SOME REMARKS ON GENITIVAL RELATIONS IN ENGLISH

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In the transformational interpretation of English there have been two ways available to analyse phrases like

(1) the boy's poem

(2) the boy's toy

Construction (1) might be traced back to the expansion rule of the phrase-structure. This rule introduces *Gen* as one of the symbols for determiners, e.g.

$$\text{Det} \rightarrow \begin{Bmatrix} \text{Art} \\ \text{Dem} \\ \text{Gen} \end{Bmatrix}$$

where *Gen* stands for *my*, *your*, etc. as well as for $\text{Nom} + \text{Z}_3$ (Thomas 1965 : 80), i.e. for the genitive form of any nominal. According to this interpretation it is claimed that genitival relations occur in deep structure. This approach entails the presence of some recursive element for a noun in order to yield the correct surface structure of (1)[1].

On the other hand, the phrase (2) might be derived transformationally by the process of nominalization. A sentence with *have* as a main verb is suggested as a source

The boy has a toy → the boy's toy (Thomas 1965 : 199).

This interpretation claims that the genitive is introduced into the grammar by embedding a nominalized transform of a sentence. Thus genitival relations underlying any surface structure of phrases like (2) do not occur in any explicit form in deep structure.

Neither of these solutions escapes criticism; dissatisfaction with either treatment has been repeatedly expressed and the need of a thorough analysis constantly emphasized (Lees 1960, Thomas 1965, Fillmore 1968). In this paper evidence is offered to show that genitival relations occur in deep structure and that the manifestation of these relations in the surface structure

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[1] It looks something like: $\text{Nom} \rightarrow \text{Det} + \text{N} + \text{No}$

$\text{Det} \rightarrow \text{Gen}$ (among others)

and *Gen* is rewritten as $\text{Nom} + \text{Z}_3$.

involves the process of embedding. In this way it seems that a kind of synthesis of the two different interpretations given above is possible. There is a variety of linguistic and extra linguistic evidence that genitival relations are of basic character.

First, it may be observed that there are certain verbs and adjectives which require a complement in the genitive, which is attested in highly inflected languages like Old English, e.g.

(3) nēosian hēan hūses   (cf. Polish "szukać wysokiego domu")
— Modern English "to seek out a high house"

(4) earfeþa gemyndig   (cf. Polish "pamiętny nieszczęść")
— Modern English "mindful of miseries"

If the genitive is postulated for deep structure, phrases like (3) and (4) can be easily generated; otherwise they would have to be derived from some other basic sentences, postulating some arbitrary sources which must undergo a series of transformations to account for their genitive forms.

The second piece of evidence for the existence of genitival relations in deep structure comes from ambiguous phrases like

(5) the teacher's book

which may be understood as "the teacher has a book", "the book is for the teacher to use", "the book that the teacher wrote". Since any ambiguous structure entails the existence of different deep structures one would also expect different structures to make the phrase (5) ambiguous.

Third, there are phrases like

(6) God's will

(7) the will of God

which are synonymous. If these phrases were derived from the sentence with *have*

God has the will

we would expect other sentences of this type to yield also synonymous transforms, e.g.

The women have shoes → the women's shoes
the shoes of the women

Both phrases are correct English but they might exhibit some difference in their meanings.

Fourth, structurally identical (in surface structure) constructions like

(8) Eric's dictionary

(9) Webster's dictionary

do not originate from the same source. One may easily agree with Jacobs and Rosenbaum (1968 : 231) that the phrase (8) can be accounted for by such transformational processes:

Eric has a dictionary—the dictionary which Eric has—Eric's dictionary

It would be, however, strange to postulate the same operations for (9), although

Webster is given the same feature specification as *Eric* [+N, —common, +sing]. *Webster's dictionary* is not understood as "the dictionary which Webster has", but as "the dictionary which was written by Webster".

It is very obvious that the genitive is the most complex of all grammatical cases and least clear as far as its relations are concerned. The term "case" is used here in the sense proposed by Fillmore (1968 : 58), i.e. "to identify the underlying syntactic-semantic relationship, and the term "case form" to mean the expression of a case relationship in a particular language—whether through affixation, suppletion, the use of clitic particle, or constraints on word order". Thus in English the genitive, no matter whether it is inflectional (with the morpheme {-s}, i.e. N+s) or periphrastic (i.e. *of* +N), expresses some unique syntactic-semantic relationship characteristic of the genitive only.

A crude approximation to the solution of the problem is to observe that the genitive performs the function of modifying a noun, or an adjective; in the case of verbs it functions as a complement. There is nothing new in this statement and relations of this sort have been previously discussed. This trivial remark is not interesting in itself but it corroborates the assumption that the two elements which stand in genitival relationship may be traced back to a relative clause of the form:

X that is modified by Y

or

X that has the property Q, this property Q being expressed by a noun.

I have not been able to determine any more precise and explicit formulation of the relative clause that participates in the process of generating the genitive, and I have thought it unwise to suggest a sentence with *have* as the only source of the construction in question.

To ascribe the modifying function of the genitive does not automatically disambiguate the structure if there are involved more meanings than one, as for instance in the example (5). The interpretation of such and similar structures has been of great concern to philosophers but neither the philosophical theory of reference nor the theory of descriptions offers a satisfactory solution[2]. According to the former the words "the teacher's book" can be used to refer to one object and sometimes to another, on the basis of non-linguistic clues in the context in which these words are used. According to the latter the description has the form "(1x)... x...", and is interpreted as "the one individual x such that ...x...", in other words it is again contextually defined (Carnap 1964 : 32). Although none of the solutions serves our purpose to show that the genitival relations occur in deep structure the relative attribute of the respective object has been explicitly stated. Given the relative at-

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[2] For the critical discussion on these two theories see Linsky (1967).

clause, however vaguely and inaccurately formulated, the modifying function of the genitive would be accounted for.

The relative clause is of interest only in so far as it leads to the formulation of deeper rules that show some underlying principle of a general character, a principle which is latent in most genitival constructions. Consider now the relative clause itself. It has been given the form:

X that has the property Q.

This property relationship can be managed by adding to the grammar another way of rewriting NP, namely

$$NP \rightarrow N\ (S)\ [Qn]$$

which reads: any noun can be optionally followed by a relative clause which ascribes some property attribution to a noun. If for Q an adjective is chosen the result is:

$$N \qquad - \text{Adjective} \quad \rightarrow \text{Adjective} \qquad - \quad N$$
(the book -- interesting → the interesting — book)

The choice of N for Q results in a different structure, namely the genitive:

$$N \quad - \quad N \quad \rightarrow \quad N - of - N$$
(the book—interest → the book of interest)

The preposition *of* is actually the realization of the underlying genitival relations, or according to Fillmore (1968 : 60) of the underlying element K (for Kasus). Such an interpretation is possible only within the frames of the case grammar where the relations represented by case include such concepts as Agentive, Instrumental, Objective, etc. What is interesting about Fillmore's theory of case is the fact, that the relations indicated by the Genitive are *not* included among the basic concepts. Some of its functions are successfully dealt with by means of D (Dative) which "is the case of the animate being affected by the state or action identified by the verb" (Fillmore 1968 : 46). In this way the relation of alienable and inalienable possession is accounted for, e.g.

    books to John → to John books → John's books

    secretary to the president → the president's secretary

Returning now to the example "the book of interest", let us consider some more phrases with inanimate objects:

    (10) the head of the statue

    (11) the disease of pneumonia

    (12) the City of London

    (13) the City of Rome

Application of Fillmore's rules to the underlying representations of (10)–(13) is blocked since the nouns are specified by [—Animate]. As no other concept suggested by Fillmore could account for examples of this sort I am assuming that the Genitive is also needed for the case grammar and that it is the case of the object or being (i.e. inanimate or animate) generically involved in the

action or state identified by the verb. The characterization of G (Genitive) comprises a notion, perhaps as universal as the other case notions, showing source, origin, descent or any type of concepts which identify certain generic types of judgment, "generic" being understood as referring to a group or class, inclusive not specific, with relation to the member of this group or class. To represent this according to set theory one can say that $N_1 \subset N_2$ (N_1 is properly included in N_2). If this conceptual framework for the genitive is correct one could easily account for (10)–(13) but not

    (10a) *the statue of the head

    (11a) *pneumonia of the disease

    (12a) *London of the City

    (13a) *Rome of the City

This characteristic of the Genitive is most clearly seen in the Genitive partitive, e.g.

    (14) one of the books

and also (12); in a very general sense it underlies other types of genitive as well.

Utilizing the concept of the genitive postulated for deep structure one can explain fairly adequately its surface manifestations. Let us now reconsider the examples given at the beginning of this paper.

The first group are phrases in which verbs or adjectives[3] require a genitive complement. The case frames for such verbs will include among others, the case feature G. Thus *nēosian* and *gemyndig* (3) and (4) will be inserted into the frame $+[\_A+G]$, while ModE *think* will be characterized by $+[\_A\ (G)]$, with G being optional, e.g.

    the boy thinks

    the boy thinks of the book

The case frames with G are clearer for Old English than for Modern English, but I believe that the same relation occurs in ModE "take care of ", "take heed of", as in OE *hēdan* (e.g. Wē hēdaþ þara crumena þæs hlāfes — Modern English "We take heed of the crumbs of bread"). The inclusion of the generic concept among other cases allows the grammarian to solve this problem automatically.

The next group, examples (5)–(9), comprises the phrases in which two nouns occur, one modified by the other, the modification being of the generic type. A variety of problems arises when interpreting (5)–(9); this is strictly connected with the feature specification of the noun which assumes the function of the genitive. Notice that all of them have the feature [+Animate]. Let us for a moment postpone these examples till later and let us consider the examples (10)–(13) in the interpretation of which no difficulty is en-

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[3] Fillmore, following other transformationalists, treats the Adjective as belonging to a subset of verbs.

countered. The nouns in question are specified by [−Animate]. In these examples the genitive (of+N), first, modifies another noun, and, second, shows the generic relation with respect to what is modified. In the generation of such structures there is a two-step procedure: the embedding of a relative clause ("N that has the property Q"), and still deeper the operation on the genitive case. This is illustrated by the example (10) "the head of the statue":
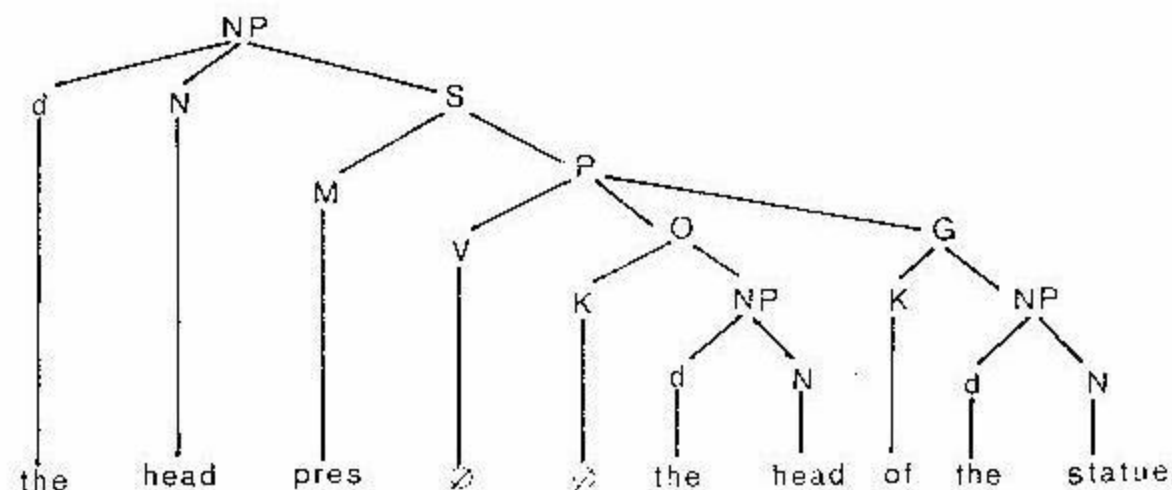
In this representation I am following Fillmore: *K* stands for Kasus, *O* for Objective concept, the semantically most neutral case, under which complex sentences (that involve recursion through the category Sentence) are generated. When G is involved under the circumstances just mentioned the empty verb is never filled, which means that G neither requires nor selects a verb being a relational concept by itself.

The genitive concept whose exponent is characterized by [−Animate] is expressed by means of *of*, more seldom by means of {-s}. When the inflectional genitive alternates with *of* no ambiguity is involved, e.g.

(15) for economy's sake—for the sake of economy
(16) an hour's time—the time of an hour⁴
(17) at death's door—at the door of death

I do not doubt that some phrases with inflected genitive have a higher frequency than the corresponding periphrastic ones but they do not constitute counter-examples to the principle which underlies genitival constructions. What are the constraints on the *of*+N to be converted to its inflectional counterpart (i.e. N+{-s}) is not clear at the moment, but it seems that the answer can be looked for in the historical account of particular items.

The other group, in which the noun is characterized by [+Animate] is much more complex than the one just discussed, because it involves ambiguity. Ignoring the embedding of a relative clause which also participates

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⁴ The phrase "the time of an hour" is not very common, but it is not impossible to find a context where this is well formed.

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in the generation of a genitival phrase, let us consider the case relationship in deep structure. In accordance with the conceptual characterization of D (Dative) and G (Genitive) the example (5) can be represented in the deepest level as
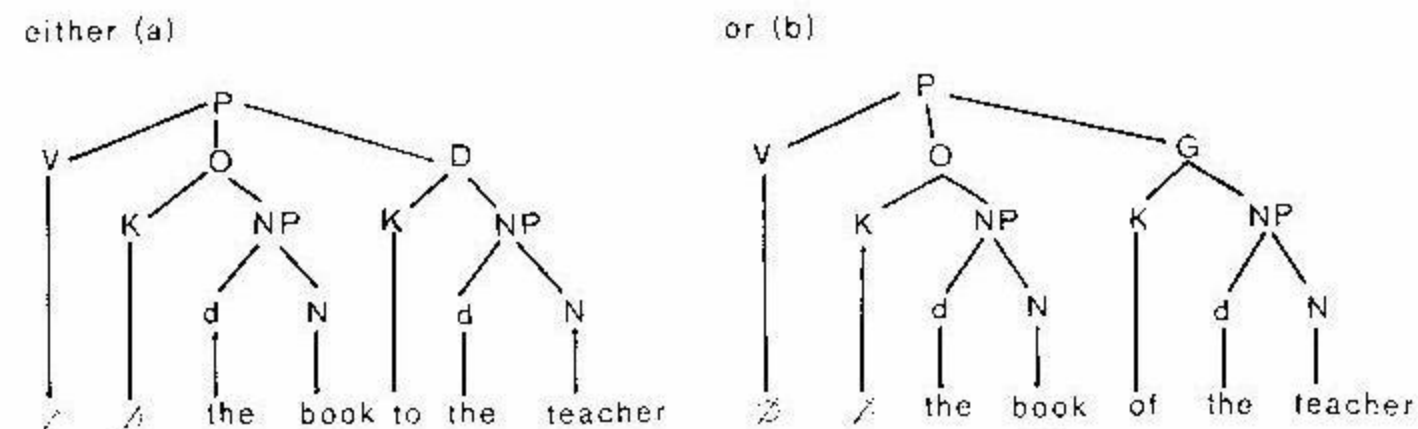
The option of the choice between D and G accounts for the surface ambiguity; if (a) is selected (5) is interpreted as possessive ("the teacher has a book"), if (b) is selected (5) is interpreted as genitive proper ("the teacher wrote the book"). The transformation which converts both (a) and (b) into "the teacher's book" is responsible for the neutralization of different case signals in the surface representation⁵. The third sense of (5), i.e. "the book is for the teacher to use" can be perhaps best approached by the process of nominalization in the terms of Lees' (1960 : 160) explanation of compounding. The sequence of lines in the derivation would then be something like:

The book is for N [+Animate] ⎫
                                ⎬ → The book is for the teacher to use
The teacher used the book   ⎭

→ The book that is for the teacher to use → the teacher's book, which can be understood rather as a nominal compound than as the genitive. Here again the case frame will have to be involved at the deepest layer but it seems that this process is different from the processes which take part in the derivation of the other two interpretations. In this way all three meanings have been given three different representations in deep structure.

The synonymous examples (6) and (7) though differently rendered on the surface are traced back to one representation only, namely the genitive which can, but need not, be transformed to the inflectional form (*of God* → *God's*). On the other hand, the identical structure of (8) and (9) is given two different representations:

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⁵ Such a process is not unusual; recall two different deep structures on which different transformations operate yielding identical surface structures, e.g.
Running machines can be fascinating.

Eric's dictionary goes back to D
while
   Webster's dictionary goes back to G.

There is a difficulty, however. If these rules apply in the way presented there would be the following possibilities:

[+Animate] — Dative concept represented in surface by *to*, {-s}
         — Genitive concept represented in surface by *of*, {-s}
[−Animate] — Genitive concept represented in surface by *of*, occasionally by {-s}

There is no rule applicable to the Dative converting it to *of*+N, which is conceptually and historically justified, since the Dative and the Genitive are mutually exclusive insofar as their concepts have been formulated, and insofar as is attested by the historical replacement of inflectional endings by prepositions (Dative by *to*, Genitive by *of*, originally meaning *from*). For this reason there should not be possessives represented by *of*+N, e.g. "the book of the teacher" understood as "the book that the teacher has". This is, however, incorrect because there are a great number of examples which contradict the above statement (e.g. the father of John, the cat of the boy, the picture of the painter, etc.). It seems hardly possible to solve this difficulty within the framework that has been suggested, unless the framework is substantially revised or the problem left to research on the theory of performance [6].

To recapitulate, I assume, for the description of English genitival relations, the generic concept identified by a special grammatical case which is deeply situated in the grammar and the application of a relative clause transformation to make this latent concept manifest in surface structure. This would be a kind of synthesis, a compromise of two seemingly distinct methods of treating the English genitive. There is, however, a considerable number of unsolved problems even under the formulation of case grammar, and a great deal of research is required to make the syntactic description of case unquestionably clear.

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[6] If it were possible to establish that the performance has some effect on deep structure and further, on the semantic interpretation the problem at hand could be approached in the following way: both D (Dative) and G (Genitive) are represented by N + {-s}, and additionally, G by *of*+N which in turn takes over the function of D by analogy of identical signals. On the remarks concerning the performance see Fromkin (1968).