NON-RESTRICTIVE RELATIVES AND OTHER NON-SYNTAGMATIC RELATIONS IN A LEXICAL-FUNCTIONAL FRAMEWORK

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Introduction

What this paper presents is the outline of a problem and a suggestion about where we might look for a solution. I will propose a set of properties of items which might loosely be called "appositional", indicate why these properties cause grief for all theories of syntax, and suggest that we will need to look for a possible escape route outside sentence grammar altogether, in the realm of discourse structure.

Non-syntagmatic relations

Syntactic units within a sentence may be related to each other in one of two ways: **syntagmatically**, or **non-syntagmatically**, a distinction which goes back to Jespersen, Bloomfield and beyond, and is restated in Quirk et al (1985) and in Huddleston & Pullum (2002) (each with his own idiosyncratic terminology)**. Syntagmatic relations** involve the linking of two or more elements to form a single grammatical construction, giving the familiar hierarchical constituency relationships. These syntagmatic relations may be endocentric (hypotactic, or "headed" constructions: e.g. subordination; complementation) or paratactic (non-headed: e.g. coordination). **Non-syntagmatic relations**, on the other hand, involve a loose linking of two or more items in a linear sequence which does not constitute a single grammatical construction. The units do not form any larger syntactic unit, and are related only by linear adjacency, not by hierarchical construction. Because non-syntagmatic relations do not form constituents, the items remain separate grammatical units which are syntactically independent of each other. The sequence of items has discourse unity, usually signalled by intonational concord, as Bloomfield (1933) points out; but there is no superordinate syntactic unit.

Straightforward examples of non-syntagmatic relations include address terms (1), interjections (2), and parenthetical clauses (3). I will also include appositional structures (4):

(1)   Do you think, *Fred*, that this is the right thing to do?
(2)   It was a great party, but *boy*, was it noisy!
(3)   John Smith – *is that his real name?* – is asking to see you.
(4)   Amanda, *no longer my best friend,* voted against me.

To take (3) as the illustrative example, the parenthetical clause in (3) is not part of the Subject NP, and it is not part of the predicate VP. It is not in fact involved in the truth conditions of the main clause; it has its own illocutionary force.

Non-restrictive relative clauses

I will argue in this paper (in line with linguists representing a wide range of different theoretical perspectives, including McCawley 1982, Haegemann 1988, Fabb 1990, Espinal 1991, Hannay & Keizer 1992, Peterson 1992, 1999, Kempson 2003) that non-restrictive relative clauses (5) also belong to the class of non-syntagmatic relations.

(5) i Ferdinand, *who had devoted his career to the study of apposition*, abandoned it abruptly in 2003.

ii Pat is afraid of snakes, *which I'm sure Kim is too.*

A contrary position is taken by Doug Arnold in his forthcoming paper for HPSG-04, *Non-restrictive relative clauses in construction-based HPSG* (Arnold 2004). Arnold assumes that non-restrictive and restrictive relative clauses have the same basic structure; i.e. he takes non-restrictive relative clauses to be syntagmatic constructions, the opposite position from the one I take here. Nevertheless, Arnold's paper contains useful data and interesting observations which I will refer to below.

The non-syntagmatic analysis of non-restrictive relative clauses is supported by the fact that they have separate illocutionary force, as shown in (6):

(6) i I lent it to my friend, who frankly I shouldn't have trusted.

ii Has John, who was supposed to lead the delegation, changed his mind?

In (6i) the speaker orientated adverb *frankly* has scope over the non-restrictive relative clause only. And in (6ii) the "external" clause has interrogative force whereas the "internal" non-restrictive relative clause is declarative.

As Arnold points out, non-restrictive relatives are always interpreted non-compositionally, not as part of the main clause. For instance they lie outside the scope of sentential negation, as shown in (7) (example from Arnold 2004):

(7) Sandy wasn't hit by the car, which was reversing too quickly.

Perhaps the clearest syntactic evidence that a non-restrictive relative clause does not form a single constituent with its host is provided by sentences such as (8) (based on McCawley 1988):

(8) i John *sold Mary*, who was his best friend, *a lemon*, and Max *did* too.

ii Tom owns *a Stradivarius*, which was once the property of Heifetz, and Jane has *one* too

The elliptical clause in (8i) is to be interpreted as *Max sold Mary a lemon*, not *Max sold Mary, who was his best friend, a lemon.* There is no implication in (8i) that Mary is (or was) Max's best friend. Thus the VP which is serving as the antecedent for the ellipsis in the coordinated clause does not include the relative clause which is linearly contained within it. Similarly, in (8ii), the violin owned by Jane is not necessarily the former property of Heifetz; again, the relative clause is not a part of the antecedent clause. In general, as McCawley (1988) notes, any linguistic phenomenon that depends on constituent identity will behave as if the non-restrictive relative clause is not there at all.

Arnold (2004) claims that non-restrictive relative clauses form constituents with their antecedents on the basis of their behaviour with respect to topicalisation (as well as passivisation, cleft formation, coordination, etc.). Example (9), including the indexing, is from Arnold (2004):

(9)   I don't often see Kim but [Sandy, who I'm sure you remember,]$_i$ I see regularly
       Δ_i.

But the co-indexing here (for one thing) suggests that this is wrong. The index belongs
to [Sandy] alone, not to [Sandy, who I'm sure you remember]. The generalization that
follows from Arnold's observation seems to be simply that non-restrictive relative
clauses can have an NP host wherever that NP occurs. I therefore maintain my
position that non-restrictive relative clauses are best analysed as examples of non-
syntagmatic relations.

A second point that Arnold makes is that the "comma intonation" associated with non-
restrictive relative clauses will be assigned via a restriction on the PHON attribute.
But for me the intonation will (presumably) "fall out" from the fact that non-restrictive
relative clauses are syntactic interpolations. (I admit there is a big assumption here
that one day we will have a solid interface between phonology and syntax which will
genuinely account for phenomena such as these.)

Analysis

Previous attempts to provide an account of non-syntagmatic relations have in general
been unsatisfactory. McCawley (1982), for instance, resorts to c-structure trees with
crossed branches, which, while capturing some of the characteristics of apposition,
retain a concept of constituency. Kempson (2003), in her "dynamic syntax" model,
utilizes her LINK mechanism, but this does not clearly distinguish non-syntagmatic
relations from adjunction. Hannay & Keizer (1992), within Simon Dik's Functional
Grammar model, propose a special relationship which they call "attachment", distinct
both from adjunction and from "clause combining". Importantly, they refer to
attachment as specifically a discourse phenomenon. I think that this is on the right
track. The kinds of relationship that exist between an appositional item such as a non-
restrictive relative clause and its "host" are those typically regarded as discourse
phenomena. Again to quote from Hannay & Keizer (1992), "all the apposition types
we have looked at do work which can be regarded as increasing the felicity of the
relevant message, or contributing to discourse management activities of the speaker."
These "discourse management activities" would include such functions as adding
relevant background information, providing supplementary identification, and so on.

Included in "discourse phenomena" would be discourse anaphora. And we see that
anaphora / coreferentiality relations may exist between a non-restrictive relative clause
and its "host", in both directions, as shown in the examples in (10):

(10) i   Mark B, who figured in *the Smith murder trial*, showed that he was deeply
          affected by *it*. (example from Ray Cattell, p.c.)
     ii   *The proposal* was enthusiastically adopted by Howard, who had originally
          opposed *it*.

In (10i) we have a pronoun in the main clause referring in to the non-restrictive relative
clause; in (10ii) the anaphoric pronoun refers out from inside the non-restrictive
relative clause. Cataphoric reference ("forward anaphora") is also possible, as in (11):

(11)   Howard, who had originally opposed *it*, enthusiastically adopted *the proposal*.
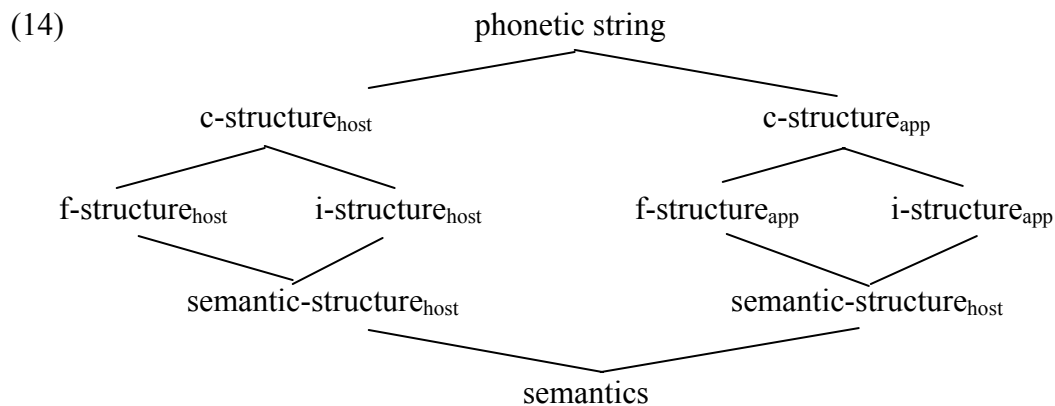
Further, Sells (cited by Arnold (2004)) points out an interesting parallel between non-restrictive relative pronouns and discourse anaphora in that both allow a kind of "accommodation" in modal contexts:

(12) i   Kim doesn't own a car. *It is blue.
     ii   *Kim doesn't own a car, which is blue.

(13) i   Kim doesn't own a car. She wouldn't be able to drive it anyway.
     ii   Kim doesn't own a car, which she wouldn't be able to drive anyway.

Example (12i) shows that an anaphoric pronoun cannot have an antecedent with a non-existent reference. And (12ii) is bad for the same reason. But (13i) is fine; the modal *would* creates a hypothetical frame that licenses the reference for the pronoun *it*. And sentence (13ii) shows that the same "accommodation" applies equally for the relative pronoun *which*.

The solution to the problem of non-syntagmatic relations within the current LFG framework would therefore appear to lie in the direction of representing the connection between a non-restrictive relative clause and its "host" at the level of semantic structure where discourse relationships such as anaphoric linkages are to be captured. The appositional item and its "host" retain separate c-structures and f-structures (and i-structures, if we adopt Tracy King's 1997 proposal), and are linked only via cross-indexing at a discourse-level representation. The appositional tree, then, is part of the discourse, available for anaphoric links, etc., but is not formally constrained by structural or functional concepts such as c-command, minimum nucleus, etc. The apposition and the "host" are not structurally linked any more than two consecutive sentences in a coherent discourse. And each must have its own separate i-structure, since each can have independent FOCUS and TOPIC discourse structures.

The relationship between the appositional item and its host could then be mapped as shown in (14):

(14)   phonetic string

         c-structure$_{host}$ c-structure$_{app}$

   f-structure$_{host}$ i-structure$_{host}$ f-structure$_{app}$ i-structure$_{app}$

         semantic-structure$_{host}$ semantic-structure$_{host}$

                              semantics

An extra benefit of analyzing the host-apposition relationship as an anaphoric (discourse) link only and not a syntactic relationship is that it leads to an explanation for the fact that, unlike restrictive relatives, non-restrictive relative pronouns can accept as potential antecedents any category of constituent or even non-constituents, as in (15) where *which* is parallel in all respects to the demonstrative pronoun *this*:

(15)   John *built* Mary *a house*, *which* is more than he did for Martha.

Conclusion

I have argued that appositional structures, including non-restrictive relative clauses, should be analysed as being syntactically distinct from their host construction. Linkages between the two structures – the apposition and its host – would be at the semantic / discourse level.

A potential counter-argument to my non-syntactic account of apposition is based on an apparent adjacency requirement (Bob Borsley, p.c.)   If there is no syntactic construction that contains both the non-restrictive relative clause and its antecedent, how do I account for the fact that the non-restrictive relative clause, apparently, must immediately follow its antecedent in the main clause?   The evidence for such an adjacency requirement comes from the contrast shown in (16):

(16) i   Howard, who had originally opposed the proposal, enthusiastically adopted it.
     ii   *Howard enthusiastically adopted the proposal, who had originally opposed it.

Separating the non-restrictive relative clause from its antecedent *Howard* leads to unacceptability. But the lack of adjacency does not inevitably lead to unacceptability, as the sentences in (17) demonstrate:

(17) i   I was talking to Howard the other day, who tells me that you want to resign.
     ii   You should give it to Kim, I reckon, who would look after it well.

Particularly when we separate the relative clause and its antecedent with discourse-relevant material, as in (17ii), the result is impeccable. This suggests, again, that we should be looking for a discourse-based explanation. The non-restrictive relative clause, as with appositional constructions in general, is adding discourse-relevant material, typically extra background information. So pragmatically it would be expected to occur immediately adjacent to the sentence-constituent that it is most relevant to. But other discourse-relevant material can take priority. My conclusion then stands – that the optimal account of appositional structures is to treat them as non-syntagmatic, discourse-level phenomena.

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