

Semantic Properties of Nonrestrictive
Relative Clauses

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0. Introduction

In this paper, we are concerned with the semantic properties of nonrestrictive relative clauses which are thought to refer to "a whole sentence" or to "a whole thought" (cf. Jespersen (1927: 113)). In section 1, we will consider these clauses from the viewpoint of modality and proposition. In section 2, we will consider some related topics. Some of the typical examples which we are concerned with here are the following:

- (1) John made a date with Mary, which pleased her.
- (2) We never stop working on this show, which is great.
- (3) He also decided, which was more to his purpose, that Eleanor did not care a straw for him.
(Jespersen 1927: 115)
- (4) Moreover, which you may hardly believe, the examiners had decided in advance to fail half the candidates!
(Hornby 1974: 998)
- (5) Sophia was not unconscious, as could be judged from her eyes.
(Jespersen 1927: 178)
- (6) As might be guessed from its title, and as is made clear in its preface, Aijmer's book represents an attempt to explore further connections between semantic and syntactic distinctions in English. (Baker 1975: 185)

(7) Mr. Bunce, as may be imagined, was opposed to innovation.

(Jespersen 1927: 178)

(8) and, what is yet more rare, his knowledge of himself equalled his knowledge of others. (ibid., p. 114)

(9) What is even more remarkable, he manages to inspire confidence in the most suspicious people.

(Quirk et al. 1972: 513)

(10) She invited the famous poet and, what's more surprising, he was happy to come.

Emonds (1976) claims that sentential relatives (relative clauses referring to the entire main clause) cannot become parentheticals (p. 45). But as we see from the examples above and also in the following, Emonds' claim is incorrect. The fact is that certain nonrestrictive relative clauses which refer to a sentence or a clause can occur sentence-internally and sentence-finally.

There might be some objection to our assumption that sentences (8)-(10) include a subset of relative clauses. An alternative interpretation might be that these should be treated as members of adverbial clauses (cf. Quirk et al. (1972)). But our assumption is not implausible, when viewed historically. The relative pronoun what is generally understood as the composite of that which (cf. Kuroda (1969)). Interestingly enough, examples like the following are cited in Jespersen (1927: 114), although he admits that the relevant combination is obsolete.

(11) our army was but small; but that which was worse,
they had not arms (frequent in Defoe). [emphasis mine]

In view of this fact, it is not implausible to consider the relevant clauses as a subset of relative clauses from a historical

point of view.¹ Thus, we will assume this position hereafter.

The above sentences show that the relative pronoun what, like the sentential relative pronouns which and as, refers to the content of the antecedent sentences. What relative clauses can occur sentence-initially and sentence-medially.

1. Modality and Proposition

In this section, we will consider relevant nonrestrictive relative clauses (hereafter, NRCs) in terms of modality and proposition.

Following Nakau (1979, 1981), we assume the meaning of the sentence as an utterance consisting of two components: modality and proposition; the modality is the expression of a mental attitude of the speaker (and, in certain cases, of the hearer) toward (part of) the proposition or the person involved, at the time of speech, defined as "the speaker's instantaneous present"; the proposition is the objective statement of a situation and it may be true or false.

A test which is used to show which part of a sentence is the proposition is tag question formation: tag questions generally conform to the subject and the predicate of the propositional expression which constitutes the main assertion of a sentence (cf. Hooper (1975) and Nakau (1979)). Compare the following sentences, cited from Nakau (1979: 231), where it is sure is a propositional expression, while I am sure is a modal expression.

(12) It is sure that he will succeed, { isn't it?
*won't he? }

(13) I am sure that's right, { *ain't I?
*aren't I?
isn't it? }

- (19) And, which is curious, John courted Mary, { didn't he? }
 { *isn't it? }
- (20) And, which is surprising, most people do not love
 themselves, { do they? }
 { *isn't it? }

Sentences (19)-(20) show that the main clause (the antecedent sentence) is the mainly asserted part of the sentence, i.e., the clause constitutes a proposition.

Here we should notice that it is not the case that sentence-internal NRCs cannot express the speaker's assertion. The following sentences show that a root transformation (Negative Constituent Preposing), which can be used to assert the content of a clause, can apply to a sentence-internal NRC:

- (21) This car, which I drove only rarely, is in excellent condition.
- (22) This car, which only rarely did I drive, is in excellent condition. (Hooper & Thompson 1973: 489)

These sentences show that the relative clauses in question can express the speaker's emphatic assertion under a certain condition. As we have noted earlier, a proposition is the objective statement of a situation, which may be true or false, and the objective statement can be emphatically asserted under an appropriate circumstance. It can therefore be said that the relative clauses under consideration express propositions.

Then what about NRCs like those in (17)-(18)? For an expository purpose, consider the following sentences.

- (23) Moreover, which you may hardly believe, the man killed himself.
- (24) *Moreover, which hardly may you believe, the man killed himself.

- (25) *Moreover, which you may hardly BELIEVE, the man
killed himself.

[Capitals indicate emphatic stress]

These sentences show that in contrast with sentence (22) neither Negative Constituent Preposing nor emphatic stress placement can apply. Since modality expresses the speaker's mental attitude at "the speaker's instantaneous present", it is expected to be incompatible with operations which produce emphatic assertions. Notice also that the NRCs in (17)-(18), which have clausal structures, show as a whole the speaker's mental attitude and these are almost synonymous with modal adverbs curiously and surprisingly, respectively. The NRC in (23), which has a clausal structure and contains itself a modal auxiliary may, is almost synonymous with a modal adverb unbelievably. Considering these facts, we can conclude that the NRCs under consideration fall under semantic component of modality.

Incidentally, the possibility that the NRCs may express presupposition is excluded. As the name "mental parenthesis" (Jespersen 1927: 113) suggests, NRCs show the speaker's (writer's) mental attitude toward the content of the antecedent sentences. The claim that the speaker's mental attitude implies presupposition is epistemologically implausible; presupposed semantic contents are generally considered to be immune from the effect of negation but the speaker's mental attitude varies according to the content of the antecedent sentence and it cannot be constant.²

As an illustration of modal expressions, we can give the following sentences:

- (26) And, which is curious, John failed in the final exam.

(27) And, which is surprising, an estimated 40,000 elephants are killed annually in Africa.

(28) Moreover, which you may hardly believe, the man was found dead in the lake.

One thing that is of some interest here is that if the subject NP of an NRC is changed from the first/second person to the third, this results in lower acceptability, as in the following:³

(29) ?Moreover, which John may hardly believe, the man was found dead in the lake.

There are sentences with NRCs that are considered to express propositions.

(30) And, which was curious, John courted Mary.

(31) Moreover, which was surprising, the president-elect killed himself.

It is possible to consider that if the tense of an NRC is in the past, the speaker's mental attitude is no longer the one at instantaneous present. The NRC expresses the speaker's comment in the past on the content of the main sentence; it expresses a proposition.⁴

The following sentences with NRCs also do not seem to express the speaker's mental attitude at the instantaneous present; they fall under the semantic component of proposition:

(32) ... and our men, which was the worst of their fate, had no advantage in their situations.

(33) He also decided, which was more to his purpose, that Eleanor did not care a straw for him.

(34) If, which very seldom happens, there are two such imperious spirits in a family ...

- (35) I very soon persuaded Lorna that for the present she was safe, and (which made her still more happy) that she was not only welcome, but as gladdening to our eyes as the flowers of May.
- (36) ... we shall flight on the beaches, we shall flight on the landing grounds, we shall flight in the fields and in the streets, we shall flight in the hills; we shall never surrender; and even if, which I do not for a moment believe, this island or a large part of it were subjugated and starving, then our Empire beyond the seas, armed and guarded by the British fleet, would carry on the struggle until ...⁵

[emphasis mine]

Next, let us turn to sentences with NRCs which are introduced by a relative pronoun as. Consider the following sentences where tag questions are formed:

- (37) As might be expected, this type of construction is most common in conversational discourses, { isn't it? }
 { *mightn't it? }
- (38) Mr. Bunce, as might be imagined, was opposed to innovation, { wasn't he? }
 { *mightn't it? }
- (39) Sophia was not unconscious, as could be judged from her eyes, { was she? }
 { *couldn't it? }

The results of tag question formation indicate that the antecedent sentence expresses a mainly asserted proposition in any position. In other words, the NRC cannot constitute a main assertion, unlike the one introduced by which (cf. (15)-(16)).

We can consider the following NRCs as modal expressions.

- (40) and the reaction, as is always the case, was inclined to go too far.
- (41) He is a teacher, as is clear from his manner.
- (42) At the end of July, the rainy season broke, as is natural.

These NRCs as a whole express the speaker's mental attitude at the instantaneous present toward the proposition expressed in the antecedent sentences. Notice that there are a number of modal adverbs which are similar in meaning to these expressions, e.g. naturally, predictably, understandably and so on.

On the other hand, the following NRCs introduced by as do not seem to be modal expressions but, by definition, propositional expressions.

- (43) One might seek evidence to determine whether something like the notation of familiar predicate calculus plays a role in LF, as has sometimes been suggested.

(Chomsky 1981: 35)

- (44) He is a teacher, as became clear from his manner.
- (45) He was a foreigner, as they perceived from his accent.

One thing that deserves mention here is that the NRCs introduced by as cannot contain "emotive predicates" such as be interesting, be surprising and so on (cf. Kiparsky & Kiparsky (1970)):

- (46) *As is interesting, John is in India.
- (47) As is well-known, John is in India. (ibid., p. 171)

The difference between the following sentences may also be traced back to the point in question.

- (48) He married her, as was natural.

assertion of the sentence, and this is incompatible with the semantic property of as relative clauses (cf. (37)-(39)). Furthermore it is clear that the fact that "emotive predicates" cannot occur in these as relative clauses is closely related to this semantic property; a sentence with an emotive predicate is more likely to bear the speaker's main concern.

Finally, let us turn to another relative clause type which is introduced by a relative pronoun what. Consider again the following sentences.

- (55) and if ever, what is even more difficult, we should come to know ...
- (56) and, what is yet more rare, his knowledge of himself equalled his knowledge of others.
- (57) She is kind, and what is still better, is very beautiful.
- (58) He declared it openly, and what is more surprising, he did it.
- (59) He is good-looking, clever, and what is best of all, is rich.

We find that these relative clauses are similar in meaning to which relative clauses in that they show as a whole the speaker's evaluative judgement at instantaneous present. Thus, it can be said that these relative clauses also constitute modal expressions. But there is a certain unnegligible difference between the two clauses, though this does not impair the status of what relative clauses as modal expressions.

What relative clauses do not occur sentence-finally in contrast with which relative clauses.

- (60) *She is kind and is very beautiful, and what is still better.

clauses are therefore by definition not considered to be modal expressions: they fall under the component of propositional expressions.

2. Some Related Constructions

In this section, we will consider some related constructions, and in particular, their syntactic derivations and semantic properties. First, let us see sentences which we are concerned with here.

(67) Strange, it was she who initiated divorce proceedings.

(68) Most important, his report offered prospects of a great profit.

(69) More remarkable still, he is in charge of the project.

(Quirk et al. 1972: 255)

(70) More important, leaders of the women's movement vowed to press their case for equality more rigorously than ever in the courts and at the polls.

(Newsweek 7/12/1982, 17)

(71) Worst of all, what the White House had hoped would be a set-piece demonstration of Reagan's global leadership had turned out to be quite the opposite.

(ibid. 6/21/1982, 32)

(72) He remarked, 'Strange that the pain has not made her soft.'

These sentences seem to be traditionally considered to be formed from it-extraposed sentences through the ellipsis of the subject and the verb it is. Such a process like this was originally named "Prosiopesis" by Jespersen (1949: 413 ff), though he does not cite relevant examples. Let us now consider if this line of

traditional reasoning is plausible compared with other views.

In view of the following sentences, Quirk et al. (1972) suggest two possibilities as their source: i) the ellipsis of the subject and the verb it is in the extraposed sentence, ii) the ellipsis of the subject, the verb, and the auxiliary verb what is and is in the pseudo-cleft construction (p. 256 fn.). The following are the two possible sources.

(73) Strange {that it turned out that way.
 how she still likes him. }

- (74) a. It is strange that it turned out that way.
 b. What is strange is that it turned out that way.
- (75) a. It is strange how she still likes him.
 b. What is strange is how she still likes him.

As we will see below, the correct source of the relevant constructions seems to be the it-extraposed sentence. There are a number of pieces of evidence for this.

First of all, the following "suppressed" sentences show a course of elliptical process, suggesting the extraposition source.

(76) 'Sfunny you didn't know.

(77) Funny you didn't know. (Bolinger 1977: 73)

The relevant process may occur in the following way.

- (78) a. It is funny (that) you didn't know.
 b. It's funny (that) you didn't know.
 c. 'Sfunny you didn't know.
 d. Funny you didn't know.

On the other hand, the following process seems to be implausible, because of the ungrammaticality of (79d), which constitutes one step in the derivation of sentence (76).

- (79) a. What is funny is that you didn't know.
 b. What is funny is you didn't know.
 c. What's funny is you didn't know.
 d. *What's funny's you didn't know.
 e. 'Sfunny you didn't know.

Kuno (1977) and Yasui (1978) note that the identificational use of be cannot be reduced. The ungrammaticality of (79d) may be due to this fact. Compare the following sentences containing the modal use of be (the progressive form) with those sentences containing the identificational use of be: be can be reduced in the case of the former type but not that of the latter type.

- (80) a. John is coming here tomorrow.
 b. John's coming here tomorrow.
 (81) a. His hobby is going to parks.
 b. *His hobby's going to parks. (Kuno 1977: 97)
 (82) a. (?)What he's doing's getting him into trouble.
 *What he's doing's getting himself into trouble.
 (ibid., p. 98)

Secondly, the elliptical process in question is productive in that a noun phrase can occur as the remaining element in the sentence-initial position.

- (83) Pity that she is dead.
 (84) Curious thing, Mr. Scott, that none of us thought of glasses. (Otsuka. 1970: 856)
 (85) [it is a] Shame after the glorious weather we've been having. (Jespersen 1949: 414)

Notice that the pseudo-cleft source of (85) is not acceptable:

- (86) *What is a shame is after the glorious weather we've been having.

Considering these observations, it seems plausible to assume the it-extraposed construction as the source of elliptical sentences we have examined so far.

Note, however, that not all relevant elliptical sentences fall under the extraposed constructions as their source. We should differentiate two types: i) one which can occur with an adjective as it is, e.g. strange, funny and so on. ii) the other which occur with a premodifying adverb more or most.⁷ Compare the following sentences again:

(87) = (67) Strange, it was she who initiated divorce proceedings.

(88) = (68) Most important, his report offered prospects of a great profit.

The crucial evidence for our position is that while type (i) can only occur sentence-initially, type (ii) can occur sentence-medially as well as sentence-initially.

(89) a. Funny, you should have thought of that.

b. *You, funny, should have thought of that.

(Yasui et al. 1976: 225)

(90) The next day, they paid a call on the Butler family of College Park Woods, Md., bringing along a jar of gourmet jellybeans -- and, more important, a message of Presidential outrage over a Ku Kulux Klan cross-burning on the Butler's lawn. (Newsweek 5/17/1982, 34)

(91) The MITI project also has set out to build a machine that will read, write and speak several languages, use common methods of communication including the telephone and television, and, most important, learn, think, and figure out its own way to solve problems.

(ibid. 8/9/1982, 34) [emphasis mine]

Since the formation of the sentences we are considering from it-extraposed constructions must postulate tensed complements, this approach cannot treat these examples properly; the elements in question are not tensed complements but NPs or VPs. The following sentence makes a point.

- (92) Worst of all, what the White House had hoped would be a set-piece demonstration of Reagan's global leadership had turned out to be quite the opposite.

The it-extraposed construction cannot provide a possible source.

- (93) *It's worst of all, what the White House had hoped would be a set-piece demonstration of Reagan's global leadership had turned out to be quite the opposite.

In view of these facts, it is necessary to differentiate the two types among the relevant examples. What then is the source of type (ii) sentences?

A possible source of type (ii) sentences may be a nonrestrictive relative clause with a sentential relative pronoun what, which we have considered in the previous section. It is clear that there are remarkable semantic similarities in the paired examples, though there may be some stylistic difference.

- (94) a. She invited the famous poet and, what's more surprising, he was happy to come.
 b. She invited the famous poet and, more surprising, he was happy to come.
- (95) a. What's most important, his report offered prospects of a great profit.
 b. Most important, his report offered prospects of a great profit.

(99) Strange that the president has resigned so suddenly,

{ isn't it? }
 { *hasn't he? }

(100) Funny that you didn't know the news, { isn't it? }
 { *did you? }

The results of tag question formation show that despite the ellipsis of the subject and the verb the ellipted part still constitutes the speaker's main concern and therefore constitutes part of a complex proposition.⁸

On the other hand, there is good reason to believe that the ellipted part expresses the speaker's modality. First of all, the sentences in question are considered to be semantically related to the clauses introduced by what (cf. Quirk et al. 1972: 285). Compare the following sentences.

(101) Strange, it was she who initiated divorce proceedings.

(102) What is strange, it was she who initiated divorce proceedings. (ibid., p. 255)

As we have discussed in the previous section, relative clauses like that in (102) express modality: they express the speaker's mental attitude toward the proposition. Secondly, sentences like (101) are almost synonymous with the following sentence (cf. ibid., p.256).

(103) Strangely, it was she who initiated divorce proceedings.

Thirdly, the tense of the main verb in the extraposed sentence, which is assumed to undergo the elliptical process, is almost always present (cf. (76)-(77)). This reminds us of the notion of the "speaker's instantaneous present" involved in modal expressions. These observations show that at least semantically the ellipted

We have also examined some related sentences both syntactically and semantically. It has been shown that a certain construction has ambivalent semantic properties -- properties of modality and proposition.

NOTES

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¹ One possible exceptional case is the following type:

What's more, there is little hope for a substantial recovery in the foreseeable future. (Newsweek 5/10/1982, 35)

The clause what's more or what is more is a fixed phrase. It is cited in Longman Dictionary of contemporary English that what is more means 'more important'.

² Hereafter, we will refer to the speaker's mental attitude in relevant contexts in the sense that it covers both the speaker's and the writer's mental attitude.

³ Kubota (1981: 7) also observes this point.

⁴ It might be possible to consider that these sentences contain modal expressions. Here we should recall that the "speaker's instantaneous present" is involved in the definition of modality. Even if the tense expressed in the NRC is in the past, however, it might be considered to be the result of the tense agreement with the tense in the main clause. In other words, it might be said that the clause as a whole still expresses the speaker's mental

attitude at the "speaker's instantaneous present." But, I do not take this position in this paper and assume that the relative clauses like those in (30)-(31) express propositions. At least sentences (34)-(36) are unambiguous cases of propositional expressions.

⁵ This example is cited from Carden (1979: 15-16).

⁶ We provide a partial list which shows the difference between emotive predicates and nonemotive predicates.

<u>Emotive</u>	<u>Nonemotive</u>
important	well-known
crazy	clear
odd	self-evident
interesting	goes without saying
sad	natural
suffice	
bother	

For further details, see Kiparsky & Kiparsky (1970).

⁷ The following are adjectives that can occur independently: curious, funny, odd, strange, surprising. There are also other adjectives that cannot occur independently without premodifying adverbs like more or most, e.g. important, remarkable (cf. Quirk et al. 1972: 255-256. and Yasui et al. 1976: 255).

Compare the following sentences:

- (i) Strange, the main killed himself.
- (ii) More important, it would strengthen the argument given earlier.
- (iii) *Important, it would strengthen the argument given earlier.
(Yasui et al. 1976: 254-255)

But this does not mean that type (i) adjectives cannot occur

in type (ii) sentences. For example, the following sentences are grammatical.

(iv) It is strange that the man killed himself.

(v) What is strange, the man killed himself.

(vi)=(i) Strange, the man killed himself.

The crucial point to decide whether a sentence falls under type (i) or (ii) lies in the presence or absence of the complementizers that and how. Consider the following sentences.

(vii) Strange { that } the man killed himself.
 { how }

(viii) It is strange { that } the man killed himself.
 { how }

(ix) *What is strange { that } the man killed himself.
 { how }

Notice that sentences (iv) and (v) are not equal in status from a semantic point of view, as we will see below: sentence (iv) as a whole constitutes a complex proposition; sentence (v) consists of a modal expression (= a relative clause) and a propositional expression (= a complement clause).

⁸ This point has been suggested to me by Shosuke Haraguchi.

REFERENCES

- Baker, C.L. 1975. "Review of some aspects of psychological predicates in English, by K. Aijmer," Language 51: 1. 185-88.
- Bolinger, D. 1977. Meaning and form. London: Longman.
- Carden, G. 1979. "Backward anaphora in discourse context,"
Unpublished paper.
- Chomsky, N. 1981. Lectures on government and binding. Dordrecht:

- Foris Publications.
- Emonds, J. 1976. A transformational approach to English syntax.
New York: Academic Press.
- Hooper, J. 1975. "On assertive predicates," in Kimball (ed.)
Syntax and semantics 4: 91-124. New York: Academic Press.
- _____. and S.A. Thompson. 1973. "On the applicability of root
transformations," Linguistic Inquiry 4: 4. 465-97.
- Hornby, A.S. 1974. Oxford advanced learner's dictionary of current
English. Tokyo: Kaitakusha.
- Jespersen, O. 1927. A modern English grammar on historical
principles Part III. Syntax. London: George Allen & Unwin Ltd.
- Kiparsky, P. and C. Kiparsky. 1970. "Fact," in Bierwisch and
Heidolph (eds.) Progress in linguistics. 143-73. Paris: Mouton.
- Kubota, A. 1981. "Zenchi sareta hi seigenteki kankeishi setsu ni
tsuite," Tsukuba Eigo Kyoiku 2. 1-9.
- Kuno, S. 1977. "Wh-cleft and it-cleft sentences," Studies in
English Linguistics. 5. 88-117.
- Kuroda, S.-Y. 1969. "English relativization and certain related
problems," in Reibel and Schane (eds.) Modern studies in
English. 264-87. New Jersey: Prentice-Hall.
- Nakau, M. 1979. "Modariti to meidai," Eigo to nihongo to. 223-50.
Tokyo: Kuroshio.
- _____. 1981. "Modariti to meidai -- eigo sonyusetsu no baai,"
Gendai no eigogaku. 239-50. Tokyo: Kaitakusha.
- Otsuka, T. (ed.) 1970. Shin eibunpo jiten. Tokyo: Sanseido.
- Quirk et al. 1972. A grammar of contemporary English. London:
Longman.
- Yasui, M. et al. 1976. Keiyoshi. Tokyo: Kenkyusha.
- _____. 1978. Atarashii kikite no bunpo. Tokyo: Taishukan.
- Zandvoort, R.W. 1975. A handbook of English grammar. Tokyo: Maruzen.