The Reduced Relative Clause: A Misnomer?

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Abstract

In this paper I argue that the term reduced relative is a misnomer. [1] I will begin by discussing the origins of the term, and the analysis that it suggests. Then I will look at the shortcomings of that analysis and describe an alternative analysis. The alternative analysis will require that there be an absence of the types of structure that are essential to relative clauses. I will also describe what may and may not be found within reduced relative clauses. Based upon all of this I will conclude that the term reduced relative clause is indeed a misnomer.

Introduction

The term reduced relative is used to refer to a particular syntactic construction which has many parallels with relative clauses. Both constructions contain a noun which is modified in some sense. The similarities between reduced relatives and relative clauses are demonstrated in (1) and (2).

(1) a. The horse raced past the barn fell.
   b. The horse that was raced past the barn fell.

(2) a. [[[The horse] raced past the barn] fell].
   b. [[[The horse] that was raced past the barn] fell].

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[1] A reviewer informs me that in *The Cambridge Grammar of the English Language* (2002), Huddleston and Pullum do not use the term. While it has been recognized by some to be a misnomer the term still remains in use, and I shall argue that the term suggests an analysis which is not sustainable.

Ross (1972) provides an analysis in which reduced relative clauses are argued to have the same syntax as regular relative clauses. This analysis survives in the term 'reduced relative' itself. I will argue that the term 'reduced relative' is a misnomer; that reduced relative clauses have a different syntax to regular relative clauses; and that the similarities between the two constructions are superficial.

Here I shall outline the analysis presented in Ross (1972). The sentences in (3) are argued to be derived from the sentences in (4). The motivation given for this claim is sparse, relying on semantic equivalency and what is "most plausible" ("The most plausible sources for [(3a) and (3b)] would be [(4a) and (4b)]." Ross 1972). Although this option may seem the most plausible it is not the only option worthy of investigation.

(3)   a.   Men sharpening knives were leering at us.
        b.   Men sharpening knives leer at us.

(4)   a.   Men who were sharpening knives were leering at us.
        b.   Men who sharpen knives leer at us.

Two rules are given to describe the transformative processes shown above. The process that begins with (4a) and results in (3a) is referred to as 'WHIZ Deletion', which states that when a relative complementizer and verb 'be' appear next to each other in an embedded clause they may both be deleted. 'WHIZ Deletion' is taken to be a process similar to 'Complementizer Deletion' as demonstrated in (5). The deleted segments remain in the syntactic representation but are not pronounced as part of the phonetic realization.

(5)   a.   I know that I put it somewhere safe.
        b.   I know ~~that~~ I put it somewhere safe.

The process that derives (3b) from (4b) is given the name 'Stuff-ing'. When the subject of an embedded clause is relativized the embedded subject is deleted and the verb takes the form that incorporates the present participle (its '-ing' form).

(6)   Stuffing
            $X - [_{NP} NP - [_S \quad\quad NP \;-\; V \;\;-\; Y]_S]_{NP} - Z$
        SD: 1   2   3   4
        SC: 1   Ø   3#ing 4
        (SD = structural description, SC = structural change)

Both 'WHIZ Deletion' and 'Stuff-ing' are surface constraints having no internal motivation, nor resulting from the mechanisms of the syntax but rather being applied externally. Such qualities are undesirable in any framework that has the aim of being minimal.

The Problem with Ross's Account

A number of issues with Ross's account of reduced relatives were raised by Hudson (1973). In that account the assumption that reduced relatives are derived from regular ('unreduced')

relatives was challenged and Hudson described a way in which reduced relatives behaved differently to their 'unreduced' equivalents. I shall now discuss these issues, and with ideas from studies on the calculation of tense in syntax propose that there is a more satisfactory alternative.

(7) a. Books published since 1950 are mostly paperbacks.
     b. The people living here are dead.

These two sentences are the seeds from which this discussion will grow. Taking the first, Hudson argues that this sentence is a well formed sentence which has a reduced relative clause within it. If reduced relatives are in fact derived from unreduced equivalents, as Ross claims, then there will be an unreduced equivalent for (7a), and indeed there is. Sentence (8a) may be said to be an accurate unreduced equivalent to (7a).

(8) a. Books that have been published since 1950 are mostly paperbacks.
     b. Books having been published since 1950 are mostly paperbacks.
     c. *Books that are/were published since 1950 are mostly paperbacks.

However, the two rules given by Ross for deriving reduced relatives cannot be applied to (8a) in order to derive (7a). WHIZ Deletion cannot apply and Stuff-ing gives us (8b) rather than (7a). If we were to apply WHIZ Deletion backwards to (7a), taking the ouput of the procedure and calculating the input, we would get an ill formed structure (8c). It is clear that either we need more (or more complicated) rules for deriving reduced relatives from their unreduced counterparts or that there are some reduced relatives that are underived, which would encourage us to question whether all reduced relatives are underived.

Now we will return to the second seed. According to WHIZ Deletion and Stuff-ing, sentence (7b) has a number of equivalent unreduced relatives. Some of these are presented in (9), limiting the tenses to present and past for the sake of simplicity.

(9) a. The people who are living here are dead.
     b. The people who were living here are dead.
     c. The people who live here are dead.
     d. The people who lived here are dead.

The first thing to note about these possible unreduced equivalents to the reduced relative being considered is that they are not equivalent to one another. This in itself is not a problem as it is not the relation between the different possible unreduced equivalents that is important but the relation between the reduced relative and the unreduced counterparts. It should be possible for (7b) to be interpreted as having any of the tenses of (9a-d).

This is not the case however, suggesting that the interpretation of tense for a reduced relative is more constrained. It is clear that (7b) only allows a contradictory interpretation, thereby demonstrating that (9b) and (9d) are not possible equivalents of it. Hudson argues

that reduced relatives behave differently to unreduced relatives when it comes to the matter of the calculation of tense. Reduced relatives have tense that, while not marked, is interpreted either 'deictically' (that is, relative to the moment of speaking) or 'derivatively' (that is, relative to the tense of the matrix verb). In (7b) this means that the 'living' being done by 'the people' discussed is either in process while the sentence is being uttered, or while 'the people' are 'being dead'. Since 'are dead' can only be interpreted relative to the moment of speaking, 'the people' must also be 'being dead' while the sentence is being uttered. This is what rules out (9b) and (9d) as possible interpretations. It is assumed that present participles convey an uncompleted action and so are interpreted as occurring simultaneously with the time referred to by the matrix verb.

Unreduced relatives can only be interpreted 'deictically'. This is why sentences such as (9b) and (9d) are perfectly acceptable. Relative to the moment of speaking 'the people' must 'have *been* living' while simultaneously 'being dead'. These two events do not contradict and so the interpretation is fine. The point, however, is that this interpretation is not available to reduced relatives.

Hudson describes these differences but does not offer an explanation for them. However, an explanation may be found in work done on Double Access Reading (DAR) in Italian. In her recent work Giorgi (2010) the notions of 'relative to the moment of speaking' and 'relative to the tense of the matrix verb' are discussed and associated with certain syntactic elements. Giorgi argues for the existence of a syntactic element within the C-layer of a sentence's syntactic structure that encodes the speaker's temporal location and a syntactic element in the I-layer that encodes the temporal location of the subject of Verb Phrase (VP). Once the event described by the VP has been checked against the temporal position of the subject of that event it is checked against the temporal position of the speaker too. It is the encoding of the speaker's temporal coordinates within the syntax that allows for the tense of the embedded verb to be interpreted relative to the moment of speaking. Normally the event described by the VP of an embedded clause cannot escape to a level higher than its C-layer and so it can only be checked against the temporal coordinates of the embedded subject and of the speaker. However, some structures allow it to transcend its C-layer and be checked against the temporal coordinates of the matrix subject, resulting in Double Access Readings. Giorgi argues convincingly that this is not an epiphenomenon at the interface between syntax and some interpretive module but is actually an independent element within the syntax itself. The point of note here is that it has been argued that there is a connection between the sequencing of syntactic elements and the computation of tense, with the C-layer being relevant for interpreting tense as 'relative to the moment of speaking'. The mechanics that Giorgi employs do not need to be assumed for the argument at hand, simply that a connection has been seen.

It is possible to see a viable alternative to Ross's account of reduced relative clauses. As Hudson has demonstrated, there exist a number of unreduced relatives that do not have a reduced counterpart, and that even those that do, do not display the same syntactic

behaviour. Reduced relative clauses may have the event described by them interpreted relative to the tense of the matrix verb or relative to the moment of speaking. However, unreduced relatives may only have the events they describe interpreted relative to the moment of speaking. Ross argues that the difference between reduced relative clauses and their unreduced counterparts is that the complementizer (which resides in the C-layer) and the auxiliary 'be' (which resides in the I-layer) go unpronounced. Giorgi provides the evidence that there is a connection between these two layers and the tense effects that Hudson notes.

It is possible to argue for there being no I-layer or C-layer in reduced relatives. Straight away the absence of complementizers and auxiliaries are readily explained, there is nowhere in the structure for them to reside. Not only that, but the absence of all auxiliary types such as the 'have been' seen in (8) above is explained. Also, by disposing of the I-layer and C-layer we also dispose of the temporal reference points associated with them. For the event described in VP to have its tense interpreted it must be checked against the I-layer or the C-layer of the matrix clause. The tense of reduced relative clauses is interpreted 'relative to the tense of the matrix verb' or 'relative to the moment of speaking'. This also accounts for the difference between reduced and unreduced counterparts. Unreduced relatives do have an independent I-layer and C-layer and as such do not have access to the temporal reference of the matrix verb and can only have their event interpreted 'relative to the moment of speaking'.

Reduced Relatives (A Description)

In this part of the paper I will discuss what may and may not be found within reduced relatives. I will begin by looking at the various predicate types that may or may not be found within reduced relatives but I will move onto more abstract elements such as semantic effects, etc. Sag (1997) in the framework of Head-Driven Phrase Structure Grammar lists the various predicate types that may be allowed to appear in reduced relatives. The list permits VPs with present participles, VPs with past participles, VPs with passive participles, prepositional phrases (PPs) and adjective phrases (APs) to appear in reduced relatives and bans finite VPs, infinitival VPs, or predicative Noun Phrases (NP). The sentences in (10) have reduced relatives that contain those elements listed as acceptable and the sentences in (11) contain those elements listed as unacceptable.

(10)   a.   The person standing on my foot is not observant

          b.   The prophet descended from heaven gave a sermon

          c.   The orders given by the General must be obeyed

          d.   People in Rome do as the Romans do

          e.   The committee happy with the proposal agreed to it

(11)   a.   *The person stands on my foot is not observant

       b.   *The prophet descend from heaven gave a sermon

       c.   *The orders instructions must be made

Keeping in mind that the C-layer and the I-layer are taken to be absent from reduced relatives then the inability for finite and to some extent infinitival VPs is to expected. Finite verbs require the presence of an I-layer in order to be tensed and bare-infinitives require the same structural elements. The absence of the I-layer in reduced relatives does not allow finite verbs and to-infinitives to appear in reduced relatives. That predicative NPs may not appear in reduced relatives is a point I will return to.

Turning now to the predicate types that are described as being permitted to reside in reduced relatives, I highlight a problem with the description. While it seems that VPs with present participles, predicative PPs and predicative APs can always appear in reduced relatives, for VPs with past participles this is not always the case. The nature of the verb within the past participle VPs effects its acceptability within a reduced relative. The sentences in (12) demonstrate this effect.

(12)   a.   *A man given his friend a gift is a generous man   (transitive)

       b.   *A man run regularly shows he has self-discipline   (unergative)

       c.   ?A vegetable grown quickly has an evolutionary advantage   (unaccusative)

       d.   A man given a gift by his friend is grateful   (passive)

While it is clear that transitive (12a) and unergative (12b) verbs are not acceptable within a reduced relative, the status of (12c) is a little murky. The reading we are looking for is one where the vegetable grows but is not grown. The sense we are after is the unaccusative sense, not the passive sense and, to my ear at least, (12c) requires there be some agent causing the growth of the vegetable. This is the passive reading which is shown in (12d) to be perfectly acceptable within reduced relatives. The similarity between the unaccusative past participles and passives makes it hard to mark a distinction between the two in reduced relatives.

(13)   a.   The door opened slowly and revealed that no-one had opened it

       b.   *The door opened slowly revealed that no-one had opened it

The pair of sentences in (13) are an attempt to tease apart the two types. The verb 'opened' is ambiguous between unaccusative and passive. If 'opened' in (13a) is interpreted as passive then the sentence is a clear contradiction, but if it is interpreted as unaccusative, with the door opening of its own accord, no such contradiction arises. That (13b) can only have a contradictory reading I take to be evidence that 'opened' does not have access to the

unaccusative reading and that unaccusative verbs with past participles may not reside within reduced relative clauses.

This result is problematic however, as it has long been argued that unaccusative past participle verbs can exist in reduced relatives. For instance, Marvin (2000) in a discussion of past participles in reduced relatives assumes that unaccusatives are permitted in English reduced relatives and gives (14) as evidence for this.

(14)   ?The leaf fallen from the tree is red

However, the acceptability of (14) is dubious to me. At the best I would give (14) a question mark status. I certainly do not feel that all unaccusative past participle verbs are perfectly acceptable within reduced relatives. The sentences in (15) have a range of pure unaccusatives in reduced relatives and it seems clear that a number of them are definitely unacceptable.

(15)   a.   *The guests appeared at the party are late

        b.   ?The parcel arrived at the office is in the inbox

        c.   *The man died in the hospital will be missed

        d.   *The countries existed for a long time have more history

        e.   *The events happened regularly can be easily predicted

That some unaccusatives are more unacceptable than others here may suggest that the group of pure unaccusative verbs may be divided into two groups, those that have definite judgements of unacceptability and those that have indefinite ones.

Horvath & Siloni (2005) argue for a difference between two types of unaccusative verbs to be recognised based upon their syntactic distributions. They argue that pure unaccusatives may be divided into 'decausative' and 'underived' unaccusatives. They come to this proposal based upon a cross-linguistic investigation into adjectival passives. Adjectival passives are adjectives that are formed using the passive form of certain verbs. They note that 'decausative' unaccusatives can form adjectival passives despite having no verbal passive equivalent, while 'underived' unaccusatives cannot form adjectival passives. The group of 'decausative' unaccusatives is also referred to as the *arrive* class, counting the verbs 'arrive' and 'fall' among its number, while the group of 'underived' unaccusatives is named the *appear* class.

Based upon this I claim that the question mark judgements for (14) and (15b) are due to the predicates not being verbal but rather adjectival. As mentioned above adjectives may reside within reduced relatives without a problem. The outright unacceptability of the rest of the

sentences in (16) is assumed to be due to those verbs being 'underived' unaccusatives and their having no adjective passive form to be ambiguous with. Following this I assume that past participle unaccusative verbs may not reside inside reduced relatives, that those that appear to do so are 'decausative' unaccusatives and are actually adjectival passives.

Kayne (1994) discusses adjectives and relative clauses, claiming that prenominal participial constituents as in (16a) are verbal and result from preposing the verbal element of a reduced relative (16b).

(16)   a. The recently sent book

        b. The book recently sent...

Kayne claims that these two sentences share an underlying syntactic form. However, Sleeman & Verheugd (1998) analyse Kayne's argument and conclude that the sentences in (16) are structurally different, (16a) being a simple adjective, and (16b) being a reduced relative. It is argued that in (16a) 'recently sent' can describe an event but cannot have any argument structure, whereas in (16b) 'recently sent' does have argument structure, suggesting that the syntax of the two sentences is sufficiently different to reflect this. Kaye's idea of preposing reduced relative clauses to a prenominal position extends to prenominal adjectives. Parallels are drawn with French as support for the notion that prenominal adjectives are derived from a postnominal position. However, Sleeman & Verheugd also note a semantic difference between prenominal and postnominal adjectives that they take to indicate different structures. In (17a) 'visible' indicates a continuing and ongoing property of 'the stars', but in (17b) 'visible' denotes a temporary state or occasion.

(17)   a. the visible stars...

        b. the stars visible...

I draw attention to this preposing account to demonstrate not only that adjectival passives and verbal passives ('sent' in (16) above) overlap conceptually to a certain extent and keeping them separate is a tricky task but also that finding the difference between them is important. In Kayne's work, for the two sentences in (16) to share an underlying structure, reduced relatives require that they have as a part of them a Spec-CP, and therefore a C-layer. However, if the sentences in (16) are taken to have different structures, as Sleeman & Verheugd argue, then that Spec-CP is not essential and may be dispensed with in accord with what has already been discussed.

Returning to the main issue of what predicate types are acceptable within reduced relatives, we may reformulate the list, factoring in the result of the discussion so far.

(18) Predicate Types Found in Reduced Relatives

Present Participal VPs: transitive, unergative, and unaccusative

Passive Participal VPs

Predicative PPs

Predicative APs: including adjectival passives

I argue that this list of predicates is a natural class as far the syntax is concerned. The NP modifying constituent that is referred to as a reduced relative may only contain as its predicate something from this natural class. However, I have not yet defined what it is about the syntax of reduced relatives that results in this particular natural class and no other. Iatridou, Anagnostopoulou & Izvorski (2000) give a generalization (19) for reduced relative content which they claim holds for all the Indo-European languages.

(19) a. A Reduced Relative can contain a past participle if the missing auxiliary is *be*

b. A Reduced Relative cannot contain a past participle if the missing auxiliary is *have*

Considering this generalization for English we see that since of all the past participle constructions only the passive has auxiliary 'be' then only the passive may appear in a reduced relative. This is parallel to what we have just argued for. Extending this generalization to all predicate types (20) is tempting, but ultimately ineffective.

(20) a. A Reduced Relative can contain any predicate that is selected by *be*

b. A Reduced Relative cannot contain any predicate that is selected by *have*

It seems *primae facie* that this is an effective definition; present participal VPs, predicative PPs, and predicative APs cannot be selected by auxiliary *have*. However, this generalization would rule in predicative NPs, which are ruled out for reasons to be discussed in the next part of this paper, and it rules out certain reduced relative structures (21) we would want to rule in.

(21) John having been there before knew what to do

In (21) 'having been there before' is a reduced relative. However, 'having' is an auxiliary that cannot be selected by any form of auxiliary 'be'. Attempts to do so (22) result in ill-formed structures. The extended generalization fails to include valid reduced relatives such as (21). It is clear that the extended generalization in (20) is ineffective at defining the natural set.

(22) *John who was having been there before knew what to do

There is a peculiar effect that can be observed in reduced relatives that concerns purely stative verbs (that is, verbs such as 'stand' that refer to a persisting state or situation). In matrix clauses purely stative verbs are not acceptable with present participles. The sentence (23a) is judged to be acceptable while (23b) is not.

(23)   a. The wall surrounds the city

   b. *The wall is surrounding the city

   c. The wall surrounding the city has withstood a number of attacks

However, in reduced relatives (23c) the present participle form is perfectly acceptable. This provides further evidence against an analysis with unpronounced C and I nodes. Under such an analysis 'surrounding' should always be accepted or never accepted. This is not observed to be the case.

A Sketch of the Structure Required for Reduced Relative Clauses

Something similar to Moro's (2000) analysis of small clauses may be called for in order to account for the pattern we see with reduced relative clauses. In the previous section we saw that defining the type of constituent that may appear within reduced relatives as being the kind of constituent that is selected by auxiliary *be* cannot be said to work. The existence of progressive stative verbs within reduced relatives is counter-evidence to such a claim. However, it is not inconceivable that a sub-constituent of the kind of constituents selected by auxiliary *be* may work. The existence of morphological elements such as –*ing*, and –*en* suggest that what may be found within reduced relative clauses may be big enough to incorporate the functional heads associated with those morphemes, which are found low down in the I-domain. A point which is crucial to the argument at hand. (24) serves as an approximation of the type of structure that may be found within a reduced relative clause.

(24)
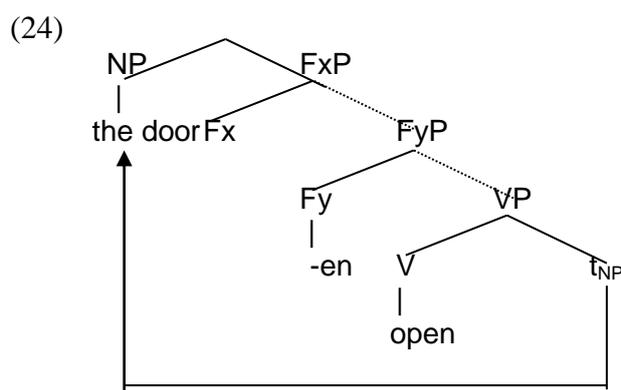
While I am unable to say for certain which functional head Fx may be said to represent here, I am able to say that it would need to be one sufficiently low down in the structure to be below the positions where Tense is assigned.

Conclusion

In this paper, I have argued that reduced relatives should not be analysed as having the same structure as regular relatives. I have suggested that the behaviour described in Hudson (1973) can be easily accounted for if reduced relatives lack C-layer and I-layer in their structures. As such, I argue that the term 'reduced relative clause' is a misnomer, that the syntax of this type of clause is drastically different to the structure of regular relative clauses.

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