The Licensing of Genitives

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1. Introduction

In a theory of syntax such as GB, sentences are considered to be generated from the lexicon in that basic aspects of sentential structure are determined by lexical properties such as semantic valency. Thus in a sentence such as (1) there are two syntactic arguments because the predicate has a semantic valency of two, or, in other words, assigns two theta roles. All NPs are considered to require licensing, and the NPs in (1) are said to be licensed in the structure by virtue of receiving a theta role from the predicate.

(1) Marshall ate some pablum.

In this paper we will consider the status of genitive Noun Phrases such as those underlined in (2) with respect to licensing.

(2) a. Hilary's mountain.
   b. Hilary's sister.
   c. Hilary's destruction of the evidence.

The majority of generative studies of English genitive structures have concentrated on derived nominals such as (2c) and have developed from the observation that such nominals bear a striking resemblance to sentential counterparts in valency and syntax (cf. Chomsky, 1970). Here, we will focus on genitives with non-derived nominals such as in (2a) asking the question: How is the possessor licensed?

2. The Possessor as Thematic Argument

The possessional relation has been considered to be thematic by Anderson (1983), Chomsky (1986), Culicover (1988), Gruber (1976), and Jackendoff (1986). I would like to show that given certain reasonable assumptions about thematic relations, this cannot be the case in certain genitive structures. Instead, this possessional relation should be considered one of modification (cf. Grimshaw, 1989; Zubizarreta, 1987). Modification will be discussed in Section 2.

2.1. The Possessor as an Argument of the Head Noun

If the possessional relation is thematic, the theta role must be assigned by some element. One possibility is that it is assigned by the head noun. This would mean that such a noun would be listed in the lexicon with its optional possessorial theta role as in (3a), along the lines of lexical entries for other argument-bearing elements such as in (3b). (The parentheses show optionality.)

(3) a. MOUNTAIN: (possessor)
   b. BREAK: (agent), patient

Recent work on the lexicon by authors such as Hale and Keyser (1987), among others, has argued that arguments should not be represented by labels, but rather should be represented as variables within a lexical conceptual structure (LCS) which spells out relevant parts of the meaning of a word. Following this view, we would represent the
lexical entry of *mountain* as in (4a), parallel to verbal entries such as in (4b) (where *c* represents a cause theta role).

(4) a. MOUNTAIN: large hill...etc...(related to *x*)
   b. BREAK: *c* - (y, taut or rigid entity, develop separation in material integrity) (Hale and Keyser, 1987)

The main problem with the idea that possession is a theta role assigned by the head noun is that the relation of possession in (2a) does not meet the criteria for thematic relations which are informally assumed by many linguists. While there is no single formal definition in the literature of a theta role or argument, there appear to be two components which make up a thematic relation.

First, thematic arguments are those which cannot freely occur with any given verb, but which are selected by a specific verb. Thus a goal is not possible in (5) since the verb does not select a goal, whereas a temporal is possible, being an adverbial. In (5b), on the other hand, the goal is possible since it is selected by the verb.  

(5) a. Fred liked Tina (*to Bill) yesterday.
   b. Fred ran (to the store) yesterday.

A second component of a thematic role is that it is semantically obligatory in the sense that even if the argument is not there, it is implied by the meaning of the verb. In this way, the verb *eat* such as in (1) and (6) has a thematic patient argument since in both sentences it is implied that something was eaten.

(6) Colette has eaten.

We can thus define an element with a theta role as below.  

(7) Thematic element: An entity involved in an event or state, the participation of which is necessarily implied by the particular nature of the event or state denoted by the predicate.

A possessor such as *Hilary* in (2) is not implied by the meaning of *mountain* and is in general (with one set of exceptions to be discussed below) possible with any nominal, and hence does not qualify as a thematic element.

A secondary problem with considering the possessor/possessed relation to be thematic is that possession is an extremely vague relation, as has been noted by all who have worked with it. Since the relation between *Hilary* and *mountain* in (2a) can be one such

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1 The problem here, as McConnell-Ginet (1982) points out, is that not all adverbials are possible with all verbs, thus it appears that elements we usually consider to be adverbials are somewhat like arguments in this respect.

   (i) Annie weighs 120 pounds (*elegantly/heavily/for her mother*)
   
   We put aside these subtle problems here.

2 We include the term "particular nature" so that elements which are implied by all verbs will not be considered thematic. For example, for almost any verb it is implied that it took place somewhere in space, but such locatives are not usually considered arguments. A reverse problem is that there are elements usually considered to be arguments which are nonetheless semantically optional, as in (i), discussed by McConnell-Ginet, (1982).

   i) Joan spoke (to someone).
that Hilary owns the mountain, likes it, talks about it a lot, sees it from his living room window, has painted it, etc., it does not seem possible to define the notion of possession in the same way as is possible for roles such as agent and patient.

Given these problems in defining the relation between a possessed element and its possessor, it seems all that can be said is that there is a relation. This idea is expressed by Seiler (1983), who says that "POSESSION consists of the representation of a relationship between a substance and another substance ... [within a] biocultural domain." (p. 4).

We have argued that possessor is not a theta role assigned by the head noun in structures such as (2a), assuming the definition of theta role in (7). Another possibility, if we want to consider the genitive NP in (2a) to be a thematic argument of the head noun, is to consider the notion of thematic argument to be much more abstract than the definition in (7) allows. Following Higginbotham (1985) and Williams (1981), for example, we could consider that nouns contain an open position which must be coindexed with another element in order to be closed. It is this open position which allows nominals to act as predicates (as does an aria in (8)), as well as allowing them to enter into other relations such as nominal/determiner relations and nominal/modifier relations.

(8) I consider this an aria.

It is important to note, however that all the above relations into which a nominal enters involve the fixing of reference or identity. The open position is never referentially distinct from the reference of the nominal itself. Coindexing with this position then, is parallel to the relation between two elements coindexed across the verb be. This is a very different process from theta role assignment, which results in a situation where the relation can be essentially anything but coreference. It appears then that the open position cannot be used in a straightforward way to assign argument status to a possessor.

2.2. The Possessor as an Argument of 's

Our conclusion so far, then, is that concrete Nouns do not assign theta roles, even though they do contain an open position which allows them to enter into other relations such as determination, modification and identity. If the head noun does not assign a theta role to the possessor, we are left again with the question as to how the possessor is licensed. A possible answer is that the theta role of possessor is assigned, not by the head noun, but by the 's element. This is proposed by Anderson (1983) in order to account for the differences between derived and concrete nominals. This view would create a parallel between the predicate have and the element 's, where have is represented as in (9).

(9) a. Silas has a lot of gold coins.
   b. HAVE: x be related to y

There are many parallels between the have relation and the 's relation. For example, as seen in (10), the relation between the post-verbal and the pre-verbal NPs can be as varied as the relation between a head noun and a genitive noun. In addition, the relation seems to be specified more by the two nouns than by the verb have. (cf. Cowper, 1989; Grimshaw and Mester, 1988; Kearns, 1989; Ritter and Rosen, 1990; Wierzbicka, 1982.)

(10) a. Mitzi has this thing about Siamese cats.
    b. I have a hearing defect.
    c. John has an exam.

There are, however, problems for the view that 's assigns a possessor theta role. An initial problem is that in some cases (as in (2c)) 's would be considered a theta role assigner and in other cases (as in (2a)) it would not. be since here the theta role is assigned
by the nominal (In Anderson (1983)'s is considered to be a theta role in some cases and not in others.) There are more serious problems also. Given certain current views it is impossible in principle to consider 's a theta role assigner. In (11) we present the tree structure for nominals argued for by Fukui and Speas (1986), Fukui (1986) and Speas (1986) (cf. also Abney, 1986).

(11) a.  
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  DP
 DET NP
  
  N'
  
  N
  the mountain
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b.  
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  DP
  D'
  DET NP
  
  DP N'
  
  N
  's Hilary mountain
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In this view, 's is a functional category, similar to a determiner, and is not a lexical category. Since part of the definition of a functional category is that it does not have a semantic argument structure (i.e. does not assign theta roles), it is impossible to consider 's both a functional category and a theta assigner. An additional problem is that given the structure in (11b), the possessor is not a sister to the 's at D-structure and hence 's could not be considered a theta role assigner for the possessor.

A further problem with positing 's as the licensor of the possessor which is independent of the particular structure assigned to NP is that while we may thus have solved the problem for English, we are left with the same problem for other languages where there is no such element as 's. In Haitian Creole, for example, the possessor is a bare NP.

(12) (Gilles, 1988)
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a. foto Jann nan  
    photo Jeanne Det
    "the photo of Jeanne"

b. dra nef manman Pol yo  
    cloth new mother Paul Det-pl
    "Paul's mom's new cloth"
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Given the above then, 's is best analyzed as a definite determiner which assigns Case to the right, as do other functional categories, and which does not participate in the semantic licensing of the possessor.

3. The Possessor as a Modifier

If the possessor is not licensed by theta theory, then how is it licensed? The answer to this is to be found in the traditional term: possessional adjective which suggests that the possessor is to be seen as a modifier rather than as an argument. (This is also proposed in Zubizarreta (1987) and Grimshaw (1989)). In this section we will consider the implications of this view.

There have been several views of modification proposed recently such as those of McConnell-Ginet (1982) and Zubizarreta (1987) (cf. also Higginbotham, 1985; Travis,
1988). Let us first consider the view of Zubizarreta (1987). She proposes that modification is as below.

(13) (Zubizarreta, 1987 p. 23) Rule of Modification

A modifies B in the context:
[C ...A...B...]
iff C immediately dominates A and B, C is a projection of B, and B is not a head.
If A is an adjunct predicate which contains a variable x, then B or the head of B contains an arg-variable with lexical index i and x is assigned the value i.
If A is an adjunct argument with lexical index i, then B or the head of B contains a variable x and the value i is assigned to x.

For Zubizarreta modification, whether by a predicate or an argument, is like theta marking in that it involves a variable which receives the index of an argument. Possession for her involves the coindexing of a poss-variable at the N' level with the possessor, with the poss-relation being a general one comprising relations such as ownership and creation.

For Zubizarreta the poss-variable exists at the N' level of NPs with certain features (eg. non-eventive) so that it is a property of a phrase, not of a noun. A question raised here is: Where does the poss-variable come from? A partial answer can be found by examining McConnell-Ginet's theory of modification. She argues that modifiers are elements which supply heads with variables, which they then satisfy. Thus we could consider the Poss-variable to be assigned to the N or the N' by the possessor. The problem for us is that the possessor is itself simply a noun and does not contain the semantics of modifiers which would enable it to assign a variable. The solution is to posit that the variable arises as a result of the modificational configuration itself.

We can now provide a picture of possessive modification. While, in the case of an adjectival modifier, the variable provided to the nominal will have relevant features such as colour, size, and so on (so that the variable provided by an adjective such as white will be interpreted as a variable of colour), in the case of a nominal modifier, there is no semantics to provide the parameters of the variable. This means that the interpretation of the modification is undefined and is open to any number of possible relations, which will be fixed in the extra-grammatical component often referred to as "pragmatics". Thus while a white wall is one which is specified for colour, Hilary's wall is underspecified in the sense that the exact relation between Hilary and the wall is left open.

Our view of the licensing of possessors is thus complete. The possessor is a modifier, the presence of which creates a variable at the N' level which is then satisfied by the possessor. This so far is true for any modifier. The possessor differs from other modifiers in that it lacks a modificational semantics which would provide information as to the details of the modificational relation, hence this relation remains unspecified. It also differs in that it is not an adjective, but a noun, and therefore requires Case (assuming the Case Filter of Chomsky (1981): *NP if it has no Case). In order to get Case it must move to the Spec of DP position. The Case requirement ensures that possessors are limited to one, and that they must occur leastmost in the string of modifiers.

4. Thematic Possessors

We now turn to possession structures where there is a more tightly specified relation between the genitive NP and the N'. An example is given in (14) where the genitive NP is the agent of the event of the N'.
(14) The Roman's destruction of the city.

"Destruction" as a nominalization, has an LCS as in (15) (where the semantic details are left out).

(15) destruction: ...x...y...

Thus, the genitive in (14) could be viewed as being licensed by theta theory just as the corresponding element would be in a sentence with the verb "destroy". The problem with this view is that arguments in a nominal (eg. 16a,c) are not obligatory, unlike those in the corresponding sentence (eg. 16b,d).

(16) a. (the) destruction of cities  
   b. *destroyed the cities.  
   c. the execution was filmed.  
   d. *executed.

This fact has led Grimshaw (1989), following Zubizarreta (1987), to argue that the relation between the genitive and the N is not thematic, but rather is an adjunct argument relation. An adjunct argument is an element which is not assigned a thematic role, but which is nonetheless coindexed with an argument position of a predicate by the rule of modification. This explains why the argument is not obligatory. The problem with this view is that it should then allow for non-coindexing of the possessor with the argument position, since nothing forces this coindexing as theta role assignment would do. In fact, if the genitive is there, it must be coindexed with the argument position of the nominal. Thus (14) cannot mean that the Romans own, like, discuss often, or etc. the destruction, but only that they were the agents of the destruction.

Zubizarreta (1987) also notes that a genitive subject such as that in the Romans' destruction of the city must be coindexed with the argument position of the head. She disallows the non-thematic modificational relation between a genitive Romans' and the N destruction of the city by stipulating that only non-evetive N's may appear with possessive variables. This rules out any purely modificational relation between a genitive and an eventive nominal. Grimshaw also adopts this view. This restriction, however seems rather stipulative and it is worth pursuing an alternative approach, especially since the relation between destruction and its genitive meets all the requirements for thematicity outlined above. We thus propose that there is another explanation for why the argument positions (and hence the arguments) are not obligatory in a nominal, putting aside, however, what this explanation might be. It is desirable to consider the arguments of a nominal to be thematic rather than to be adjunct arguments in order to leave room to account for another class of genitives which do meet all the characteristic requirements of adjunct arguments. Consider (17).

(17) Gordon's sister

This phrase may or may not denote a sibling relation between Gordon and some female person. The noun sister has an LCS which contains a variable, since it is an inherently relational noun.

(18) sister ...y...

Now in (17), the possessor is related to the noun by modification, and hence can bear any relation to the head, as discussed in the previous section. One of the possibilities is that the genitive is coindexed with the variable in the LCS of the head. If this occurs, the relation is one of adjunct-argument, as outlined in Grimshaw (1989) for other cases. Another possibility however, is that it is not so coindexed and then any relation is possible, as with other possessional modifiers. The adjunct-argument reading is preferred but not
obligatory (unlike the agent reading for Romans in (14)). Thus it is possible that every member of a group (including Gordon) has been assigned one of a group of sisters to show around the city. This reading is freely available, as are many others where the possessor has no biological relation with the head. In my view, this means that the relation is not thematic and further, that it is best characterized as one of adjunct-argument. We reserve this relation for such examples and consider that agents of nominals are thematic, putting aside here the problem of why subjects/agents of nominals are optional. This allows us three categories of genitives: those which are modificational, those which are thematic, and those which are both, i.e. adjunct arguments. This is in accord with the data, since we find genitives which bear no thematic relation to the head noun (2a), those which bear an obligatory thematic relation to the head noun (2c), and those which bear an optional thematic relation with the head noun (2b).

5. Conclusion

We have attempted here to clarify the nature of the relation between the possessor and the possessed in an English genitive. It has been argued that such a relation cannot be thematic, regardless of whether the head or the genitive marker is considered to be the theta role assigner. A view has been outlined of both possession and of modification which allows the possessor to be interpreted as a pure modifier. In the final section other cases of genitives were considered where the possessive item is either obligatorily (if present) or optionally coindexed with an LCS variable. The domain of the notion adjunct argument was modified to allow for the various relations a genitive may have to a head noun.

References


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