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## The Accessibility Hierarchy in Relativisation: The Case of Eighteenth- and Twentieth-Century Written English Narrative<sup>1</sup>

### Abstract

This article aims to test Keenan and Comrie's (1977) Accessibility Hierarchy, together with Fox's (1987) Absolutive Hypothesis, on the basis of eighteenth- and twentieth-century written English narrative data. While the patterns of relativisation differ very little across the two centuries, relativisation on intransitive subject (S-RCs) and on direct object (DO-RCs) occurs more frequently than relativisation on transitive subject (A-RCs) and on oblique (OBL-RCs). Moreover, OBL-RCs outnumber A-RCs. On the other hand, relativisation on genitive (GEN-RCs) occurs very infrequently and relativisation on indirect object (IO-RCs) is unattested. It is suggested that the high frequency of S-RCs and OBL-RCs falls out from written narrative requiring a considerable amount of description in order to indicate the states of people or other entities, or to set the scene. The high frequency of DO-RCs follows from Fox's (1987) suggestion that one of the main functions of RCs is to anchor the head NP in discourse; the other NP in a DO-RC, i.e. the transitive subject NP, tends to be pronominal, and, therefore, a good anchor. The infrequently occurring RCs, i.e. A-, GEN-, and IO-RCs, tend to be formed on grammatical relations that typically appear in pronominal form. In these RCs, therefore, the functions of RCs, whether to distinguish, describe, or anchor, become largely irrelevant. Thus, accessibility in relativisation is not so much motivated by a hierarchy of grammatical relations as by discourse preferences or properties.

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<sup>1</sup> This is a revised version of our article entitled: "Patterns of relativisation in eighteenth- and twentieth-century written English narrative: A functional-typological perspective," included in an in-house publication (Colin Gibson and Lisa Marr (eds.) (2005), *New Windows on a Woman's World: Essays for Jocelyn Harris*, pp. 182–208, Dunedin: Department of English, University of Otago). The decision to submit it to a linguistics journal was motivated by the realisation that the original article, buried in the midst of literature articles, was not really being disseminated to those who could make use of it. The authors are grateful to two anonymous *SKY Journal of Linguistics* referees for their useful comments and suggestions. The article is better because of their input.

## 1. Introduction

Relativisation or relative clause formation—along with basic word order and case marking—occupies a very prominent place in linguistic typology. Indeed, Keenan and Comrie's (1977) research on relativisation is regarded as "one of the most influential works in the language universals literature" (Fox 1987: 856). The influence of this study is not confined to the language universals literature *per se*, but has been extended to other major areas of linguistics, including first language acquisition (e.g. Clancy, Lee and Zoh 1986), second language acquisition (e.g. Gass 1979, 1982; Eckman, Bell and Nelson 1988; Aarts and Schils 1995), and psycholinguistics (Keenan and Hawkins 1987).

The primary objective of this article is to ascertain the validity of Keenan and Comrie's (1977) constraints on relativisation in the context of written English narrative across two centuries. There are at least two reasons why it is important to extend Keenan and Comrie's work to written narrative from different periods of time. First, it is interesting to find out whether Keenan and Comrie's constraints, formulated on the basis of elicited data, will also be attested in written narrative, especially in such a highly codified language as English. Second, if the constraints on relativisation are indeed universal as they are claimed to be, the expectation is that they will hold, irrespective of which period of the history of English (or of any language, for that matter) data is drawn from. Should, however, this expectation fail to be borne out by the data, an interesting question will arise as to why. For example, it will need to be determined what other factors or exigencies may have a bearing upon the way relative clauses are formed in one and the same language at different times in history.

On the basis of eighteenth- and twentieth-century written English narrative data, the present article aims to test not only Keenan and Comrie's constraints on relativisation but also Fox's (1987) Absolute Hypothesis, which poses a challenge to the "subject primacy" embodied in Keenan and Comrie's work. The results of the eighteenth- and twentieth-century text counts reveal that, while the patterns of relativisation differ very little across the two centuries, relativisation on intransitive subject and on direct object occurs more frequently than relativisation on transitive subject. Moreover, relativisation on oblique outnumbers that on transitive subject. Relativisation on genitive and on indirect object, on the other hand, occurs very infrequently and is unattested, respectively. It will be suggested that the high frequency of relativisation on intransitive subject and oblique falls out from written narrative requiring a considerable amount of

description in order to indicate the states of people or other entities, or to set the scene. The high frequency of relativisation on direct object, as opposed to the low frequency of relativisation on transitive subject, follows from Fox's (1987) suggestion that one of the main functions of relative clauses is to anchor the head NP in discourse; the other NP in the former type of relativisation, i.e. the transitive subject NP, tends to be pronominal, and, therefore, a good anchor, whereas the other NP in the latter type, i.e. the direct object NP, tends to be a full NP, and, therefore, not a good anchor. It will also be demonstrated that the infrequently occurring relativisation types (i.e. on transitive subject, genitive and indirect object), tend to be formed on grammatical relations that typically appear in pronominal form. In these relative clause types, the functions of relativisation, whether to distinguish, describe, or anchor, become largely irrelevant. Thus, accessibility in relativisation does not seem to be so much motivated by a hierarchy of grammatical relations as by discourse preferences or properties.

The rest of this article is organised as follows. In section 2, Keenan and Comrie's Accessibility Hierarchy, together with Fox's Absolutive Hypothesis, is explained as a theoretical prelude to the main investigation. Section 3 discusses the objectives of the article. Section 4 describes how texts were sampled. Also discussed there is what does or does not count as a relative clause in the context of the present study. Section 5 provides the results and some general observations, especially in comparison with the findings of Keenan and Comrie (1977), Keenan (1975), and Fox (1987). The conclusions to be drawn from the study are provided in section 6.

## 2. The Accessibility Hierarchy in relativisation

The relative clause (hereafter, RC) construction, as is generally understood, consists of two components: the head noun and the restricting clause. The semantic function of the head noun is to establish a set of entities, which may be called the domain of relativisation, following Keenan and Comrie (1977: 63), whereas that of the restricting clause is to identify a subset of the domain—a one-member subset in the case of (1) below—by imposing a semantic condition on the domain of relativisation referred to by the head noun. In the following example, the head noun is *the PhD student*, and the restricting clause *whom Professor Smith supervised*.

- (1) The PhD student whom Professor Smith supervised won the prize.

In (1), the domain of relativisation is denoted by the head noun *the PhD student*. This domain of relativisation is then “narrowed down,” as it were, to the only entity that can satisfy the condition expressed by the restricting clause *whom Professor Smith supervised*. It is in this sense that the restricting clause has traditionally been understood to modify the head noun, hence the alternative label of the attributive clause.

The primary objective of Keenan and Comrie’s (1977) cross-linguistic study is to examine formal constraints on relativisation. They focus on the grammatical relation of the head noun within the restricting clause. Based on a sample of some fifty languages, Keenan and Comrie discover that, although languages vary with respect to which grammatical relations can or cannot be relativised on, they may not do so randomly. For instance, there are no languages in their sample that cannot relativise on subject, although there are languages which can relativise on subject only. In other words, all languages must have at least one relativisation strategy whereby subjects are relativised on. This relativisation strategy is referred to by Keenan and Comrie as the “primary strategy” (1977: 68). There is also a very strong tendency for relativisation strategies to apply to a continuous segment of a hierarchy of grammatical relations or the Accessibility Hierarchy (AH hereafter), as defined in (2).

- (2) SBJ > DO > IO > OBL > GEN > OCOMP

N.B.: “>” = “is more accessible to relativisation than”; SBJ = subject, DO = direct object; IO = indirect object; OBL = oblique; GEN = genitive; and OCOMP = object of comparison

The primary strategy, which must by definition apply to subject relation, may also continue to apply to “lower” relations on the AH, and, at the point where it ceases to apply, other relativisation strategies may or may not take over and apply to a continuous segment of the AH. Relativisation strategies, including the primary strategy, may “switch off” at any point on the AH, but they should, in principle, not “skip” on the AH. English is one of the rare languages which can relativise on all the grammatical relations on the AH. This language thus serves as a good example by which the AH can be illustrated with respect to relativisation. Consider

- (3) the girl who swam the Straits of Dover [*SBJ*]
- (4) the girl whom the boy loved with all his heart [*DO*]
- (5) the girl to whom the boy gave a rose [*IO*]
- (6) the girl with whom the boy danced [*OBL*]
- (7) the girl whose car the lady bought for her son [*GEN*]
- (8) the girl who the boy is taller than [*OCOMP*]

The majority of the world's languages, however, are not as generous as English in their relativising possibilities. In fact, the very nature of the AH is grounded on the observation that there are more languages which can—whether by primary or non-primary relativisation strategies—relativise on subject than languages which can also relativise on direct object, on direct object than also on indirect object, on indirect object than also on oblique, and so forth.

Keenan and Comrie (1977) suggest that the AH reflects the psychological ease of comprehension (and presumably also of production): The leftmost position on the AH or subject relation is the easiest to process and, consequently, the most accessible to relativisation; conversely, object of comparison is the most difficult to process and, consequently, the least accessible to relativisation.<sup>2</sup> In particular, subject is claimed to hold cognitive prominence unattained by the other grammatical relations on the AH. This may explain why there are languages which can relativise on subject only, while there are no languages that cannot relativise on subject.

Subject relation, however, has been questioned by Fox (1987), who demonstrates that, in natural English discourse, intransitive subject and direct object are treated preferentially in relativisation as opposed to transitive subject—hence her Absolute Hypothesis. The reason for this is that, unlike intransitive subject and direct object, transitive subject tends to carry given or old information, thereby functioning as an excellent anchor to the preceding discourse. This difference in their discourse roles is claimed to give rise ultimately to the predominance in natural discourse of the relativised noun phrase (NP) being in intransitive subject or direct object relation, as opposed to transitive subject relation, in the restricting clause. Fox's findings, therefore, call into question subject relation as a single grammatical category on the AH. More importantly, Fox challenges the cognitive prominence attributed to Keenan and Comrie's (1977) subject

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<sup>2</sup> For the same position from the perspective of the human processor, consider Hawkins (1994, 2004).

primacy, and hence the psychological status of the overall AH. Regardless of whether subject primacy has its roots in cognition or discourse, it will be interesting to find out the frequency of relative clauses in terms of the AH in data other than elicited sentences (Keenan and Comrie) or naturally occurring conversations (Fox).

### 3. The present investigation

The degree of accessibility to relativisation captured in the AH is directly reflected in the cross-linguistic variation in relativisation: More languages can relativise on higher than lower grammatical relations on the hierarchy. This quantitative interpretation of the AH can be further extended to individual languages to the effect that subject relative clauses are predicted to occur more frequently in one and the same language than direct object ones and so on down the hierarchy. This was tested by Keenan (1975), whose text counts, in a variety of written English texts, indicate that the AH can be interpreted also in terms of the frequency of relative clauses in individual languages.

The main objective of the present study is, therefore, to test the same prediction as tested in Keenan (1975), but on the basis of narrative data taken from two different periods in history. Following from the kind of analyses offered in previous studies, the present analysis is based on the results of a series of text counts. These were made on chapters drawn at random from English-language novels written in first person narrative from the eighteenth and twentieth centuries.<sup>3</sup> The counts recorded the frequency with which the features represented on the AH, namely the grammatical relations, occurred within the texts. It was intended that this would provide some indication of which grammatical relations are relativised on more frequently than others. This study will also investigate whether there is variation in the patterns of relativisation between the two time periods. In this respect, it will depart from previous studies, which deal with relativisation either across languages or within a single language at one point in time.

One additional thing to be closely examined in this study is the status of subject relation. As indicated in the previous section, the leftmost

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<sup>3</sup> The reason for choosing first, as opposed to third, person narrative was that the present study was part of a larger one, which also examined the correlation between the so-called animacy hierarchy and different grammatical relations. Third person narrative would have precluded the use of the first person pronouns (i.e. outside direct speech).

position on the AH has been called into question. Thus, for purposes of counting instances of RCs, subject relation will be split into intransitive subject and transitive subject.

#### **4. Selection of sample texts**

In order to minimise the influence of authors' personal preferences or idiosyncrasies on the text counts, the sample texts consist of chapters or extracts drawn from three novels from each of the two centuries. It is necessary that the chosen texts are as similar as possible. It would not be useful, for instance, to mix data from an informal note written to a friend with data from a formal legal document. Informal discourse tends to be less fixed in form than highly formal discourse and may allow for many of the constraints present in formal discourse to be relaxed; for example, restrictions on word order.

Aside from the disparities that may arise from variation in register, different genres may also exhibit different levels of "information pressure." According to Du Bois (1987), there is a correlation between genre and information pressure, and hence a correlation between genre and the distribution of new and given NPs among grammatical relations. For instance, in discourse with high information pressure the intransitive subject position is most likely to be filled with new referents, whereas in discourse with low information pressure the intransitive subject position may be filled with as many given referents as new ones, if not more. In other words, information pressure may affect the numbers of pronominal and nominal intransitive subjects. In view of this kind of concern, the texts selected for this study belong to a similar genre and style. The texts analysed in this study come from six novels written in first person narrative:<sup>4</sup>

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<sup>4</sup> One of the referees asks if the two text groups are really of the same genre, given "the changes in our culture over the last 200 years". We do not wish to answer this question, except to say that it would require a very different kind of study to ascertain whether that is the case or not.

- Eighteenth Century: *Moll Flanders* (Defoe 1722[1994])  
*The Vicar of Wakefield* (Goldsmith 1766[1988])  
*Gulliver's Travels* (Swift 1726[1973])
- Twentieth Century: *The Disposal of the Living* (Barnard 1985)  
*To the Hilt* (Francis 1996)  
*The Street Lawyer* (Grisham 1998)<sup>5</sup>

Regardless of any underlying motivations—such as satire or moral instruction—the chosen texts can be considered examples of the crime/adventure novel genre. Texts from that genre generally consist of straightforward narrative. This is an advantage in that such texts typically yield a high proportion of neutral constructions, particularly active declarative clauses. Moreover, narrative is a form of discourse not confined to a single genre or medium and thus has a relatively high degree of “naturalness,” compared to many other discourse forms (Brown 1983: 318; Hopper and Thompson 1980: 282), for example, legal texts or poetry. Although there will be no attempt in this study to make any claims of universality about the findings or to extend any hypotheses into more natural discourse such as conversation, it is important that the sample texts be as representative of everyday language as possible.

Six chapters were chosen from each novel. A sufficient number of extracts were provided for the relative clause count in order to ensure a sample of at least one hundred relative clauses, the size of Fox's (1987) database. The selection process involved opening each of the novels to a page at random and taking the chapter/extract in which that page was contained. However, each of the chosen chapters was examined to ensure that it be a reasonable size (no less than 1,000 words) and, if not, another chapter/extract was selected. Extracts and chapters, rather than a set number of pages, were used in this study to ensure that each sample consist of a complete “story”. It was intended that this would provide context and better enable comparisons to be made between the findings of this study and those from studies that look at parameters such as discourse preferences.

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<sup>5</sup> All the texts, with the exception of *The Street Lawyer*, which is written in American English, represent British English. This, however, has no bearing on the tendencies, observations and generalisations discussed in the article. Thus, what is true of the British English texts is also true of the American text, insofar as relativisation is concerned.



Since the intended focus of the study is written, not spoken, English, all passages of dialogue were excluded from the counts. Although it is possible that conversation in written discourse is not an entirely accurate representation of actual speech, it may also differ from the surrounding narrative in a number of respects. First, there tend to be greater numbers of second person pronouns in sections of direct speech than there are in sections of narrative. This does not come as a total surprise because the speaker is speaking to a specific addressee, rather than producing a monologue aimed at an unspecified audience. Second, there is likely to be an increase of deixis in direct speech. For example, in face-to-face dialogue, the speech act participants are usually aware of their shared surroundings and are therefore able to use other means of distinguishing or identifying different referents; for example, (9) instead of (10):

(9) The magazine is *there*.

(10) The magazine is *on the coffee table*.

Third, direct speech in the written narrative is often intended to be as representative of actual speech as possible and may contain features or properties that are not acceptable in the rest of the narrative. For instance, the speaker may unintentionally repeat elements of the clause, leave interrupted sentences unfinished, omit certain verbs or NPs, or change the typical word order to better meet the demands of discourse. Dialogue in written narrative may also include more colloquial or non-standard forms of language, as illustrated in (11) and (12).

(11) they shan't catch me a-kissing of you (Defoe, p. 25)

(12) as us watches 'im, I looks down an' sees there's blood on me 'ands  
(Barnard, p. 93)

The inclusion of such material would not be helpful, given that an effort has been made to select texts similar in style and register.

The characterisation of RCs given in section 2, which is based on Keenan and Comrie's (1977) definition of RCs, was interpreted as narrowly as possible for the purposes of the present study. What this means is that the italicised parts of the sentences in (13) will all be recognised as RCs, whereas those in (14) will not.

- (13) a. *The car which was parked in front of the house* has been towed away.  
 b. *The man handing out the tickets* checked his watch.  
 c. Donna bought *the dress she saw last Friday*.
- (14) a. Susan sat on *the chair under the window*.  
 b. Only *the good children* will be allowed to go outside.

It is possible to claim—and it has, indeed, been proposed (e.g. McCawley 1998)—that the italicised parts of (14a) and (14b) involve “reduced” RCs (cf. *the chair which is under the window* or *the children who are good*). However, these are not widely accepted as RCs, and the idea of reduced RCs itself is generally considered to be marginal or controversial (Mallinson and Blake 1981: 367). Although the exclusion of clauses such as (14) will have affected the potential numbers of RCs with heads which are intransitive subject NPs, the RCs included in this study are those whose form and acceptability is uncontroversial. Moreover, because Fox’s (1987) observation that intransitive subject is preferentially treated in relativisation as opposed to transitive subject is going to be tested in this article, any controversial instance of RC formed on an intransitive subject should be avoided where possible.

Also excluded from this study were so-called non-restrictive RCs, as exemplified in (15), because the italicised part is not used to identify a subset of the domain expressed by the head NP *all teachers*. The function of the non-restrictive relative clause is, instead, to provide incidental information about the already identified referent of the head NP.

- (15) All teachers, *who last week got a pay rise*, will now pay more tax.

Keenan and Comrie (1977) limit the RCs used in their study to those with definite head NPs. Fox (1987: 861), on the other hand, includes RCs with indefinite heads and points out correctly that there is no apparent reason why RCs with indefinite heads should be excluded. Both RCs with definite and indefinite head NPs were thus included in the present study, for the characterisation given earlier in no way suggests that the acceptability of an RC depends on the definiteness of its head NP. The RCs included in this study were then restrictive RCs with definite or indefinite head NPs and with an explicitly expressed verb inside the restricting clause.

As has already been explained, this article focuses on RCs in which the head NP has a grammatical relation in the main clause of the restricting clause. However, the sample texts also yielded a number of RCs in which the head NP had a grammatical relation in the subordinate clause of the restricting clause—three in the eighteenth-century count and six in the twentieth-century count. The majority of these were formed on direct objects, such as (16), and the remainder formed on obliques, such as (17).

(16) *many of the goods he intended to buy* were not ready (Swift, p. 128)

(17) a perplexity *that I had not indeed skill to manage myself in* (Defoe, p. 355)

The results of the count may follow the tendencies noted by Comrie (1989: 162), who states that there is “good cross-linguistic evidence for the surprising generalization that subordinate non-subjects are easier to relativize than subordinate subjects.” However, the sample texts yielded too few such RCs to enable any conclusions to be made about their accessibility to relativisation in written English narrative. Given the small number of tokens and that the AH is initially intended to apply to the grammatical relations in the “main” clause (e.g. (13)), the issue of relativisation from “subordinate” clauses (e.g. (16) or (17)) will not be dealt with any further in this study.

Another matter that will not be explored further, in the following discussion, is the absence from the text counts of RCs with object of comparison heads. Although that particular category is included on the AH, there has been some debate as to whether the inclusion is warranted. Kuno (1976: 427) suggests that, although Keenan and Comrie (1977) give English as an example of a language which can relativise on all positions on the AH, it is difficult to find perfectly grammatical examples of RCs formed on objects of comparison. In point of fact, Keenan and Comrie (1977: 74) themselves state that, although English “[does] have phrases such as ‘*the man who Mary is taller than*’ [...] some [speakers] find them uncomfortable”. Therefore it is not altogether surprising that there are no RCs formed on objects of comparison in the sample texts. (In a way, the complete absence of such RCs in the text counts can be taken to be in support of the lowest position on the AH of OCOMP.)

## 5. Results and general observations

This section will begin with the results of the counts and some general observations about the data, including a comparison of results from the eighteenth- and twentieth-century texts. The findings of this study will then be compared to claims made by Keenan and Comrie (1977), Keenan (1975), and Fox (1987) to see how closely, if at all, the patterns of relativisability in written English discourse of the eighteenth and twentieth centuries reflect the predicted patterns of relativisation.

The following labels will be used for the sake of convenience: S-RC (relativisation on intransitive subject), A-RC (relativisation on transitive subject), DO-RC (relativisation on direct object), IO-RC (relativisation on indirect object), OBL-RC (relativisation on oblique), and GEN-RC (relativisation on genitive). Note that the present study included all obliques, whereas Keenan and Comrie (1977: 66) included only those which “express arguments of the main predicate [...] rather than ones having a more adverbial function”. The inclusion of “more adverbial” as well as “argument-expressing” obliques seemed necessary in order to better understand the true function(s) of OBL-RCs. Each of these RCs is exemplified below.

- (18) a. S-RC: ... the men who belonged to the shop (Defoe, p. 295)  
 b. A-RC: ... the man who managed the estates (Francis, p. 13)  
 c. DO-RC: The man whom they pursued ... (Defoe, p. 238)  
 d. IO-RC: ... the child to whom Judith gave the apple  
 e. OBL-RC: ... the place where Castle Walk began (Barnard, p. 99)  
 f. GEN-RC: ... two volunteers whose names I never heard (Grisham, p. 107)

### 5.1 Eighteenth-century RCs

The eighteenth-century texts yielded 293 RCs, which line up in order of frequency (from most to least frequent) as follows: S-RCs, DO-RCs, OBL-RCs, A-RCs, and GEN-RCs (see Table 1). No IO-RCs were found in the sample extracts.

Although the results of the counts indicate a difference in the proportion of S-RCs and DO-RCs, they also indicate that the difference is very slight—less than 1%. This suggests that intransitive subjects and direct objects are almost equally ranked in terms of their relativisability. The combined numbers of S- and DO-RCs, which make up 64.1% of all RCs, further suggest that there is a strong preference for RCs with

intransitive subject or direct object head NPs in eighteenth-century written English narrative.

RC Type	Number	Percentage
S-RC	95	32.4
A-RC	39	13.3
DO-RC	93	31.7
IO-RC	0	0
OBL-RC	64	21.8
GEN-RC	2	0.7

**Table 1.** Frequency of Eighteenth-century RCs by Grammatical Relation of Head NP

The preference for A-RCs does not seem to be as strong as the preference for S-RCs, although in both cases the head NP is a subject. A-RCs make up only 13.3% of all eighteenth-century RCs counted, whereas the S-RCs make up 32.4%. This is despite the fact that, like the intransitive subject and direct object, the transitive subject is a core clausal argument. Indeed, in the texts used in this study, the argument status of an NP seems to have little, if any, bearing on relativisability. The oblique, for instance, is a non-core or peripheral element in the clause, but the percentage of OBL-RCs in the count is 8.5% greater than that of A-RCs.

The other grammatical relations—indirect object and genitive—are least preferred as the head of RCs. GEN-RCs are very infrequent, making up less than 1% of RCs, and the IO-RCs do not occur at all. However, whereas the low frequency of GEN-RCs is not particularly surprising—given the low rank of genitives on the AH—the absence of IO-RCs is more unexpected. Indirect objects occur in third highest position on the AH, outranking obliques and genitives but, despite this, both GEN-RCs and OBL-RCs outnumber IO-RCs in the text counts. Possible reasons for the lack of IO-RCs will be discussed later in 5.4.5.

## 5.2 Twentieth-century RCs

There were 361 RCs found in the twentieth-century texts. These occurred in order of frequency (from most to least frequent) as follows: DO-RCs, S-RCs, OBL-RCs, A-RCs, and GEN-RCs (see Table 2). Again, as in the eighteenth-century count, there were no occurrences of IO-RCs.

The results of the twentieth-century counts reveal that direct objects are the most frequently relativised grammatical relations. This differs from the eighteenth-century results, where the S-RCs outnumber the DO-RCs, statistically non-significant as it may be. The difference in the percentages of S-RCs and DO-RCs occurring in the twentieth-century texts is one of approximately 2.8%—slightly larger than the equivalent gap between the percentages of S- and DO-RCs in the eighteenth century, which was less than 1%. However, like the eighteenth-century result, the closeness of the figures for S-RCs and DO-RCs suggests that the two have a similar degree of accessibility to relativisation.

RC Type	Number	Percentage
S-RC	107	29.6
A-RC	60	16.6
DO-RC	117	32.4
IO-RC	0	0
OBL-RC	72	19.9
GEN-RC	5	1.4

**Table 2.** Frequency of Twentieth-century RCs by Grammatical Relation of Head NP

The difference in the frequency of twentieth-century A- and OBL-RCs, at 3.3%, indicates that the level of preference for transitive subjects and obliques occurring as RC heads is also about the same—although the obliques are preferred slightly more. The preference, or lack thereof, for GEN-RCs and IO-RCs is indicated by the very low frequencies of those RCs. The GEN-RCs, for example, make up only 1.4% of all RCs. They occur, however, slightly more frequently than the IO-RCs, which are absent from the twentieth-century texts, as they were from the eighteenth-century texts. It appears that IO-RCs, like RCs formed on objects of comparison, may be the least preferred choice of RC in written English. The similarity in the results of the eighteenth- and twentieth-century counts further

suggests that the reasons for the absence of IO-RCs may be applicable across time periods (again, refer to 5.4.5 for detailed discussion).

### 5.3 Comparison of eighteenth- and twentieth-century results

The results of the eighteenth- and twentieth-century text counts differ in a number of ways. Perhaps the most obvious variation is the change in the order of frequency of the S- and DO-RCs. In the eighteenth-century count, S-RCs occur more frequently than DO-RCs. In the twentieth-century count, DO-RCs occur more frequently than S-RCs. However, the difference is of no statistical significance, as the comparative percentages of S- and DO-RCs in both centuries vary by only a very small margin.

The eighteenth- and twentieth-century results also differ with respect to the size of the gap between the percentages of A-RCs and OBL-RCs. In the eighteenth-century count, OBL-RCs outnumber A-RCs by 8.5%, whereas in the twentieth-century count, OBL-RCs outnumber A-RCs by 3.3%. Reasons for the difference are not immediately apparent, although it seems to be due mostly to higher percentages of A-RCs in the twentieth-century texts—17% as opposed to 13%. If the numbers of DO-RCs were also greater in the twentieth-century count, the change may have been related to an increase in the number of RCs with transitive restricting clauses. However, the percentages of eighteenth-century and twentieth-century DO-RCs are very similar, at 31.7% and 32.4% respectively. Similarly, if the higher percentage of A-RCs were the result of a trend towards more RCs with subject heads, it would be expected that there would also be higher percentages of S-RCs in the twentieth-century texts. This is not borne out by the data, however, as twentieth-century S-RCs occur about 3% less frequently than do eighteenth-century S-RCs. In any case, the difference is of limited significance, as the relative frequencies of OBL- and A-RCs remain unchanged between the two time periods. Moreover, the gap between the two is not particularly large at under 6%.

Despite the differences in the results of the eighteenth- and twentieth-century counts, a number of general similarities have emerged. First, regardless of which is more frequent than the other, intransitive subjects and direct objects occur more frequently as RC heads than the other grammatical relations. Second, after the S-RCs and DO-RCs, the pattern of frequency of the other RCs, from most to least frequent, is as follows: OBL-RCs, A-RCs, and GEN-RCs. Third, in both centuries, there are no RCs formed on indirect objects (or objects of comparison). These

similarities suggest that the motivations behind RC formation have been more or less stable over time. Just what those motivations are, and to what extent they correlate with the claims made by Keenan and Comrie (1977) or Fox (1987), will be discussed in 5.5.

## 5.4 Preliminary suggestions

As indicated by the results of the text counts, some grammatical relations are more frequently relativised on than others. This section offers some preliminary suggestions as to the kinds of factors or exigencies that may bear upon accessibility to relativisation. It is intended that these will form a base for the main discussion and for the comparisons to be made between the findings of this study and those of Keenan and Comrie (1977), Keenan (1975), and Fox (1987).

### 5.4.1 The S-Relatives

The S-RCs are the most frequently occurring RCs in the eighteenth-century texts and the second most frequently occurring RCs in the twentieth-century texts. The majority of S-RCs—around 60% in both centuries—occur with stative verbs, particularly *be*. This suggests that S-RCs in written English narrative are used primarily to describe the states of people and other entities, in order to “set the scene” for the addressee. In other words, RCs, such as those illustrated below, enable the addressee to picture things, people, and situations that may be unfamiliar to her/him, or to locate entities and events within the discourse setting:

(19) [...] drest in cloaths *that once were laced* (Goldsmith, p. 14)

(20) a smell *that was not unpleasant* (Grisham, p. 75)

(21) a box *that stood in the kitchen* (Goldsmith, p. 126)

In general, the S-RCs found in the sample texts achieved this by providing a description in the restricting clause, either simply to characterise the head NP or to distinguish it from other potential referents. The “distinguishing” function of S-RCs tended to correlate with the definiteness of the head NP, as illustrated below:



- (22) *the fellow that had come over*, and seized upon me, told his [story]  
(Defoe, p. 296–97)
- (23) the hours we pass with happy prospects in view, are more pleasing than *those crowned with fruition* (Goldsmith, p. 50)
- (24) a brave smile that was adapted from *the one that was part of her funeral mien*  
(Barnard, p. 43)

The “distinguishing” S-RCs drawn from the texts also seem to have three main purposes. The first, illustrated in (22), is to reintroduce a previously mentioned referent—one that has been absent from the discourse for a period of time. The second, as shown in (23), is to provide a point of contrast between one NP and another. The third is to restrict a set of possible referents to a single particular member. In (24), for example, the smile referred to by the head NP, *the one*, is not just any smile, but *the one that was part of her funeral mien*.

The “characterising” function tended to occur more frequently in S-RCs with indefinite head NPs. Typically, as in the examples below, the characterisation given in the restricting clause better enables the addressee to picture the referent of the head NP:

- (25) a room *paved like the common prison* (Goldsmith, p. 105)
- (26) a light rain *that was turning to sleet* (Grisham, p. 56)
- (27) a little bundle *wrapped in a white cloth* (Defoe, p. 209)

In many cases, the characterisation need not play any part in the text, other than that of describing the head NP. In (27), for instance, the fact that the bundle is wrapped in a cloth, and that the cloth is white, is of no apparent significance, other than that the description allows the addressee to “see” what the speaker “sees”.

The prevalence of S-RCs with restricting clauses that, in some way, characterise the head NP seems in keeping with the nature of the written medium. In written discourse, unlike conversation for instance, the addressee has no recourse to ask questions, clarify details, or otherwise “actively” interact with the speaker. Therefore, the speaker may use S-RCs to give more information about actions, people, and things so as to minimise potential sources of confusion or to enable the addressee to imagine more clearly the world contained within the discourse.

#### 5.4.2 The A-RCs and DO-RCs

The functions of the A-RCs in the sample texts are varied, but there appear to be three main types. For example, there are those that characterise the head NP in a manner similar to the S-RCs, such as the RCs in (28) and (29):

(28) a mechanic *wearing overalls and grease* rounded the corner and glared at me (Grisham, p. 138)

(29) inhabited by a man *that sold goods for the weavers* (Defoe, p. 299)

The head NPs of “characterising” A-RCs, like those of “characterising” S-RCs, tend to be indefinite. Also like S-RCs, the function of A-RCs, such as those shown above, seems to be to allow the addressee to better picture people and objects existing within the body of the text.

There are also A-RCs in which the restricting clause distinguishes the head NP from other potential referents. For example, in (30), A-RCs are used to distinguish different ice-cream vans from one another, by describing the music each broadcasts:

(30) I hated the one *that played “Greensleeves”* more than the one *that played the Harry Lime Theme* (Barnard, p. 68)

Finally, there are A-RCs in which the direct object in the restricting clause is used to anchor the transitive subject head NP in the text. It is this function that Fox (1987) attributes most strongly to the A-RC. She (1987: 859) claims that the purpose of an A-RC is to link the head NP to the surrounding discourse using a “given” direct object in the RC as a bridge. This is illustrated in the following example from one of the sample texts. The A-RC in (31) enables a change of topic, using the links between a recently mentioned referent that appears as direct object in the restricting clause (*his soutane*) and the head NP (*the breeze*):

- (31) I turned and saw Father Battersby. He was standing a little behind me on the lawn, *his black soutane billowing around his ankles*" (Barnard, p. 102)

At this point, although Father Battersby was talking, was most possibly giving me words of advice or remonstrance, my attention was drawn back to Castle Walk. *The breeze that had fluttered the hem of his soutane* when we started the conversation had risen to a real wind by now, and real winds make themselves felt on Castle Walk. (Barnard, p. 106)

According to Fox (1987: 859), the "anchoring" function of A-RCs is also common to DO-RCs. In DO-RCs, however, it is the transitive subject in the restricting clause that acts as an anchor. In (33), the head NP (i.e. *a short fine-boned girl*) is anchored in the text by the transitive subject within the DO-RC (i.e. *he*), which refers to a previously mentioned referent (i.e. *a thin, smiling middle-aged man*):

- (32) *A thin, smiling middle-aged man* opened the door in welcome. His skin had the tautness of terminal illness, but his handshake was strong. Behind him stood *a short fine-boned girl* who *he* introduced as his daughter, saying she would drive through the village in the horsebox. (Francis, p. 168)

Yet despite their common function, and despite the high ranking of subjects on the AH, there were fewer A-RCs in the text than there were DO-RCs. Fox (1987: 858) suggests that the difference in the frequency of A-RCs and DO-RCs in discourse is related to the quality of the potential anchor within the restricting clause. Her findings indicate that DO-RCs are preferred over A-RCs because the transitive subject within the DO-RC tends to be pronominal and, therefore, a good anchor. The direct object in an A-RC, in contrast, tends to be a full NP and, therefore, not a good anchor.

To test whether the low frequency of A-RCs in this study correlates with the possibility of whether the direct object within the RC is a pronoun or a full NP, a count was made of the numbers of definite, pronominal and full NP "potential anchors" in both A-RCs and DO-RCs. The results indicate that both the direct objects in A-RCs and the transitive subjects in DO-RCs tend to be definite, although that tendency is stronger in the latter: 67% of eighteenth-century and 62% of twentieth-century A-RCs have definite direct objects in their restricting clauses. By contrast, 98% of eighteenth-century DO-RCs and 92% of twentieth-century DO-RCs have definite transitive subjects in their restricting clauses. The results also reveal that the transitive subjects in DO-RCs are typically, not only definite, but also pronominal (84% in the eighteenth century and 82% in the twentieth century). Among the direct objects in A-RCs, in contrast,

only 38% in the eighteenth century and 9% in the twentieth century are pronominal. The findings of this count, then, tend to agree with Fox's (1987) findings. The higher preference for DO-RCs, rather than A-RCs, seems related to the "other NP" in the restricting clause being pronominal and, therefore, better able to act as an anchor.

It is also interesting that A-RCs, like other RCs that appear infrequently in the sample texts—namely GEN- and IO-RCs—tend to be formed on grammatical relations that prefer human referents. High "animacy" correlates strongly with high topicality and, hence, with definiteness and a tendency towards pronominalisation. Human referents, which are highly "animate," tend, therefore, to be highly topical and are more likely to be definite or pronominal. Although this makes human NPs preferred anchors in transitive restricting clauses, it seems that this same quality makes them least preferred as head NPs of RCs.

### 5.4.3 The OBL-RCs

OBL-RCs make up the third highest proportion of RCs in both the eighteenth- and twentieth-century counts. It should, however, be noted that the difference in the percentages of twentieth-century A- and OBL-relatives is not large at 3.3%.

The oblique functions of the head NP vary, but the majority of OBL-RCs express something about location or time (56% in the eighteenth century and 57% in the twentieth century), for example:

(33) the Cave *where I had lodged my Provisions* (Swift, p. 130)

(34) the very moments *while I was calling* (Defoe, p. 297)

(35) the warehouse *where the eviction took place* (Grisham, p. 79)

This suggests that a common function of OBL-RCs is to set the scene. As discussed earlier, there is often a high dependency on description in written texts towards that end. Hence, the relatively high percentage of OBL-RCs is possibly related to the fact that the speaker often needs to refer back to elements of location and time so that the addressee does not lose track of where or when events are taking place. Moreover, the restricting clause following the oblique head NP often not only describes the setting, but also implies why the head NP has been included within the text. For example, in (36), the restricting clause in question follows a discussion between the speaker and another character about a cat:

- (36) We were at the sitting-room door, and she suddenly changed her tone. “Oh, Helen—I’ve just remembered that I wanted to talk to Marcus about Sophronia.” Mary’s maneuver was quite transparent: she saw that I was likely to be a lukewarm advocate, and she wanted to put her case herself. I looked over to the easy chair *where Sophronia Tibbles, a lazy and evil-minded Persian dozed oblivious, dreaming dreams of the slow dismembering of mice* (Barnard, p. 14)

At no other point in the text is the chair referred to by the RC mentioned: it is relevant and therefore included in the text, only because the cat—the previous topic of conversation—is sitting on it. Therefore, the OBL-RC may be used not only to distinguish or describe, but also to show why the entity it has identified is relevant, or why it has been mentioned in a RC that contains previous topics of discourse or those which will become topics.

The majority of OBL-RCs counted have intransitive restricting clauses (81% in the eighteenth century and 73% in the twentieth century). It is unclear whether this has any significance to the results of this study. What is interesting about the restricting clauses of the OBL-RCs is that the majority of the subjects in them are definite (94% in the eighteenth century and 82% in the twentieth century). Moreover, a large proportion in each century are pronominal (80% in the eighteenth century and 58% in the twentieth century). Based on these results and on the observations discussed above, it can be tentatively suggested that, in a way similar to DO-RCs, the subject within the restricting clause of the OBL-RCs acts as an anchor for the head NP.

#### 5.4.4 The GEN-RCs

Only 1% of RCs in both the eighteenth- and twentieth-century samples were formed on genitive NPs. This is in keeping with their low position on the AH. It is difficult to determine the function that GEN-RCs may have in written English discourse and unwise to guess, as the texts yielded only a small number of tokens on which to base any conclusions. Therefore, no definitive suggestions will be offered here.

#### 5.4.5 The IO-RCs

No IO-RCs were found in the sample texts, even though RCs formed on other lower-ranked grammatical relations, such as obliques and genitives, appear. Given that the indirect object is ranked relatively high on the AH, the absence of RCs formed on indirect objects warrants further investigation. There may be a number of possible reasons for the lack of IO-RCs. Two of the more immediately obvious ones are that indirect objects tend to occur infrequently in discourse and/or that indirect objects are typically pronominal. As already suggested, grammatical relations that tend to be pronominal are generally not as accessible to RC formation as grammatical relations that tend to be full NPs.

To test the hypothesis that the infrequency of IO-RCs is linked to the infrequency of indirect objects in discourse, the numbers of indirect objects were compared to the total number of grammatical relations within each century and clause type.<sup>6</sup> It was found that indirect objects occur very infrequently in the sample texts. In both the eighteenth- and twentieth-century texts, they make up around 2% of main clause grammatical

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<sup>6</sup> One of the referees suggests that statistics be provided on how many instances of each grammatical relation occur in the data in order to ascertain whether there is a correlation between the frequency of a given grammatical relation and that of relativisation on that grammatical relation, as has been done in the case of IO. The point is well taken, but, as will be explained below, such a correlation does not seem to be substantiated for SBJ, DO and OBL. For example, in the twentieth century data on main clauses, OBL (n = 808) occurs more frequently than DO (n = 639), but DO-RCs outnumber OBL-RCs, as has been shown. IO, on the other hand, occurs significantly less frequently than the other grammatical relations. For example, in the twentieth century data on main clauses, there are only thirty instances of IO, compared to S (n = 790), A (n = 639), DO (n = 639), OBL (n = 808), and GEN (n = 394). To put it differently, the infrequency of IO is statistically significant enough to have a bearing upon the infrequency of IO-RCs. The same, however, may not be said of the other grammatical relations and their related RCs. This is more or less true of the remaining data.

relations and around 1% of all subordinate clause grammatical relations. The “significance” of this result is most clearly demonstrated by the fact that in eighteenth-century subordinate clauses the percentage of indirect objects is 1.3%, whereas the percentage of intransitive subjects is 21%. Even the second most infrequently occurring grammatical relation, the genitive, is around 10% more frequent than the indirect object. Similar results were obtained from the eighteenth-century main clauses and the twentieth-century main and subordinate clauses. It is likely that this trend is not merely an artifact of the data source but extends, at least, to written texts other than those used in this study. Brown (1983), for instance, finds much the same infrequency of indirect objects in her study of written English third person narrative. This general infrequency appears to be linked to the “limited” function of the indirect object, which is restricted almost exclusively to that of beneficiary/recipient (e.g. Greenbaum 1997, Aarts 1997).

Given that indirect objects occur infrequently in clauses other than the relative clause, the lack of IO-RCs is, perhaps, not particularly surprising. However, it should be noted that the frequency of a grammatical relation in clauses other than RCs does not always reflect exactly how frequently it will be relativised upon. For example, obliques outnumber intransitive subjects in eighteenth-century main and subordinate clauses and in twentieth-century main clauses, but OBL-RCs occur less frequently than S-RCs. In the case of the indirect object, however, the issue of frequency is related to its restricted use, rather than simply to its comparative infrequency.

To test the hypothesis that IO-RCs occur infrequently, because indirect objects tend to be pronominal and, therefore, less likely to be relativised on, the percentages of personal pronouns and full NPs among all grammatical relations were compared. It was found that indirect objects tend to occur more frequently as human pronouns than as something else. The percentages for human pronominal indirect objects are presented in Table 3.

	Main Clause	Subordinate Clause
18th Century	88.9%	50%
20th Century	73.5%	76.9%

**Table 3.** Percentages of Human Pronominal Indirect Object

This is in contrast to the obliques and the direct objects, where human personal pronouns are not common, i.e. 6.5% for the obliques, and 16.6% for the direct objects on average. Around 70% of all transitive subjects and genitives—which also occur infrequently as RC heads—appear as personal pronouns. These results thus seem to suggest a link between tendency towards pronominalisation (or high topicality) and lower accessibility to relativisation. This relationship will be addressed more fully in 5.5, but given its potential significance to the present discussion of IO-RCs, the main points will be outlined here.

Kuno (1976: 431) claims that the more likely a grammatical relation is to be interpreted as the theme or topic of a clause, the more accessible it is to relativisation. The results of this study, however, seem to be suggesting the opposite. That is, grammatical relations with a preference for human pronouns (and hence more likely to be interpreted as topics) tend to be relativised less frequently than grammatical relations with a preference for full NPs (and hence less likely to be interpreted as topics). A possible challenge to this hypothesis, however, is that at least half of all main- and subordinate-clause intransitive subjects also appear as personal pronouns. As the results of the counts indicate, the frequency of pronominal intransitive subjects does not seem to affect the chances of the intransitive subject appearing as the head of an RC, although it should be noted that intransitive subjects, unlike transitive subjects, genitives, and indirect objects, also take high percentages of low animacy and full NP referents (Du Bois 1987).

The results of the indirect object counts, then, are somewhat inconclusive. The indications are that both general infrequency and a tendency towards pronominalisation seem to have some influence on how often indirect objects are relativised on. It is quite possible that there are a number of interacting motivations behind the absence of IO-RCs from the text counts.



## 5.5 Discussion

It is important to reiterate that this study differs from Keenan and Comrie's (1977) study in one major respect. Whereas Keenan and Comrie's observations are based on cross-linguistic variation, the observations made in this article are based on the frequency of different RCs in written texts from two periods of a single language. For example, when Keenan and Comrie claim that subjects are more relativisable than direct objects, they mean that there are more languages that can relativise on subjects than those that can relativise on direct objects. The aim of this section is, then, not to compare the findings of this study to Keenan and Comrie's study *per se*, but rather to determine the extent to which the AH is reflected in the frequency of RCs bearing different grammatical relations within written English narrative.

For the initial purposes of comparison, it is necessary to combine the totals of A- and S-RCs to reflect the single category of subject that is presented on the AH. In doing so, the following order of frequency (with respect to grammatical relation of head NPs) is revealed:

(37) SBJ > DO > OBL > GEN > IO/OCOMP

An obvious difference between the results of the text counts and the form of the AH is the position of the indirect object. Keenan and Comrie (1977) rank indirect objects above obliques and genitives on the hierarchy, but, in this study, IO-RCs were found to be outnumbered by both DO-RCs and GEN-RCs. As has already been pointed out on more than one occasion, IO-RCs did not appear at all in either the eighteenth- or twentieth-century sample texts.

Unfortunately, this result cannot be directly compared to the results of Keenan's (1975) study, which does not provide a separate category for IO-RCs. It is interesting that Keenan's justification for collapsing indirect object and oblique is that these positions behave in the same way with respect to relativisation. It is unclear exactly what Keenan means by this, as he offers no explanation. (It is possible that the two positions are put together under one category in Keenan because indirect object NPs can be marked by the preposition *to* in English—for example, *Jane gave the book to her granddaughter*—very much like oblique NPs—for example, *Jane travelled to Tokyo last year*.) However, the results of this study seem to suggest that there is little reason, in written English, to collapse the two

positions, not least because there is so substantial a difference in frequency between them.

Notwithstanding the disparity between the infrequency of indirect objects and their position on the hierarchy, the results of this study generally follow the pattern of the AH. It is only when the results are viewed with respect to the distinction between transitive and intransitive subjects that a clearly different pattern emerges. In both the eighteenth- and twentieth-century texts, A-RCs occur less frequently than DO-RCs and OBL-RCs.

As already discussed, Keenan and Comrie (1977) place considerable emphasis on the relativisability of subjects. The first of their hierarchy constraints, for instance, states that all languages must be able to relativise on subjects (Keenan and Comrie 1977: 67). Furthermore, they provide data arising from a number of experiments (for example, Keenan and Hawkins 1987) to support the claim that the subject, out of all grammatical relations, is the most psychologically accessible to relativisation. Therefore, the fact that DO-RCs and OBL-RCs outnumber A-RCs in the text counts poses a challenge to the notion that all subjects are inherently easier to relativise on than other grammatical relations. It also suggests that, for the purposes of relativisation in written English, a unified category of subject is not wholly justified, or, at least, that it is potentially misleading.

As discussed above, the A-RCs were outnumbered, not only by the DO-RCs, but also by the much lower-ranking OBL-RCs. It is possible that this is due, in part, to the kinds of oblique used in this study, as opposed to those used in Keenan and Comrie's (1977) study (see 5.4.3). Whereas this study included all obliques, Keenan and Comrie (1977: 66) included only those which "express arguments of the main predicate [...] rather than ones having a more adverbial function". It is also possible that the number of OBL-RCs reflects their importance in written texts, as a means of setting the scene. As discussed earlier in this article, the functions of different RCs tend to influence the frequency with which they appear in the text. Given this, and given that the results of the count do not fully match the AH when transitive and intransitive subject are separated, it is likely that there are a number of interacting motivations behind accessibility to relativisation. These may manifest themselves in ways that reflect the AH, but it is more likely that these manifestations represent variations in discourse preference, rather than the primacy of certain grammatical relations.

As has already been alluded to, Fox (1987) suggests that the discourse functions of subjects and objects play an integral role in their accessibility to relativisation. According to her, RCs have two main functions: to

describe an NP and justify its inclusion, or to anchor it to the surrounding discourse. She claims that S-RCs are best suited to the first function and DO-RCs to the second. A-RCs also have an anchoring function, but, unlike DO-RCs, the other NP in their restricting clause tends to be a full NP, rather than a pronoun. Hence, A-RCs occur less frequently in discourse than do DO-RCs, because the potential anchor in an A-RC is not as good as the typically pronominal anchor in a DO-RC.

The results of this study differ in one immediate respect from those of Fox (1987): RCs formed on direct objects do not occur in numbers equal to those formed on intransitive and transitive subjects combined, as in Fox's results. However, this does not detract from the general similarities between the findings of this study and those of Fox. Perhaps of most significance is the fact that S-RCs and DO-RCs—with no statistical difference between the two—occurred more frequently in both the eighteenth- and twentieth-century sample texts than did A-RCs. This provides some empirical support for the possibility that Fox's Absolute Hypothesis is also applicable in written English narrative, as it is in English conversation. Thus, the frequency hierarchy in (37) should be revised to:

(38) S/DO > OBL > A > GEN > IO/OCOMP

The question arises as to whether Fox's (1987) claims can be extended to cover grammatical relations other than subjects and direct objects. Presumably, if the discourse functions of relative clauses and grammatical relations influence accessibility to relativisation in subjects and direct objects, they must also influence the accessibility of other grammatical relations (for such a suggestion, see Song 2001: 241). The results of this study provide some indications that the analysis suggested by Fox (1987) could be applied to obliques, indirect objects, and genitives. For instance, Fox suggests, based on the results of her own study and on the work of Du Bois (1987), that preferences for the distribution of given and new information in discourse tend to correlate strongly with accessibility to relativisation. Specifically, those grammatical relations that tend to bear given information/pronouns are less frequently relativised on than those that tend to bear new information/full NPs. As found in this study, and supported in part by Du Bois's findings, obliques tend to appear as full NPs, whereas indirect objects and genitives tend to appear as pronouns. If the suggestions made above are to be borne out, OBL-RCs should occur more frequently in the texts than both IO- and GEN-RCs. As the results

indicate, OBL-RCs indeed occur more frequently than GEN-RCs and IO-RCs.

There were insufficient numbers of GEN-RCs and IO-RCs to enable their discourse functions to be determined. However, the numbers of OBL-RCs lend themselves to the tentative suggestion that OBL-RCs, like DO-RCs, may rely on anchors. This is supported, to an extent, by the fact that the other NP in the OBL-RCs in this study tended to be pronominal. However, unlike DO-RCs, the head NPs in OBL-RCs tend not to be continuing topics of discourse. Therefore, it is likely that any anchor in an OBL-RC would be used, not to introduce a new topic, but rather to signal the relevance to the surrounding discourse of the OBL-RC head NP.

In summary, the results of this study suggest that the claims made by Fox (1987), concerning discourse preferences and accessibility to relativisation, may be applicable, not only to intransitive subjects, transitive subjects, and direct objects, but also to obliques, genitives, and indirect objects.

## 6. Conclusion

This study had three aims: (i) to examine the link between accessibility to relativisation and grammatical relation; (ii) to test whether the patterns of relativisation, as discovered by Keenan and Comrie (1977) on a cross-linguistic basis, are the same in the eighteenth century as they are in the twentieth century; and (iii) to compare the findings of the counts with the findings of Keenan and Comrie (1977), Keenan (1975), and Fox (1987).

It was found that the patterns of relativisation differ very little between the eighteenth and twentieth centuries. Any variations that occur tend to be minor. For example, although there were differences in the relative frequencies of S-RCs and DO-RCs, and in the size of the gap between the A- and OBL-RCs, these involved margins of only a few percent. In general, the tendency in both the eighteenth and twentieth centuries is towards a preference for S- and DO-RCs, followed, in decreasing order of frequency, by the OBL-RCs, A-RCs, and GEN-RCs, with IO-RCs and OCOMP-RCs completely unattested in the counts.

When subject is presented as a unified category, the patterns of frequency mirror the ranking of grammatical relations on the AH, with the exception of the IO-relatives. However, when the subject category is divided into intransitive and transitive subject, the results tend to offer more support for Fox's (1987) reinterpretation of subject, rather than the

AH. In particular, Fox points out that S- and DO-RCs occur more frequently than A-RCs. This is indeed borne out by the results of this study. Moreover, both the lower ranked DO-RCs and OBL-RCs occur more frequently than A-RCs. It has been suggested that written narrative requires a considerable amount of description in order to indicate the states of people or other entities, or to set the scene. The frequency of S- and OBL-RCs seems to fall out directly from this requirement. The frequency of DO-RCs seems to follow from Fox's (1987) suggestion that one of the main functions of RCs is to anchor the head NP in discourse. Certainly, the results show that the other NP in a DO-RC tends to be pronominal and, therefore, a good anchor. Preferences for pronouns as opposed to full NPs seem to have a strong bearing on whether certain grammatical relations are relativised on as frequently as others. All of the infrequently occurring RCs in this study, the A-, GEN-, and IO-RCs, tend to be formed on grammatical relations that typically occur in pronominal form. In contrast, the more frequently occurring RCs, that is, the S-, DO-, and OBL-RCs, tend to be formed on grammatical relations that typically occur as full NPs. This makes much sense. If an NP is pronominal, it is most likely a recent or current topic. As such, the functions of RCs, whether to distinguish, describe, or anchor, become largely irrelevant. The speaker, in using a pronominal form, assumes that the addressee can identify the referent in question, hence there is no need for description. Moreover, current topics of discourse do not need to be anchored—they are already present in the text, and their relevance has already been established.

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