SOME REMARKS ON INTERROGATIVE AND RELATIVE PRONOUNS IN ENGLISH

BARBARA LEWANDOWSKA

University of Lódź

The English words used as interrogative pronouns have the same phonological shape as some relative pronouns. The problem whether one could postulate different basic forms for the two groups and regard this morphological identity as accidental, or whether the identity of the superficial forms is a consequence of their syntactic or semantic identity, has obtained different interpretations in the current transformational analysis of English. For J. Katz and P. Postal (1964: 129), "occurrences of wh are found not only in structures underlying questions but also in those underlying relative phrases", i.e., the P-markers of both interrogatives and relatives are identical and contain the same wh-element dominated by the Determiner node. For some other authors (S.-Y. Kuroda 1968: 244), both the types represent the same underlying structure, though the problem of whether or not the wh interrogative and relative words are also related substantially or semantically is still open. The others (including the UCLA group), postulate, though not explicitly, distinct underlying representations for interrogative and relatives. E. S. Klima (1964 a: 246) tries to find some formal distinguishing markers and approaches the problem in the following way: "Basing relative pronouns and adverbs on the pronominalization (incorporation of the element PRO, transformational in origin) of repeated constituents also serves to differentiate the relative pronoun which from the interrogative pronoun what ...".

The problem of the analysis of wh- words is closely related to the description of the determiner system in English. The exhaustive analysis of the entire determiner system, however, would need much more space and fall beyond the scope of the present paper. The linguistic investigation will be limited then to settling the issue by the analysis of three wh- words: what, which, and who, which are most frequently used as interrogative and relative pronouns in English. An attempt will be made here to find some formal syntactic

markers distinguishing these two uses and consequently to postulate distinct feature matrices for them.

The first thing to be investigated here is the derivational history of the relative pronoun, which will help in establishing common syntactic features of all relative pronouns. Relative pronouns, as has been extensively discussed in the transformational analyses of English, appear to be based on combining repeated pronominalized constituent with the relativization marker Wh. The majority of linguists postulate the element Wh in the terminal strings underlying both relative and interrogative constructions (N. Chomsky 1964: 69, J. Katz and P. Postal 1964). Relativization is applied only if the Noun in the matrix sentence is the same as that in the embedded sentence. If there are no co-referential nouns in the basic structure, the string is an interrogative. The marker Wh then represents the common characteristic for interrogatives and relatives, namely the preposing of wh- words. This common syntactic feature, however, will be also accounted for, even if the basic form of the relative structure does not contain the Wh-marker (cf. Terry et al. 1967). The present analysis of the relativized Noun Phrase in the relative - complex sentence assumes the following basic form of the NP's:

(1)
$$\operatorname{Det}_1 \operatorname{N}_1 \quad [\operatorname{Det}_2 \operatorname{N}_2] \\ \begin{bmatrix} -Def \\ +Spec \\ -Wh \end{bmatrix}$$

under the condition of co-referentiality of N₁ and N₂, e.g.:

(2) The boy who is coming here is a friend of mine with the underlying form:

(3) the boy (some boy is coming here) is a friend of mine
$$\operatorname{Det_1} N_1$$
 [$\operatorname{Det_2} N_2 \times] \times \begin{bmatrix} -Def \\ +Spec \\ -Wh \end{bmatrix}$ boy in $N_1 = boy$ in N_2

[Specific] (Ch. Fillmore 1966) is a feature which distinguishes the SOME's which are converted into any in negative and interrogative sentences, [-Spec], from those that are not, [+Spec], e.g.,

- (4) Have you seen any boy here? [-Spec] SOME vs.
- (5) Have you seen some boy here? [+Spec] SOME

It is claimed that the some with the feature specification [-Def, +Spec]appears in the basic representation of the determiner preceding the pivotal noun¹ in the consituent sentence of the relative-complex construction. Moreover the above analysis assumes the feature [-Wh] as a marker of the deep structure article underlying the relative pronoun in its basic form on the grounds of the possible interpretation of (2) by means of (3). Relativization of the pivotal noun brings about the transformational addition of the feature [+Rel] to the feature matrix of its determiner, simultaneously converting [-Wh] into [+Wh]. When the relativized noun in the constituent sentence is deleted, another rule feature, [+Pro], is acquired by the determiner preceding it (Terry et al 1967). The features [+Rel, +Wh, +Pro], then are introduced transformationally into the matrices of indefinite pronouns as they are not present in their underlying deep structures. The noun in the constituent sentence of the relative-complex construction is characterized by the features [-Attach, +NDeletion, +Pro]. [Attach] is a feature accounting for the possibility of attaching Det stems marked [+Attach] to N stems assigned the same feature (P. Wolfe and B. Partee 1967). [+NDel] accounts for the fact that the repeated noun must be obligatorily deleted, the feature [+Pro] is then a natural consequence of this procedure. In order to establish these features formally let us consider the sentences containing who, and which:

- (6) The book which is on the shelf is a dictionary.
- (7) * The book which book is on the shelf is a dictionary.
- (8) I saw a girl who was eating a banana.
- (9) * I saw a girl who girl was eating a banana.

Sentences (7, 9) where the rule of Noun Deletion has not been observed, are obviously ungrammatical.

As can be seen from the argument above the basic form underlying the relative pronouns will appear as

(10)
$$\operatorname{Det}_{1} \operatorname{N}_{1} \left[\operatorname{Det}_{2} \right]$$
 N_{2} x_{1} $\operatorname{Some}_{1} \left[\begin{array}{c} +Hum \\ -Attach \\ +NDel \\ +Pro \end{array} \right] \left[\begin{array}{c} +Wh \\ +Rel \end{array} \right]$ $\operatorname{N}_{1} = \operatorname{N}_{2}$

which undergoes the following change in the process of relativization:

¹ The term pivotal noun used in this paper was proposed by Kuroda (1968: 247) and denotes the noun which appears both in the matrix and constituent sentences of the relative-complex construction. He calls a sentence relative-complex if it contains a relative clause.

(11) Det,
$$N_1$$
 [Det₂ x] x
$$\begin{bmatrix}
-Def \\
+Spec \\
\pm Hum \\
+Wh \\
+Rel \\
+Pro
\end{bmatrix}$$

The matrix of Det₂ with the feature [+Hum] will yield who, while with [-Hum]will generate the pronoun which.

To account for particular interrogative words such as what, who, which, it is assumed that certain constituents of the sentence may be incorporated into the Wh-marker (Klima 1964 b: 252-3). It is generally accepted that the interrogative pronouns are analysed into the element Wh, the definite or indefinite determiner, and a nominal item as follows:

(12)
$$Wh + some + thing \Rightarrow what$$
 $[-Def]$

(13)
$$Wh + some + one \Rightarrow who$$

$$[-Def]$$

(13)
$$Wh + some + one \Rightarrow who$$
 $[-Def]$
(14) $Wh + the + \begin{cases} thing \\ -Def \end{cases} \Rightarrow which$
 $[+Def]$

The definite-indefinite distinction of wh- words was first postulated by Katz and Postal (1964). They claim that what and who (as well as where and when) are indefinite, as opposed to which thing, and which one, which are definite. The basic form generating what from the marker Wh and the indefinite something has been substantiated and incorporated into the transformational analysis of the English syntax. According to some authors, however, who, (also where and when), does not seem to bear this dichotomy at all (A. Koutsoudas 1967) or appear to be ambiguous (Kuroda 1968: 251), derived either from the indefinite Wh + someone, or definite Wh + the one, on the grounds that e. g. the sentence in Kuroda (op. cit.: 252):

(15) You may see Chomsky or Sartre

may be followed by both:

(16) Who do you prefer to see? or

(17) Which one do you prefer to see?

Hence the distinction between interrogative determiners which and what may be regarded as one of [+Def] - [-Def], while who, following Kuroda, is ambiguous and as such may be generated either from (13), or from (18)

(18)
$$Wh + the + one \Rightarrow who$$
 $[+Def]$

in which form it is synonymous with which from (14). Recapitulating, we have arrived at the conclusion that the interrogative pronoun which is derived from [+Def] determiner, as opposed to the relative which, generated from the [-Def, +Spec,] article. While the relative which refers only to non-human Nouns, the interrogative one may be either [+Hum] one or [-Hum] thing. The interrogative what is assigned [-Def] feature, being in contrast to [+Def] interrogative which. The relative pronoun who contains the features [-Def, +Spec] in its deep structure, as opposed to [-Def] and [-Spec] (i.e. converting into any) ones, or [+Def], characteristic for the interrogative who.

The next step in our procedure will be the examination of interrogative pronouns in respect to [Attach], [N Deletion], and [Pro] features. In order to do that, the following examples will be considered:

- (19) What are you asking for?
- (20) What thing are you asking for?
- (21) Which book is yours?
- (22) Which is yours?
- (23) Who are you?
- (24) * Who man are you?

The mechanical distribution of the examined syntactic features of the interrogative words in the above questions, suggests some obvious implication of contrast with the same set of features in the relative pronouns. To account for this fact the following basic forms may be postulated for the particular interrogative pronouns:

(25)
$$Wh + Det + N \Rightarrow what$$

$$\begin{bmatrix} -Def \\ +Attach \\ -N Del \end{bmatrix} \begin{bmatrix} +Attach \\ -Pro \end{bmatrix}$$
some thing

(26) Wh + Det + N
$$\Rightarrow$$
 what thing
$$\begin{bmatrix} -Def \\ -Attach \\ -N Del \end{bmatrix} = \begin{bmatrix} -Attach \\ -Pro \end{bmatrix}$$
some thing

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$$(28) Wh + Det + N \Rightarrow which$$

$$\begin{bmatrix} +Def \\ -Attach \\ +N Del \end{bmatrix} \begin{bmatrix} \pm Hum \\ -Attach \\ +Pro \end{bmatrix}$$

$$the \begin{cases} one \\ thing \end{cases}$$

$$(29) Wh + Det + N \Rightarrow who$$

$$\begin{bmatrix} \pm Def \\ -Spec \\ +Attach \\ -N Del \end{bmatrix} \begin{bmatrix} +Hum \\ +Attach \\ -Pro \end{bmatrix}$$

$$\begin{cases} some \\ the \end{cases}$$

$$one$$

The nominal node underlying which in the interrogative function may appear as [+Pro] or [-Pro], i.e., the transformational rule of Noun Node Deletion may be applied (ex. 22) or not (ex. 21), which is complemented by $[\pm N\ Del]$ feature in the preceding Determiner, the value of the features being chosen before the insertion of this item into the deep structure of a question. The relative which is assigned the feature [+Pro], as the Noun following the relative pronoun must be always deleted to block, for instance, ungrammatical (7) and (9). Wh followed by the indefinite determiner which neither can be attached to a nominal node nor can delete it, yields the attributive what N, but when followed by the $[+Attach, -N\ Del]$ noun, the resultant string underlies the substantive what. If the nominal item bears [+Hum] specification, the morphophonemic rules convert the string into the interrogative who. The interrogative what and who (as opposed to the relative who as well as both relative and interrogative which), cannot undergo the Noun Node Deletion in order not to generate ungrammatical:

(30) * What of those books would you like?

vs. grammatical:

(31) Which of those books would you like? generated as a reduced variant of:

(32) Which book(s) of those books would you like?

One more remark will be added concerning the status of the so-called interrogative adverbs. The analysis of when, where, how, and why, assumes (Katz and Postal: 1964) their deep structure to be based upon the sequences: at + what + time, at + what + place, in + what + way, and for + what + reason, respectively. Since, however, Kuroda (1968) convincingly argues that, similarly to who, the wh — adverbs are also ambiguous as to their definitness, the parallel forms would be respectively: at + which + time, at + which + place, in + which + way, and for + which + reason. The syntactic feature

of attachment also seems to be valid here, in generating either the full forms:

(33) At what place shall I see you?

(34) At which place shall I see you?

or the ambiguous form with the single-word interrogative pronoun:

(35) Where shall I see you?

Hence it may be supposed that what or which attached to place and preceded by a preposition is converted into either at what place, at which place, when place is [-Attach], or into where if place has the feature marking [+Attach]. At what time and at which time underlie at what time and at which time respectively, for [-Attach] time, and when, for [+Attach] one. In what way and in which way give in what way and in which way, or else how, and for what reason and for which reason yield either for what reason or for which reason if [-Attach], and why if [+Attach].

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