**FILLMORE'S CASE THEORY AND THEMATIC ROLES IN GB THEORY
– A COMPARISON AND CRITICISM**

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1 INTRODUCTION[1]

The aim of this paper is to compare two theories concerning the relation between some semantic characteristics of words and the syntactic structures they can be inserted in: Fillmore's deep case (DC) theory on the one hand and the theory of thematic roles (θ-roles) on the other. It might be appropriate to clarify these terms here to some extent.

It is not uncommon to read about "Fillmore's case grammar". We must, however, keep in mind that Fillmore himself, at least in his later writings rejected this terminology stating that his case theory is not a complete, coherent model of grammar, it is just a way of describing some aspects of lexical structure and clause types (197762). Fillmore has developed his theory in a number of articles between 1968 and 1977 (see also Huddleston 1970). During these nine years several alterations were introduced. Remarkably enough, with a few exceptions the literature still keeps referring to the first paper in the series, Case for Case (1968), in spite of the numerous reconsiderations and sometimes quite drastic changes introduced in the later versions. In this paper, I will try to follow these alterations, thus 'case theory" here does not mean the first version of the theory.

The idea of thematic roles (θ-roles) has at least partly been elaborated by Gruber and Jackendoff. But since θ-role, as part of the lexical subcategorization, is an important notion of GB (government-binding) theory, and as I am going to discuss it mainly as developed by Chomsky (1980, 1982a, 1982b), in this paper θ-roles are associated with Chomsky's name.

First I am going to sum up the essentials of case theory and θ-roles (2.1. and 2.2.), then I plan to consider some points of common interest in the two theories and see how the results compare.

2. SHORT DESCRIPTION OF THE TWO THEORIES

As my aim is to compare some aspects of the two theories, I do not intend to give a historical description of the development of either of them. All I want to do here is to give a short summary of the essentials of both CT and θ-roles, in order to give a background to the subsequent comparative and critical chapters. The references within the text are meant to advise the reader on the source and date of the most relevant exposition of the problem in question.
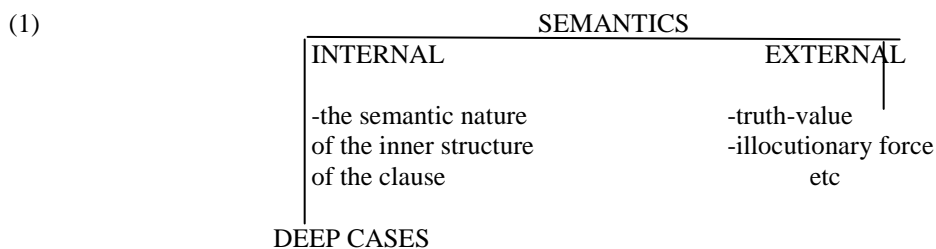
2.1. *Fillmore's Case Theory*

Deep Cases (DC), as Fillmore defines them, are "semantically relevant syntactic relationships involving nouns and the structures that contain them" (1968:5). DC is the underlying property of NPs attached to a predicate word, defining the semantico-syntactic role of the arguments. Arguments are verbal equivalents to those participants of a situation which are taken into perspective in the communicative process. DC has both

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semantic and syntactic relevance - that is why we can speak about its semantico-syntactic nature (1977:61). Fillmore places DC within the frame of "internal semantics" i.e. the semantics of the inner structure of the clause (1977:60):

(1)
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                          SEMANTICS
  INTERNAL                              EXTERNAL

  -the semantic nature        -truth-value
  of the inner structure      -illocutionary force
  of the clause                       etc

        DEEP CASES
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The basic structure of a sentence consists of a propositioned nucleus (P), i.e. a set of tenseless relationships (involving a V, one or more NPs, possibly embedded sentences) and modality (M), carrying notions like tense, mood and negation:

(2)   S -> P + M

The proposition (Fillmore sometimes uses the word "sentence" in this sense) in its basic structure consists of a verb and one or more noun phrases, each associated with the verb in a particular case relationship" (1968:21). These case categories build up a "case frame" displaying the sementico-syntactic roles of the participants in the described situation:

(3)   P -> V + CASE FRAME
          CASE FRAME -> Cl (+ C2 ... Cn)

Entities in the case frame are NPs or embedded clauses. The cases proposed by Fillmore (1971:42) in a hierarchical order are:

(4)   A AGENT   -   no definition
      E EXPERIENCER -   "where there is a genuine psychological event or mental state verb",
                          "entity which receives or accepts or experiences or undergoes the
                          effect of an action", partly the earlier DATIVE
      I INSTRUMENT   -   the immediate cause of event; stimulus
      0 OBJECT   -   entity that moves or undergoes change; also a wastebasket for cases
                          that cannot be classified otherwise
      S SOURCE   -   no proper definition
      G GOAL   -   receiver, destination of a transfer or movement, result, including
                          former RESULTATIVE and FACTATIVE
      L LOCATION   -   place of event
      T TIME   -   time of event

Some of these labels have no satisfactory definition. Fillmore seems to handle it as an open, but presumably not very long list, a specific finite set. The cases are arranged in a hierarchical order and this fact becomes significant in the choice of grammatical categories appearing overtly in the clause (subject, direct and indirect object etc.). We are going to return to this problem later.
     Each case can appear only once within a case frame, but the same argument can take on several case roles, e.g.

(5)   i.   John learns English.
      ii.   John teaches English.

John is both AGENT and GOAL in (5)i, and AGENT and SOURCE in (5)ii.
     The arrangement of case frames results in a number of characteristic sentence types. and verbs as lexical units are subclassified according to the case environment they can occur in. This classification takes place in the lexicon. "In lexical entries for verbs, abbreviated statements called 'frame features' will indicate the set of case frames into which the given verbs may be inserted. These frame features have the effect of imposing a classification of the verbs in the language. (1968:27, similarly 1977:61). The relation of verbs and case frames shows certain flexibility insofar as a verb can be inserted in more than one case environment and the

case frames themselves contain both obligatory and optional elements. Below are some examples with the verb break in different case frames:

(6)   i.   The window broke.   + /_ _0/
        ii.   John broke the window.   + /A_ _ 0(I)/
        iii.   John broke the window with a hammer.   + /A _ _ 0(1)1

In (6)iii. the INSTRUMENT is overtly realized, while in (6)ii it is not.

It remains unclear how Fillmore intends to handle more arbitrary constituents such as a great number of time and location adverbials that can be attached to practically any proposition, and therefore can hardly contribute to the semantic subcategorization of verbs. Let us exemplify this problem with (7) and (8). While it seems to be acceptable that smoke has been exposed to a certain semantic modification from (7)i to (7)ii presumably as a result of the addition of 0 to its case frame:

(7)   i. John smoked.
         ii. John smoked fish.

one would hesitate to agree that the addition of a T element has a similar effect:

(7)   i. John smoked.
(8)   John smoked all day long.

While (7)i and (7)ii refer to different activities, (8) merely gives some additional information about the same activity as in (7)i. No straightforward information is given whether this type of "loose" T or other similar elements are fullfledged entities of the case frame which - as we have learned - serves as a base for classifying the verbs of a language.

    The problem is far from new, and although relatively far reaching studies have been made on languages where the form of the verb often shows a kind of congruence with its minimal case frame, (i.e. transitivity or the possible presence of an adverbial can be morphologically marked on the verb form,) a number of questions are still waiting for a satisfying answer. (One of these languages is Hungarian, see remarks by Huddleston 1970: more detailed discussion in Nolnar 1969, Hadrovics 1969, Dienes 1978.) Fillmore considers the subject and the direct object as "nuclear sentence elements" (1977:75), presumably even the predicate belongs to this group, but not much is said about other categories.

    DCs are thought of as being present at. the base, on "a level of structural organization for a sentence which is distinct from what is usually thought of as a semantic representation and which is distinct likewise from the familiar notions of deep and surface structure syntactic representation" (1969:60). They are a kind of input to the US.

    In later writings (1971:55), Fillmore abandons the idea of DS; instead, he postulates a "Composition Plan". This is a level where a predicate word and a compatible case frame are operating and where the semantic and semantico-syntactic subcategorization features of the predicate word seem to have a leading role.

    DC elements are not linearly ordered. If visual model should be attempted, I would suggest a diagram with the predicate in the centre and DCs circling around them on orbits arranged by the case hierarchy, i.e. the hierarchical order of cases (p 6). Some of the DCs relevant to the situation are brought into perspective, that is are chosen as explicit participants in the sentence by a grammatical process that Fillmore calls transformation. The perspectivized elements take on different grammatical roles and become sentence constituents. One of these elements is chosen to be the subject, another (if there are more) the direct object etc. Theoretically any of the perspectivized elements can be given the role of the subject. For example in a situation where a window (O) was broken (Pred) by John (A) who used a hammer (I), the case frame is +/A, O, I/, we can get the following constructions:

(9)   i.   +/O_ _/   The window broke.
        ii.   +/A_ _O/   John broke the window.
        iii. +/O_ _ A/   The window was broken by John.
        iv. +/O_ _I/   The window was broken with a hammer.
        v.   +/I _ _O/   The hammer broke the window.
        vi. +/A_ _O I/   John broke the window with a hammer.

As for the semantic differences between <u>break</u> +/O_ _/ and <u>break</u> +/A__O/, these are to be marked in the lexicon: "Syntactically and semantically different uses of the same word type should be registered in the <u>same</u> lexical entry whenever their differences can be seen as reflecting a general pattern in the lexical structure of the languag" (1969:126). This verbal polysemy rule applies both to a verb exposed to several different insertion rules, and to words belonging to more than one word class as e.g. verb and noun.

The theory of deep case is a contribution to valence theory as formulated by Tesniere, to the distinction of grammatical levels, to the explanation of constituents and to the collocation rules of a language.
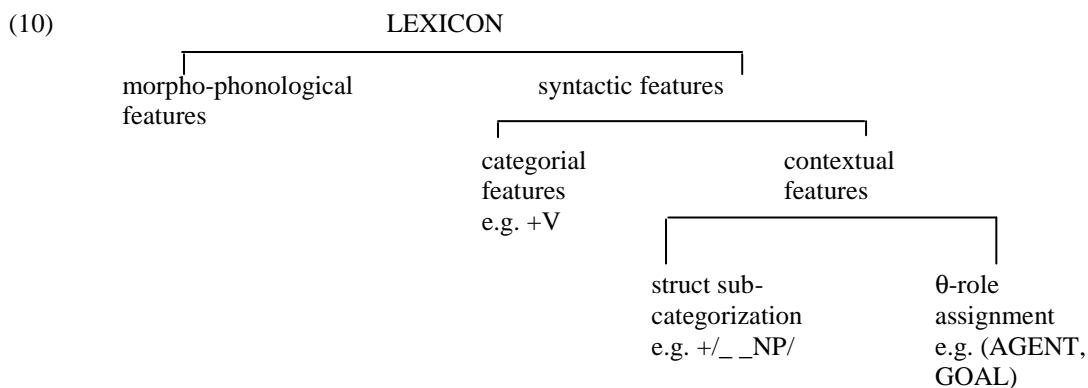
<u>2.2.   θ-roles in GB-theory</u>

In order to clarify some possible terminological misunderstanding, we should mention here that even Chomsky introduces the concept of so-called "abstract cases" in his theory, but he applies the term "case" in a different way. Whereas Fillmore's DC is primarily semantically defined, Chomsky's abstract case "is a structural property of formal configuration" (1982a:170), a property of the PF-component. (PF=Phonetic Form). It can be regarded as a formal or positional property of an NP, and is therefore comparable with Fillmore's grammatical categories. Three of Chomsky's four "structural Cases": Nominative, Objective and Oblique are assigned by the governing categories AGR, V and P respectively, while Genitive has the characteristic structure of /NP_ _ X/.

Chomskv does not give a definite statement as how and on which level Case is assigned in the grammar, but he claims that "Case-assignment can be no later than S-structure since it figures in the LF-component as well as the PF-component,.."(l982a:183, LF=Logical Form), Structural Cases are dissociated from θ-roles, in the sense that a given Case can take various θ-roles, and while a phonetically realized NP must have a Case, θ-role is not obligatory. I.e. each NP has a Case, but not each NP has a θ-role

The concept of θ-roles - similarly to Fillmore's DCs - comes up first in the lexicon. "The lexicon specifies the abstract morpho-phonological structure of each lexical item and its syntactic features, including its categorial features (1982:5). The contextual features are provided partly by the <u>strict subcategorization</u> that gives information about the possible collocations of the word, e.g. that the word occurs together with an NP or a PP etc. This categorization is said to be syntactic.

The other information about contextual features has, as I understand, a more semantic (or probably syntactico-semantic) nature. It is concerned with the thematic roles: AGENT, THEME, GOAL etc. that the word - as a head of a phrase - assigns to its complement NPs.

It is remarkable that, from what is included in the definition above, Chomsky seems to regard θ-role assignment as a basically syntactic phenomenon of the lexicon.

(10)   LEXICON

morpho-phonological   syntactic features
features

                                    categorial   contextual
                                    features   features
                                    e.g. +V

                                              struct sub-   θ-role
                                              categorization   assignment
                                              e.g. +/_ _NP/   e.g. (AGENT,
                                                                       GOAL)

It is actually hard to tell how much Chomsky identifies himself with those who see thematic roles as semantic features when he writes: "It has traditionally been assumed that such notions as 'agent-of-action', 'goal-of-action' etc., play an important role in semantic description, and there has been important recent work elaborating these ideas. These notions in fact enter into many different theories of semantic description. They are the semantic relations of Jerrold Katz, the thematic relations of Jeffrey Gruber and Ray Jackendoff, the case relations of Charles Fil1more... "(1982a:35). But Chomsky does not express his own view about the relations of θ-roles to semantics and syntax. There seems to be no attempt to connect any of the θ-roles to specific surface cases: any θ-role appears to have the same chance of being assigned any case. As for Deep Cases, Chomsky claims that they are dissociated from θ-roles.

A Case Filter is introduced to make sure that all phonetically realized NPs are assigned an abstract Case, i.e. no NP can appear on the S level without having a Case:

(11) Extended Case Filter

   */NP α/ if α has no Case and α contains a phonetic matrix or is a variable.

A variable is an empty node, bound by an operator. (Another definition claims that a variable is an empty node which has a Case, but this definition, connected to the Extended Case Filter, is a logical short-circuit which in fact states that '*/NPα/ if α/ has no Case and is an empty node which has a Case'.)

   In Platzack's interpretation, θ-role assignment is clearly semantic information (Platzack's: 21). We have no access to a complete list of θ-roles, but we can reconstruct the following list (Platzack's: 42):

(12)   AGENT   - the cause of an action
        THEME   - something influenced by the action, bearer of a quality or feature
        SOURCE   - starting point of a movement, initial state in case of change
        GOAL   - final point of movement, result of a change
        LOCAL   - a place where something else exists

Indications of θ-roles are actually insertion rules for the word. That is to say, θ-roles are not (as one would presume) assigned to arguments directly, instead, they are assigned to different <u>positions</u> in the LF. "An argument is assigned a θ-role by virtue of the θ-position that it or its trace occupies in LF." (1982a:36). Each LF position satisfying the subcategotization features of the lexical head of a construction is θ-position.

   Not all elements of LF require a θ-role, e.g. the grammatical subject <u>it</u> in (13):

(13)   It is nice to see you.

Neither are all LF-positions θ-positions. Chomsky claims that there are two kinds of obligatory positions in LF, those determined by the subcategorizat.ion frames of lexical items on the one hand, and the subject position of a clause on the other (1982a:40). To understand this statement with all its consequences would require a proper definition of 'clause' and 'subject', which Chomsky unfortunately fails to give. But it apparently means that the first type of LF position emerges by virtue of the θ-role assignment, although this contradicts a previous assumption stating that θ-roles are assigned to already existing positions. The other type of compulsory LF position is the subject, which either has or has not a θ-role. In the latter case the subject must be the outcome of the syntactic rules of categorial components. (Presumably, these rules ensure a position to the predicate as well.) We will come back to these questions later in connection with the grammatical subject.

The θ-criterion makes sure that

(14)   "Each argument bears one and only one θ-role, and each θ-role is assigned to one and only one
        argument." (1982a 36)

In DS, each argument. occupies a θ-position, i.e. DS is a direct representation of grammatical functions with θ-roles. Further on, the rule Move α disturbs this one-to-one relationship between lexical properties and categorial components, and in the resulting S structures, θ-positions, that is LF-positions with θ-role assignment, may be left empty. E.g. if the verb <u>put</u> assigns the θ-roles THEME and LOCAL, the result is

(15)   the books$_1$ were put t$_1$ on the table

In this case the argument <u>the books</u> "inherits" its θ-role from its trace <u>t</u>, they form a chain, and now the whole chain is assigned the θ-role THEME. As arguments keep their θ-roles even after transformations to θ-free positions, while their traces still occupy the original θ-positions, the θ-criterion holds on the S level too.

We can sum up the main points made about θ--roles in 2.2. as follows:

a)   Each syntactic structure has an LF.
b)   The grammatical head of the structure assigns θ-roles to some LF-positions, whereupon they become
        θ-positions.

c)   The arguments within a structure acquire their θ-roles via the θ-positions they occupy in the LF. The θ-criterion makes sure that. each argument has one and only one θ-role, and that each θ-role (defined by the subcategorization rules of the lexicon) is assigned to one and only one argument. Thus, in LF and, for that matter, in DS each argument occupies a θ-position.

d)   The rule Move α moves arguments to new, θ-free positions, but arguments keep their θ-role even after this transformation. Their traces keep the original θ-positions occupied.

3.   SIMILARITIES AND DIFFERENCES BETWEEN THE TWO THEORIES

One serious difference between Fillmore's DCs and Chomsky's θ-roles is that while DCs are actually responsible for the whole <u>formation</u> of the clause, as they define its construction, θ-roles are <u>assigned to certain "positions"</u> which thus are thought to exist independently of θ-roles. Briefly, LF-positions are there, and they either get a θ-role or they do not.

There are several other interesting points of comparison between the two theories. One has to do with how DC and θ-roles are assigned, another concerns the different grammatical levels on which DC and θ-roles operate and how they are each mapped onto S-structure; and a final question - not entirely independent of the others - is how the grammatical subject is chosen within the two theories. In this chapter I shall compare the two theories primarily from these aspects. Besides comparing Fillmore's and Chomsky's approach, I also make some critical remarks. As these remarks concern exclusively the "points of comparison" mentioned above, it seemed to be the most economical to take them up in the course of the comparative discussion.

3.1.   DC and θ-role assigners

Which lexical items actually exercise their "right" to assign DCs and θ-roles and what is the range of their effect?

The question is motivated by the fact that potentially each word can assign DC or θ-role, since these properties are defined in the lexicon. However, in reality some lexical items tend to assign, while others tend to receive these roles.

Fillmore suggests that each <u>predicate word</u> takes argument 'Predicate word' does not necessarily mean 'verb': "Content words may all be inserted as predicates, and their realization as nouns, verbs or adjectives is a matter of application rules" (1969:129). Most. content words can be used as predicates although many languages have rules rendering a function verb to copula to nouns and adjectives in predicative position, while other languages accept nominal predicates. Fillmore suggests that existential sentences are verbless sentences in their DS, with a lexically empty V constituent. Even conjunctions like <u>because</u> can be regarded as predicates as they can be described according to the number of arguments they take (1969:114):

(16) S_1 because S_2

Chomsky, on the other hand, claims that each word as the <u>head of a phrase</u> is capable of assigning θ-roles to the constituents of the phrase.

Although neither of the two scholars seems to differentiate between word classes that are or are not DC vs. θ-role assigners in practice they both are engaged in studying these properties on <u>verbs</u> end deverbally derived word classes such as infinitives, participles and deverbal nouns without giving any reason why they are doing so. We start with the whole lexicon and end up with a single word class and its derivations. This is a clear shortcoming of both theories, because it is not uninteresting why one can give an approximate case frame or θ-role surrounding to 'run', 'read' or 'prefer', but not to 'noodles', 'Honolulu' or 'pink'. Even Jackendoff's lexical redundancy rules, which contribute to both DC and θ-role discussions, show a remarkable preference for verbs and their derivations for exemplification (Jackendoff, 1975).

Whether the authors admit it or not, both theories focus on verbs. Fillmore analyses predicate words (usually verbs) as the center and organizer of the clause, where V with its case frame is mapped into a clause as a constructional unit. There is a rule ensuring that a DC occurs only once within a case frame. But even non-finites assign DCs, which results in constructions with double DC occurrence, e.g. in (17) there are two AGENTS:

(17)   <u>John</u> compelled <u>his son </u>to stab the usher.

Fillmore analyses this sentence as clausally complex, with separate case frames around <u>compelled</u> and to <u>stab</u> thus the occurrence of two As do not violate the case frame principle.

This explanation, if confronted with the claim that DCs are assigned by "predicate words", would require a clarification as to what exactly is regarded as a clause or as a predicate. How many clauses, predicate words and case frames are then in (18)?

(18)   John compelled his son to stab the usher's disinherited nephew and his recently adopted daughter with the murderer's stolen dagger.

If we accept the clausal complexity of (17) as an explanation for the double occurrence of AGENT, we are to consider a multiple clausal complexity in (18), arid it is rather dubious if one should analyze certain units as "clauses" or as phrases". This is not merely a matter of terminology, because one has to decide where case frame boundaries are drawn, and whether <u>clause</u> is indeed the unit within which the double occurrence of a DC is forbidden.

In Chomsky's theory, θ-roles assigned by nouns are realized grammatically as genitive attributes, (see also Platzack:42), but even he tends to give examples with typically deverbal nouns, such as <u>destruction</u>

(19)   i. the barbarians' destruction of Rome
        ii. Rome's destruction by the barbarians (1982a:104)

It is remarkable that even here we have to do with complements due to certain semantic features of the noun - features that convey the notion of an action or process. These nouns seemingly are connected to verbs via lexical redundancy rules (Jackendoff, 1975). One cannot help wondering whether an AGENT or any other θ-role would so naturally be assigned by a noun without similar relationships to verbs, like e.g. <u>grass</u> or <u>Jacksonville</u> and how these presumptive θ-roles would be included in the lexicon. Intuitively, it does not sound very convincing to speak about the AGENT, GOAL or THEME of <u>grass</u> or <u>Jacksonville</u>

It seems to me, that here again we cannot avoid the necessity of a basically semantic approach, which of course is bound to have a bearing on syntax. Chomsky appears to choose another starting point, with syntactically established "positions" some of which are assigned θ-roles by words in head-position. I feel that Fillmore offers a deeper insight in the mechanism of the inner relations and coherence of a clause, how and why some constituents become verbally explicit due to the DCs around a predicate word, and exactly why a given DC appears in a proposition. This might well depend on the interest in semantics with which Fillmore turns to these syntactically manifested phenomena.

3.2.   <u>DCs, θ-roles and their S-structure representation (The question of levels)</u>
In his earlier writings, Fillmore made an attempt to link DCs to grammatical or surface cases. He even suggested that a system of language-specific grammatical markers (prepositions or affixes) originating in the DS could be traced throughout the syntactic relations of constituents. For example he assumed that all AGENTS in DS have the prefix marker <u>by</u> which later is deleted during the transformation when the AGENT is moved to the (grammatical) subject position; whereas it is preserved when the AGENT is in a post-verbal position as in passives (1968:32).

Fillmore has given up the requirement of grammatical markers as the inherent property of deep and surface cases; instead, he has made some effort to find a system in the relationship between DCs and their surface representations (1971:42). He claims that the connection is - at least partly - governed by the saliency hierarchy (1977:76 ff). This hierarchy influences the speaker's perspective on the event, and his perspective is realized in the way he focuses on certain elements out of a possible case frame, and in the way he maps the DC elements into sentences, i.e. which item he chooses to have as subject, direct and indirect object, etc. Factors such as /+Human/, /+Change/, /+Definite/, /+Total/ tend to give a higher position in the saliency hierarchy, which results in a higher probability to get in a) subject, b) direct object, c) indirect object, d) prepositional object position. If the GOAL of a movement is /+HUMAN/ it is likely to become the direct object, while the /-Human/ element becomes prepositional object:

(20)   i.   John hit Huck with a stick - rather than
            ii.   John hit a stick against Huck.

A /+Change/ item becomes direct object; the same item if /-Change/ figures as prepositional object:

(21)   i.   I knocked on the door. /-Change/
            ii.   I knocked the door down. /+Change/

I think that the reasoning about the saliency hierarchy and its connection with humanness and change is rather vulnerable. There are other possible influencing factors with a perhaps even stronger effect on the

formation of the clause, such as the aim of the action one refers to, e.g. to describe a flower as in (22)i or to describe a woman as in (22)ii:

(22)   i.   He compared a flower to a woman.
         ii.   He compared a woman to a flower.

or the reason of describing the action, often depending on the context

(23)   i.   (Where is the beer?) I gave the beer to Billy.
                         or: I gave it to Billy.
         ii.   (Is Billy thirsty? - No,) I gave Billy the beer.
                         or: I gave him the beer.

or simply some grammatical convention, of the alternative syntactic role of <u>brother</u> in (24)i and ii:

(24)   i. I met your brother.
       ii. I met with your brother.

Similarly, it is hard to find any /+Change/ feature in (25)1 or /-Change/ in (25)ii:

(25)   i. I entered the room.
       ii. I went into the dining room.

Thus, the features /+Change/ and /+Human/ are only some of the possible factors in establishing a Saliency Hierarchy.

    Fillmore points out that besides case and saliency hierarchy, S structure is also influenced by the transformational properties of the V. Verbs are not only classified by the specification of their possible case frames, but also by transformational rules responsible for the choice of a particular NP for subject or object, or requiring certain prepositions to go with complementizers, e.g. <u>agree with somebody, insist on something</u>

    In DC theory, the semantic description of verbs should also include information about the arguments incorporated in V. This has a bearing on S structure, since some of the latent arguments can emerge onto the surface as <u>lips</u> (I) in (26), while others can never be explicit, like <u>dinner</u> (0) in (27):

(26)   He kissed me with his soft lips.
(27)   He dined a good dinner.

Arguments can be omitted if the speaker feels them unnecessary or uninteresting in the given conversation:

(28)   He was smoking (a cigarette).
(29)   He ate (his meals) in the kitchen.

The pronominal presence of an argument or its deletion often refers to different situations or different background knowledge of the listener:

(30)   i. The arrow hit.
      ii. The arrow hit it.

In (30)11, the listener is supposed to have some specified knowledge about the GOAL of the action (1969:119).

    Summarizing Fillmore's suggestions about the different levels where DCs operate, we can say that instead of a DS level he postulates a "Composition Plan" where a predicate word and a compatible case frame are operating. The predicate word assigns DCs to the surrounding NPs. Through a transformation process, restricted by principles such as the case and the saliency hierarchy and the varying necessity of the overt realization of certain arguments, the elements of the DC-frame become Subject, Object etc. In English declarative sentences, at least one of the arguments from the case frame must be explicit. Of course, this rule applies only to decontextualized sentence-models and not to sentences taken from real communicative actions, cf. "How did you get home? – <u>Walked</u>."

    Chomsky approaches the question of θ-role representation in LF and PF from a rather different aspect. First of all, as Carlson (1983) has also pointed out, the actual quality of θ-roles remains rather vague and inexplicit. As we have mentioned, the number and variety of cases remains an open question even in

Fillmore's model, but he has certainly considered and reconsidered the problem, and suggests that the relative Saliency order of the DC elements within a propositional nucleus determines to some extent what is likely to become the subject, direct vs. indirect object or the prepositional object of the clause. We have no such differentiation in Chomsky's GB theory.

We are going to try to follow how θ-roles, assigned in the Base, are attached to elements all the way up to the S level.

Chomsky claims that both categories and positions must be θ-marked in the same way at all syntactic levels. The θ-Criterion holds at D, S and at LF. It follows from this statement that if an element is assigned a θ-role by its head in DS, it keeps this role during transformations.

According to Chomsky's explanation, the existence of the same θ-roles on all grammatical levels is ensured by the <u>projection principle</u>. Representations of each syntactic level (D, 5, LF) are projected from the lexicon, in that they observe the subcategorlzation properties of lexical items.

This explanation brings up another problem. Consider (31):

(31)   John$_1$ was asked /t$_1$ to marry Bertha/.

<u>John$_1$</u> and <u>t$_1$</u> form a chain that is assigned a θ-role. But what kind of a θ-role should it be? Intuitively, one would read John as the THEME (or possibly the GOAL) of the verb <u>was asked</u> and the AGENT of <u>marry</u>. But the θ-criterion blocks the assignment of different θ-roles to a trace and its antecedent. If we presume that the subject position in (31) has no θ-role of its own, then it follows that <u>John</u> transports its AGENT-role from the trace to the subject position, which makes little sense and violates the most elementary semantic considerations.

To sum up, we can conclude that it seems difficult to keep the levels apart. We have seen previously (2.2.) that. θ-roles are actually assigned to LF-positions, and arguments (categories?) obtain their θ-roles from these LF-positions. If categories are supposed to be already θ-marked in DS, then LF-positions must already be present at this (D) level. But this contradicts Chomsky's statement, namely, that LF representations are assigned to S-structures. If this is the case, it remains unclear how one should distinguish between the various levels in connection with θ-roles.

The semantic content of the chains is an especially problematic area, which is still waiting for a proper explanation.

<u>3.3.   The Grammatical Subject</u>
The choice of grammatical subjects is but one aspect of the S-structure representation of DC or θ- elements, but the differences between the two theories are deeper here and reveal more about the two approaches than the choice of other grammatical categories.

We have already discussed Fillmore's suggestion on subject choice (3.2.). The most important notion here - when compared to Chomsky's theory - is that. the subject is one of several possible NP-complements to the verb, and the process of supplying a clause with a subject claims the same type of transformation as in case of the object or other categories. As Fillmore expresses it: "the semantic differences in the relationships between subjects and verbs are of exactly the same order and exhibit the same extent of variety as can be found for the other cases(l968:6). This claim is of special importance in DC-theory, which develops the whole process of clause construction from the idea of a predicate word and its case frame, the latter a basically semantically defined phenomenon. And since no semantically constant value is associated with the notion of 'subject', there is no way to differentiate on the compositional level (or in the DS) between the DC that is to become the subject on S-level on the one hand, and other DC elements on the other. Different DCs are associated with the subjects in (32):

(32)   i.   John (A) opened the door.
        ii.   The key (I) opened the door.
        iii.   The door (0) opened.

The choice of the subject in the transformation process, as I have already mentioned, is ruled by the saliency and case hierarchy as well as by grammatical and pragmatic considerations. If other factors influence the subject selection, as for example in passives, it must be registered on the V. As the rules of English do not allow subjectless sentences, (again, I mean decontextualized sentence models), a semantically empty <u>it</u> is always present if there is no other subject. This <u>it</u> does not exist in the DS, or, as Fillmore formulates it, on the compositional level.

The most important notion here is however that the subject emerges through a transformation process from a set of DC elements registered in the lexical entry of the predicate word.

The connection between θ-roles and the subject is based on a rather different presumption. First of all, θ-role assigners are not clause-centers, they are heads of phrases. Therefore, the V as head of the VP is able to assign θ-roles to its complements (i.e. within the VP), but cannot assign θ-role to the Subject NP, which, at least according to EST, is dominated by S and not by VP:

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          S
         / \
        /   \
      NP     VP
```
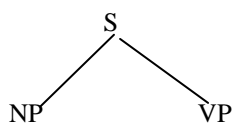
This configuration causes some difficulties, because θ-roles are somehow assigned to most subject positions. Chomsky tries to solve this contradiction by suggesting that the θ-role of a subject is determined by the VP or by S rather than by the verbal head of the VP. But in this case the whole notion of θ-marking must be revised from the very beginning. Namely, if θ-roles are assigned by abstract notions as S or VP (i.e. a whole phrase instead of a single lexical entry), then they cannot be registered in the lexicon anymore. If Chomsky's suggestion is accepted, then a new theory must be developed whish re-defines θ-roles and locates their origin. It would also question the validity of the Projection Principle.

We mentioned that Fillmore thinks of special rules for "non-normal" subject selection, as e.g. in passives. Chomsky suggests another solution. As an illustration, let us see (33), where "the verb <u>believe</u> lacks a subject" (1982a : 103):

(29)   John is widely believed to be a liar.

CHOMSKY claims that <u>John</u> is the "subject of the copula".

One could criticize these assumptions at several points. First of all, (as Chomsky himself points out at other places in similar constructions), <u>believe</u> is no the verb in this sentence; <u>believed</u> here is a past participle, otherwise there would be no need of a copula. The passive verb form <u>is believed has</u> a Subject, namely <u>John</u> what it lacks is an AGENT, which is not the same thing. Semantic and grammatical categories should not be confused.

This rather disturbing ambiguity keeps occurring in Chomsky's articles, using the word "subject" with some remarkable individual freedom (1982a:75, 104). One would guess that where he writes "subject", he means approximately "agent", as he uses it both as the equivalent to some special θ-role and as a grammatical category as opposed to VP and S. There should be no need to point out that something either is a θ-role, i.e. a semantically determined notion, or a phrase as a syntactic phenomenon. We can speak of the <u>agent</u> of an action even if the action itself is expressed by a noun as in <u>the barbarians destruction of Rome</u> (1982a:104), but this does not entail that an AGENT is necessarily a subject as well.

Chomsky devotes lengthy explanations on whether the subject is or is not related to S, or to VP, claiming that there is no such thing as "the subject of a verb"; so most readers should be surprised to learn that nouns, on the other hand, <u>do</u> <u>have</u> subjects (as in the example above, see Chomsky 1982a:104).

Chomsky regards this question "more peripheral than many others that we have been considering" (1982a:104), but one cannot help wondering whether the lack of a clear formulation does not have any theoretical consequences. How would greater terminological discipline affect the reasoning if it suddenly turned out that a statement regarding a syntactic category is indeed a statement regarding a lexical property or vice versa?

Even some of Chomsky's other formulations are in need of a more detailed explanation. For example, he often writes about the θ-marking of <u>subjects</u>. "Subject" thus is regarded as a position with no semantic implications. But how does one know <u>which</u> category is θ-marked if θ-assignment is semantic information about the surrounding of a head word? θ-role assignment states that certain circumstances must be explicitly mentioned, but it does not define the grammatical quality of these factors. In (34) the THEME of the action is expressed by different categories:

(34)   i. The book sells well.
         ii. I sold him a book.
         iii. I sold a book to him.

Besides, subject can hardly be considered as a <u>position</u> in case of free word order; and what is taken for subject in ergative languages? John Andersson has taken up this problem by introducing ERG as the basic case in his case grammar (see Andor, 1982).

Summarizing the relation of grammatical subjects and θ-roles, we come to the conclusion that the question of θ-assignment to subjects is not yet satisfactorily solved. Chomsky himself assumes that the whole problem may need a revision. It remains unclear how S or VP can assign θ-roles since they are not lexical entries; and if we remove the possibility of θ-assignment from the lexicon, it would affect the whole theory. The main cause for most of these difficulties may originate from the fact that Chomsky does not seem to accept the effect of semantic properties on syntactic structures.

4. SUMMARY

DC-theory and θ-role theory are attempts to explore and explain the collocation rules operating within a clause or a phrase, defining their possible constructions and relating their elements to each other. Both DCs and θ-roles are characteristics of NPs and show what type of arguments these NPs are within a given construction.

We have considered three different aspects of these theories: DC and θ-role assigners, the manifestation of DCs and θ-roles on different levels, and finally their relation to one special sentence part, namely to the grammatical subject.

We found that the main difference between the two theories is that while Fillmore considers DCs as basically semantically defined notions, Chomsky tries to restrict the θ-roles to syntax, and does not try to elaborate their semantic aspects to the same extent. This becomes even more obvious if we think of Fillmore's Case and Saliency hierarchy which array the elements of the Case frame into a semantically defined order, and which have an effect on the actual occurrence of the surface cases. Chomsky's theory about the connection between θ-roles and their S-structure representation shows less interest in the semantic properties of the arguments. Instead, it postulates an exclusively grammatical mechanism that makes lexical items and syntactic structures compatible with each other.

Although both theories have their shortcomings, I feel that there are more unanswered questions in Chomsky's approach. Fillmore's explanation offers a deeper insight into the relations of the elements of a clause, and gives a plausible theory about the cohesion that binds the lexemes together in order to build a higher linguistic unit. The reason for this difference may well be that while Fillmore takes the semantic values of the Case Frame into consideration, i.e. he extends the notions of semantics onto the syntactic level, Chomsky's semantic interest is confined to the lexicon where the inherent properties of lexical items are specified. The conclusion is that. we encounter serious problems if semantics is confined to the lexical level.

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