitival $I(nfl)$ element of the complement clause, being non-finite, cannot mark the subject of the complement clause with the Nominative Case. The Case-marking of the subject is deemed exceptional because the matrix-clause verb *want* does not directly govern the complement-clause subject -- there is an intervening branching node IP_2 that prevents direct government of the complement-clause subject by the matrix-clause verb. Normally, a Case-assigner must govern the NP to which it is to assign Case. For sentences like (22a) and (22b), however, this requirement of government is found to be relaxed so that the complement-clause subject does not remain Case-less.

3.4 THEMATIC ROLES

3.4.1 Basic thematic roles

We have already seen two of the basic thematic roles that a noun phrase in English can assume, namely, AGENT and THEME. We have also listed a number of other thematic roles without discussing them further. We examine these thematic roles now. Consider the following sentences:

- (24) a. Ram felled the tree with an axe.
 b. I go to work by bus.
 c. What_i do you slice onions with t_i ?

(The subscripts i on *what* and the trace t indicate that t is the *wh*-trace of the question word *what*, as we have seen earlier.)

3.4.2 Thematic roles and the Theta Theory

The part of generative grammar that deals exclusively with thematic roles is often termed the **Theta Theory** (also written as " θ - theory"): thematic roles are also known as θ - roles or **theta roles** for short. Theta theory is centred around an important principle called the **Theta criterion**, which goes as follows:

- (25) *Theta Criterion:* Every argument NP in a sentence bears one and only one theta role, and each theta role is assigned to one and only one argument NP.

The Theta Criterion thus figures in Theta Theory in the same way that the Case Filter figures in Case Theory. It ensures that no noun phrase that is selected by the lexical entry for a given verb (or predicate adjective, or even preposition) can figure in a sentence without being assigned a proper thematic role.

3.4.3 Thematic roles and Case

As should be evident to you by now, there is a lot of overlap between certain Cases and certain thematic roles: for instance, an argument NP in the Nominative Case is typically an AGENT or EXPERIENCER in its thematic role, while an argument NP in the Accusative Case that is not a prepositional object typically has the thematic role THEME (or PATIENT); and an argument NP that is the object of a preposition like *in* or *on* typically has the thematic role of LOCATION. However, the match between Cases and thematic roles is not always perfect. For instance, argument NPs can bear the same thematic role but different Cases, as the following pair of sentences illustrates:

- (26) a. They often like amusing toys.
EXPERIENCER
- b. Amusing toys are often liked by them.
EXPERIENCER

The pronoun *they* in (26a), being the subject, is in the Nominative Case-form, whereas the pronoun *them* in (26b), being the object of the preposition *by*, is in the Accusative Case-form; but they have the same theta role, that of EXPERIENCER, in the two sentences. Similarly, the same Case is often assigned to argument NPs with two different theta roles, as the following pair of examples illustrate:

- (27) a. The children like sweets.
EXPERIENCER
- b. The children threw stones at them.
AGENT

The same argument NP *the children*, which is also the subject in both the sentences and is assigned Nominative Case, has different theta roles, EXPERIENCER in (27a) and AGENT in (27b).

3.5 CONCLUSION

Grammatical functions, Cases, and thematic roles are often overlapping but not perfectly matching properties that NPs in a sentence display. In the lexicon, grammatical functions and thematic roles feature in the "frame specifications" for lexical entries, especially for verbs, predicate adjectives, and prepositions. The grammatical function frame (or frames) in which a lexical item can occur was earlier called the *strict subcategorization* specification(s) for the lexical item (Chomsky 1965); later, it has been renamed the *c-selection* properties of the lexical item (for "category selection": see, e.g., Lasnik & Uriagereka 1988). The specification of thematic roles of arguments that can occur with a given lexical item was earlier

covered under the term **selectional restrictions** for the lexical item (Chomsky 1965); this has also been renamed later, as the **s-selection** properties of the lexical item (for "semantic selection": Lasnik & Uriagereka 1988). Thus, the c-selection and s-selection specifications for a verb such as *put* would appear in the lexical entry for *put* as follows:

- (28) *put*: V, [_{VP}NP [v ' ___ NP PP[+LOCATIVE]]] (*c-selection*)
<AGENT, THEME, LOCATION> (*s-selection*)

This is to be interpreted as follows: the lexical item *put* is of the part of speech Verb; its c-selection specification says that it occurs with a subject, a direct object, and a locative prepositional phrase; and its s-selection specification says that the three arguments that it selects must bear the thematic roles AGENT, THEME, and LOCATION.

3.6 LET US SUM UP

1. Grammatical functions, Case, and thematic roles are all properties possessed by noun phrases in a sentence.
2. The principal grammatical functions are: the subject, the direct object, the indirect object, and the prepositional object.
3. The principal, morphologically distinct, Cases in English are: Nominative Case, Accusative Case, and Genitive Case.
4. In English, every noun phrase must have Case. This requirement is known as the Case Filter.
5. Furthermore, every noun phrase must be assigned Case in English, by finite INFL, V, P, or (for the Genitive Case) N.
6. Case is assigned to the subject of an infinitival complement clause through Exceptional Case-Marking, by a V or P in the matrix clause.
7. The principal thematic roles in English are: THEME, AGENT, LOCATION, EXPERIENCER, INSTRUMENT, RECIPIENT/BENEFICIARY, GOAL, SOURCE.
8. The assignment of thematic roles to argument NPs is regulated by the Theta Criterion, which says that every argument NP must be assigned at least one thematic role, and conversely, every thematic role is assigned to at most one argument.
9. The frame of grammatical functions in which a particular lexical item can occur is specified by the c-selection properties (earlier, strict subcategorization) of the lexical items as specified in the lexicon (which is an essential component of the generative grammar of a language).
10. The thematic roles that a lexical item selects are specified by the s-selection properties (earlier, selectional restrictions) of the item as specified in the lexicon.

3.7 KEY WORDS

Accusative Case:

Sometimes also called the **Objective Case**, this is the Case-form of pronouns such as *me* (and archaic *thee*), *him*, *them*. In English, Accusative Case is usually assigned by a verb to its direct or indirect object, or by a preposition to its object.

AGENT:

The thematic role taken on by the (usually conscious, voluntary) "doer" of an action denoted by

a verb; for example, *Ram* in the sentence *Ram painted this picture* consciously and voluntarily performs the action of painting the picture, and thus takes on the thematic role of AGENT that is s-selected by the verb *paint(ed)*.

BENEFICIARY:

A thematic role, usually s-selected by a ditransitive verb like *give*; for example, in the sentence *Sita gave Salma some flowers*, the indirect object *Salma* is the BENEFICIARY selected by the verb *gave*.

Case:

A morphological and/or syntactic property of NPs; in English, usually three distinct morphological Case-forms are found, viz., Nominative, Accusative, and Genitive. Traditionally, books of English grammar also list the Dative Case (assumed by an indirect object) and the Vocative Case (the form used to address or call someone, e.g., "Hey, *John!*" or "O *King, ...!*"); however, morphologically the Dative Case is identical in form to the Accusative, and the Vocative Case to the Nominative, in English.

Dative Case:

See CASE, above.

Direct object:

In a sentence such as *Ram called Harish*, *Harish* is the direct object of the verb *call(ed)* (whereas *Ram* is the subject). The direct object of a (transitive) verb is thus the most important argument NP towards which the verb is directed.

Genitive Case:

The Case taken by a possessor NP, as in *his mother*, *Mr. X's car*, etc.

GOAL:

The thematic role that is typically assigned to the indirect object of a verb such as *transfer* or *sell*, i.e., the ultimate destination of the direct object in undergoing the action expressed by the verb, as in *Ram sold the car to Harish*; and also to the destination of someone's coming or going, as in *Ram is going to the post-office*.

Indirect object:

The "other" object of a ditransitive verb, apart from the direct object: typically a GOAL or BENEFICIARY, and traditionally said to be in the "Dative Case".

LOCATION:

In a sentence such as *Ram is in the garden*, the noun phrase *the garden* denotes where *Ram* is to be found, and is therefore said to bear the thematic role of a LOCATION.

Nominative Case:

The Case assumed typically by the subject of a finite clause, and the most neutral, least marked among the distinct Case-forms found in English. Forms such as *we*, *she*, *he*, *they* are in the Nominative Case, as opposed to, e.g., the Accusative Case-forms *us*, *her*, *him*, *them*.

Prepositional Object:

A grammatical function assumed by a NP that occurs as the complement of a preposition, e.g., *them* in the prepositional phrase *by them*.

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SOURCE:

A thematic role assumed typically by the object of the preposition *from*, e.g., the NP *the tree* in the sentence *The mangoes fell from the tree*. Also, in a sentence like *Ram lost the contract to Harish*, the subject *Ram* bears the thematic role of SOURCE (rather than AGENT, since Ram may not have voluntarily given up the contract to Harish).

Subject:

A grammatical function that is obligatorily present in every English sentence, either covertly (as in imperative sentences like *Go away!*, in which the subject *you* is understood but not expressed) or overtly (as in *It is rather hot outside*). When a sentence is divided into a Subject and a Predicate (phrase), the subject is what the predicate (phrase) is about.

Thematic role (theta role):

A semantic role played by a NP in its capacity as an argument to a verb or preposition, or sometimes an adjective like *fond (of)* or *worth*. The lexicon in the generative grammar of a given language is believed to carry s-selection information about the thematic roles required by a given lexical item.

THEME:

A very common thematic role, typically assumed by the subject of a non-agentive intransitive verb (as in *The rock rolled down the hill*) or the direct object of an active transitive verb (as in *Ram rolled the rock down the hill*).

Theta Criterion:

A criterion, or principle, which states that every argument NP must be assigned one and only one thematic role, and conversely, every thematic role must be assigned to one and only one argument.

3.8 BIBLIOGRAPHY

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3.9 QUESTIONS & EXERCISES

1. A few pairs of sentences are given here. The two sentences in each pair have an argument each that has the same Case but different grammatical functions. Point out that argument, and state its Case and its grammatical function in the two sentences:
 - (i) a. The children spotted him.
b. The children were spotted with him.
 - (ii) a. I have my doubts whether Mr. X will lend you the papers.
b. I doubt whether Mr. X will accept the papers from you.
 - (iii) a. There's no better exercise for you than a long walk, say I.
b. Between you and I, he has simply gone out for a long walk.

2. The following pairs of sentences have a common argument NP which is identical in grammatical function but differs in its thematic roles in the two sentences. Point out the grammatical function and the thematic roles of that NP for each pair of sentences.
 - (i) a. John hit the nail on the head.
b. John was hit by the nail on his head.
 - (ii) a. They have no doubts about this matter.
b. They expressed no doubts in this matter.
 - (iii) a. He handed all the documents over to me.
b. It seemed to me that he had handed over all the documents.

3. You have learned about the Theta Criterion. The following sentence is an apparent exception to the Theta Criterion:

This box has a lot of money in it.

Discuss where the apparent violation of the Theta Criterion lies, and give arguments in favour of or against retaining the Theta Criterion in the light of the acceptability of this sentence.

NOTES ON "QUESTIONS & EXERCISES"

1. (i) a. *him* -- Accusative Case, direct object; b. *him* -- Accusative Case, object of preposition *with*. (ii) a. *you* -- Accusative Case, indirect object; b. *you* -- Accusative Case, object of preposition *from*. (iii) a. *I* -- Nominative Case, subject (note inverted Object-Verb-Subject order); b. *I* -- Nominative Case, but object of preposition *between* (as a conjunct of the coordinate NP *you and I*).

2. (i) a. *John* -- Nominative Case, AGENT; b. *John* -- Nominative Case, THEME (or PATIENT). (ii) a. *they* -- Nominative Case, EXPERIENCER; b. *they* -- Nominative Case, AGENT. (iii) a. *me* -- Accusative Case, GOAL; b. *me* -- Accusative Case, EXPERIENCER.

3. The NP *this box* and the pronoun *it* must both be assigned the same thematic role -- LOCATION -- within the same clause, which goes against the Theta Criterion.

One possible reason why the sentence cannot really be said to violate the Theta Criterion is that the pronoun *it* is not an argument selected by the verb, but simply part of the adverbial adjunct *in it*, which can be dropped without much damage to the sentence. However, if we assume that the pronoun *it* is an argument NP, albeit not an ESSENTIAL argument s-selected by the verb, then the Theta Criterion may have to undergo some rethinking and, if necessary, modification.