

Comparative *rather*¹

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1. INTRODUCTION

1.1. *The issue: are rather than constructions comparatives?*

English *rather than* clauses display obvious surface similarities with comparative clause constructions. The parallelism between expressions where *rather than* is followed by clause remains, and such ordinary comparative expressions as *better than*, *taller than*, etc., followed by a clause or clause remains, suggests that the *rather than* expressions are just comparatives, derived in much the same way as the more familiar comparative forms. However, the derivation of *rather than* expressions as comparatives is not entirely straightforward. First, although *rather* has the form of a comparative adjective, *rath + er* (as required in comparative clause constructions), this is apparently a fossil form: in current English there is no adjective *rath* of which *rather* is the comparative. Thus, any treatment that derives comparatives from structures containing compared adjectives (e.g., *-er much tall* in Bresnan [1973]), would have to postulate an adjective *rath*, never realized in modern English, in order to give a unified treatment of *rather than* expressions as comparatives. Part of the purpose of this paper will be to argue for just such an account.

Another problematic difference between *rather than* and ordinary comparative expressions is the fact that in the former, the *than* clause is (almost) necessarily subjectless, while in the latter, full clauses may appear following *than*:

- | | | | |
|---------|----------------------------------|------------------------|----------|
| (1) (a) | Harry walked to work rather than | { *he
?*Bill
∅ } | drive. |
| (b) | Harry walked to work rather than | { *he
?*Bill
∅ } | driving. |
| (c) | Harry walked to work rather than | { *he
?*Bill
∅ } | drove. |

[1] We would like to thank Dwight Bolinger and Chris Clifford, whose comments at an early point in this study were most helpful in defining the questions to be raised. Thanks also go to the people who attended the Georgetown University Dissertation Hours in Spring, 1978, and to Fiona Burnett, for typing the paper.

- (2) Harry walked farther than $\left\{ \begin{array}{l} \text{he} \\ \text{Bill} \\ * \emptyset \end{array} \right\}$ ran.

In the examples of (1), *rather than* clauses have logical subjects identical to those of the clause preceding *rather*, and those identical subjects are necessarily null², at least on the surface. In contrast, the ordinary comparative in (2) displays no identical subject constraint, and no requirement for a null subject in the comparative clause, even when the subjects are identical. In addition, the subjectless *rather than* clauses in (1a) and (1b) display non-finite verb forms: present participles or even bare verb stems; in this too they differ from ordinary comparatives. Comparative clauses seem never to contain bare verb stems, and contain present participles only as the result of ellipsis of an ordinary progressive or nominal construction:

- (3) *Harry walked farther than $\left\{ \begin{array}{l} \text{he} \\ \text{Bill} \\ \emptyset \end{array} \right\}$ run(ning).
 (4) (a) I like sleeping better than (I like) studying.
 (b) The FBI was pursuing radicals harder than (it was) investigating organized crime.

The null subject and uninflected verb in some *rather than* clauses makes them look like certain (non-comparative) adverbial subordinate constructions; Thompson (1972) draws attention to this parallelism in her examples:

- (5) (a) *He skates in addition to he dances.
 (b) He skates in addition to dancing.
 (6) (a) *Tom tiptoed in without he woke up his parents.
 (b) Tom tiptoed in without waking up his parents.
 (7) (a) *Karna washed the car rather than she studied for the exam.
 (b) Karna washed the car rather than study(ing) for the exam.

Both Thompson (1972) and Dieterich (1978) treated *rather than* as a unitary form, an adverbial subordinator, and made no effort to further analyse *rather than* expressions as comparatives. In contrast, in the present paper we will try to provide evidence that *rather than* expressions derive from comparative

[2] It is possible for *rather than*, and similar sentences with *instead of*, to have nonidentical subjects. Thompson (1972) cites (i) as acceptable, and the present authors have collected one or two spontaneous occurrences, e.g., that in (ii):

- (i) I'll walk instead of Herbert(s) getting the car out.
 (ii) I had a topic that I was going to bring up during the meeting, and rather than everyone just sit (we could discuss it now).

—May, 1978

But the fact remains that nonidentical, non-null subject cases like (i) and (ii) are both much rarer than null identical subject forms, and also are marginal or unacceptable for some informants. No such conditions constrain ordinary comparatives.

structures, largely via rules required for generating ordinary comparative expressions.

1.2. *Two kinds of rather than construction*

Thompson (1972) first noted that *rather* can precede either a tensed or a tenseless clause, and that the presence or absence of tense corresponds to a meaning difference. A minimal pair that illustrates this meaning difference rather strikingly is given in (8):

- (8) (a) Mary seduced John rather than was seduced by him.
 (b) Mary seduced John rather than be seduced by him.

(8a) means that Mary seduced John, and not the other way around, as might have been claimed or supposed. (8b) on the other hand means that Mary chose seducing John over being seduced by him. Following Thompson's terminology, we will call the former reading – that associated with the tensed verb – the 'denial of assertion or assumption' (DOA) reading; the latter reading – associated with the untensed verb – we will call the 'preference' (P) reading. Thompson characterizes these two readings as follows; the P reading: a *rather than* sentence [with untensed verb] ordinarily presupposes that there is a preference on the part of the subject for the situation of the main clause over that of the adverbial clause, and furthermore that the action of the first clause will render that of the second clause unnecessary or impossible to carry out. (p. 242).

And the DOA reading:

These [tensed verb] sentences are generally used to deny an earlier assumption. For example, if I believe that there is an assumption that it snowed, which I want to deny, I can say

It rained rather than snowed.

no matter how I may have learned about that assumption. (p. 243).

Thompson (1972) proposed a single underlying structure for these two types of *rather than* construction. Dieterich (1978) noted syntactic differences between the two types, and argued for two distinct underlying structures: a sentential conjunction for tensed DOA sentences, and an adverbial complement modifying the main verb for untensed P sentences. We here follow Dieterich's lead in distinguishing syntactically between such pairs, but propose to derive both from comparative clause structures, where in the case of DOA sentences the comparative clause is a sentence modifier, while in P sentences it is a VP modifier.

2. EVIDENCE FOR RATHER THAN CONSTRUCTIONS BEING COMPARATIVES

We will present three arguments that *rather than* constructions – in both P and

DOA readings – are comparatives. First, there are significant morphological similarities between *rather* sentences and comparative structures, which appear not to be accidental when one considers some data from earlier stages of English. Second, there is a permutation rule that operates on comparative structures, which also seems to operate on *rather* sentences, and in precisely the way that our hypothesis would predict. Third, there is at least one constraint applicable to comparative structures that also applies to *rather* sentences. These three distinct kinds of similarities between *rather* sentences and comparative structures are accounted for if *rather* sentences involve comparative clauses. In Section 2 we will present these three arguments, carefully noting unsolved problems we have encountered.

2.1. Morphology

To claim that *rather* sentences like (8a) and (8b) involve comparative clauses, we must identify a comparative element and a comparative complementizer. We suggest that the morphological make up of *rather* is the comparative suffix *-er* (as in *faster*) plus the adverb *raih(e)*. And we claim that the *than* following *rather* in (8a) and (8b) is the comparative complementizer *than*.

While *raih(e)* does not occur in modern English as a free morpheme, it did so occur in earlier stages of English. Thus the OED gives examples of the adverb *raih(e)* meaning 'soon', 'early', or 'quickly', with a full range of modifiers. Here we offer examples with *too*, *as*, *so*, *very*, *somewhat*, and no modifier at all.

- (9) He reigned fiftene zere and died alle to rathe. 1330.

As rathe as thou hast I-sey these lettres, ne leue nat to come to socour. 1425.

Hee was wroth because she was ful of wrath so rath. 1649.

It was verie rathe to haue Monasteries built in all S. James time. 1565.

For that it was somewhat rath for to returne, they went to the Iland of Carnabalan. 1580.

Upon some Sundaie morning rath. light it. 1584.

Raih(e), used in this sense, appeared in a full range of adjective constructions; there were comparative forms (10), and superlatives (11):

- (10) The warke was finished rather than a man myght beleue. 1519.

The continuance of hot and dry weather may cause them come somewhat rather. 1609.

Playsed god that ye were arryued two dayes rather, For thenne ye had found my fader on Iyue. 1500.

- (11) His... untrained, or rather unlettered, or ratherest unconfirmed fashion. 1588.

There was also an adverb *raihely* (12), and a nominal *ratheness* (13):

- (12) Then sir Rowlande full rathely up he rase. 1400.

These ylles that we se come rathely. 1502.

- (13) God makes no difference between the ratheness and lateness of time. 1635.

But at some point in the history of English, *raih(e)* became bound to *-er* and only that form survives today.

As for the claim that the *than* in (8a) and (8b) is the comparative clause complementizer, this amounts basically to the null hypothesis. The burden of proof lies on those who would claim the *than* with *rather* is some distinct *than*.

2.1.1. A possible argument about *than*. There is, perhaps, an argument to be culled from the following discussion in favour of claiming that the *than* that follows *rather* is comparative *than*.

Hankamer (1973) argues that there are two *than*'s in English, a complementizer and a preposition, and he discusses some interesting behaviour of *than* phrases. Hankamer claims that when a comparative *than* phrase contains only a single NP, it ceases to be an island for movement rules when that NP is (understood as) an intransitive subject or a transitive object, but not when it is (understood as) a transitive subject. Reconstructing his examples for *rather* sentences, one of his arguments appears to translate, viz., his argument from the elimination of ambiguity. (14) is ambiguous between alternative deletion site versions as represented in (15a, b).

- (14) Max hit Bill rather than Harry.

(15) (a) Max hit Bill rather than \emptyset Harry.

(b) Max hit Bill rather than Harry \emptyset .

When the NP after *than* is moved, as in (16) and (17), acceptability is lowered, but apparently we get readings corresponding only to (15a), and not to (15b). That is, (16) asserts that Max didn't hit Harry (but hit Bill instead); (17) questions who Max didn't hit (hitting Bill instead).

- (16) Harry is the man who Max hit Bill rather than.

Harry is the man rather than whom Max hit Bill.

- (17) Who did Max hit Bill rather than?

Rather than whom did Max hit Bill?

(14-17) work out exactly the same way if *rather* is replaced by *harder*, thus yielding examples similar to Hankamer's. The only difference is that it is somewhat worse to move an NP out of a *rather* expression than out of other kinds of comparatives. (16) and (17) are relatively worse with *rather* than with

harder. In spite of the fact that (16) and (17) are not perfect, the disambiguation there seems pretty clear, and can be taken as an argument parallel to Hankamer's: Transitive object NPs, but not transitive subject NPs, can be extracted from a *than* expression, whether that expression is preceded by *rather* or by some ordinary comparative adjective.

Hankamer also produces the following examples to show that transitive subjects are more immovable than transitive objects, in the remains of comparative clauses:

- (18) ?There's nothing than which I like avocados less.
 (19) *There's nobody than whom I like avocados less.

Replacing *less* with *rather* in (18, 19) doesn't help us to show anything, however, because the *rather* version of (19) is not so good (on the intended reading) even without movement of the NP:

- (20) I like avocados rather than Bill (\neq rather than Bill likes avocados.)

In other *rather* examples our informants didn't like either transitive subject or object movement.

- (21) (a) John ate the beans rather than the steak.
 (b) *What did John eat the beans rather than?
 (22) (a) John ate the beans rather than Harry. (stress on *John*).
 (b) *Who did John eat the beans rather than?

Likewise, an intransitive subject can move from ordinary comparative phrases (as Hankamer says):

- (23) (a) John coughed louder than Bill.
 (b) Who did John cough louder than?

but moving from similar *rather* expressions is pretty bad:

- (24) (a) John coughed, rather than Bill.
 (b) *Who did John cough rather than?

So, for *rather* sentences it looks like any grammaticality differences that depend on what NP is moved are submerged in the general ungrammaticality of moving any NP, even when *rather than* is followed by only a single NP.

What is more, there are examples in which it is acceptable to move either the transitive subject or object NP out of a *rather* comparative and (*contra* Hankamer) also out of ordinary comparatives.

- (25) (a) What did you say you'll get to eat the avocados rather than?
 (b) Who did you say you'll get to eat the avocados rather than?
 (26) (a) What did you say you get to eat avocados less often than?
 (b) Who did you say you get to eat avocados less often than?

(25) and especially (26) cast some doubt on Hankamer's claim that transitive subjects and objects differ with respect to syntactic islandhood.

Given the questions we have raised about Hankamer's proposal, and the marginal or ungrammatical status of any *rather* sentence out of which an NP has been moved, it is not clear exactly what conclusions can be drawn. Still, the disambiguation data of (14-17), parallel for ordinary comparatives and the *rather* cases, may constitute an argument in favour of our hypothesis that *rather than* expressions are comparatives.

2.1.2. *A problem*. There are some discrepancies between pied piping out of *rather* comparatives and pied piping out of other comparative adverbials for at least some speakers. Thus, for ordinary comparative adverbials, the *than* can be pied piped with or without the head adverb for some speakers.

- (27) There's nothing which I like avocados more than.
 There's nothing than which I like avocados more.
 (28) There's nothing more than which I like avocados.
 What do you like avocados more than?
 ?Than what do you like avocados more?
 More than what do you like avocados?

But with *rather* comparatives the *than* cannot be pied piped without *rather*:

- (29) There's nothing which I'd eat avocados rather than.
 *There's nothing than which I'd eat avocados rather.
 There's nothing rather than which I'd eat avocados.
 (30) What did you eat avocados rather than?
 *Than what did you eat avocados rather?
 Rather than what did you eat avocados?

However, *rather* is not alone in this respect. Thus, substituting *faster* in place of *rather* in (29) and (30) results in the same grammaticality judgments for some. Furthermore, many speakers have uniform judgments for (27-30), finding the second sentence of each example group bad and the others strange. We leave this problem without further comment, with the knowledge that if it can be shown that *rather* occurs in a different comparative structure from *more*, then the permutation rule discussed in Section 2.2 below may have to be modified accordingly.

2.2. Permutation

2.2.1. *Ordinary comparatives*. Bresnan (1973) offers a syntactic analysis of comparative clauses. Since the syntax of comparative constructions is intricate, we will present some discussion of relevant aspects of the derivation of ordinary comparatives before proceeding to *rather* comparatives.

Underlying a sentence such as (31) would be (32):³

- (31) I'm sadder than I am angry
 [I am both angry and sad but I'm sadder than I am angry.]
 (32) I am -er much sad than I am x much angry.

In (32) *-er much*, the QP modifying *sad*, originates to the left of that adjective. However, there are also sentences like (33), where *-er much* originates to the right of its adjective, as shown in (34):

- (33) I'm sad more than (I'm) angry.
 (34) I am sad -er much than I am angry x much.

Bresnan also proposes a rule called QP Permutation, which moves *-er much* across the adjective in (34) to derive (35):

- (35) I'm more sad than angry.

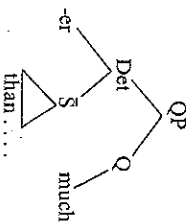
Bresnan (1973: 326-7) provides some motivation for this permutation rule, which we will not repeat here. In the course of this discussion, Bresnan observes that Comparative Ellipsis (CE) must first apply, deleting *I am* from the comparative clause, before QP Permutation can move *-er much* around its associated adjective. Thus apparently, Bresnan would find (36) ungrammatical:

- (36) ?I'm more sad than I'm angry.

We and our informants, on the other hand, find (36) marginal at worst. If the grammar is to generate (36), it must do so through application of QP Permutation, providing another argument for this rule. Let us see why.

- (37) (a) I'm sadder than I am angry. [= (31)]
 (b) *I'm sadder than I'm angry.
 (c) I'm -er much sad than I am x much angry.
 (38) (a) I'm sad more than I am angry.

[3] In Bresnan's account the comparative clause originates as a sister constituent to *-er* in the QP *-er much*:



The comparative clause is then extraposed; in (32) and elsewhere, we show it already in extraposed position.

- (b) I'm sad more than I'm angry. [= (33)]
 (c) I'm sad -er much than I am angry x much.
 (39) (a) I'm more sad than I am angry.
 (b) ?I'm more sad than I'm angry. [= (36)]
 (c) I'm sad -er much than I am angry x much.

Note that we can contract (*I am* → *I'm*) in the comparative clause when we have not combined *-er much* with its adjective, (38b), but cannot contract when we have combined them, *(37b). Bresnan proposes that the output of QP Permutation is a structure to which comparative adjective formation cannot apply. So, for example, only when *-er much* originates before an adjective like *sad* can this structure combine into *sadder*. When QP Permutation moves *-er much* to pre-adjective position, it cannot combine, and *more sad* must result. Thus, in (37a) and *(37b), the occurrence of *sadder* shows that *-er much* must have originated before *sad* in these sentences – i.e., they must have come from (37c). *(37b) is ungrammatical because *I am* is illegitimately contracted to *I'm* before the site from which *x much* has been deleted.⁴ In contrast, in (38b) and (39b) this contraction is acceptable. (39b) cannot derive from (37c) through Comparative Deletion (*x much* → ∅), because contraction would then be impossible before the deletion site of *x much*; (39b) must derive, via QP Permutation, from (39c), where the deletion site of *x much* lies to the right of the adjective *angry*. Thus QP Permutation helps to explain the acceptability of contraction in (39b), where without it, (given the rest of Bresnan's theory of comparatives), contraction should not occur.

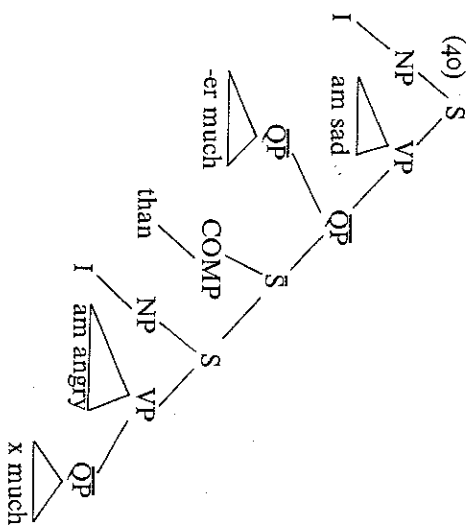
Having offered some evidence for the existence of QP Permutation, let us return to example (33), where the QP *-er much* originates to the right of its adjective. As Bresnan (1973) observed about a similar example, (33) is ambiguous: in one reading it asserts that the frequency or duration of my sadness is greater than that of my anger; in the second reading it asserts that what I feel is more like sadness than like anger. Bresnan associates this ambiguity with a syntactic distinction in which the QP structure [*-er much than S*] can either modify the main VP or the matrix S in a comparative sentence.

[4] We do not believe that constraints on contraction can be adequately explained in terms of a following deletion site, due to sentences like the following:

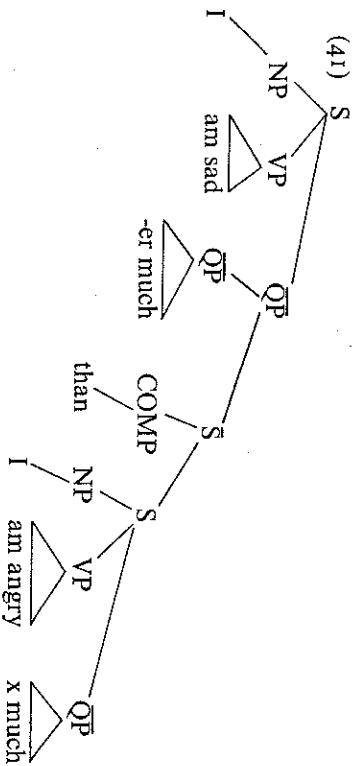
- The fact is/*fact's that smoking kills [from Kuno (personal communication)]
 Your theory can't account for the data in examples (2) through (756):
 { that is/*that's } your solution is inadequate.
 { that is to say/*that's to say }

See also Dieterich (1977) for an argument against the pre-deletion-site theory of contraction. In spite of the inadequacy of this theory to explain all cases where contraction is unacceptable, it does seem to be true that contraction is always unacceptable before a deletion site. Thus the acceptability of contraction in (39b), on which the present argument turns, does provide evidence that no deletion site intervenes between *I'm* and *angry* in that sentence.

The VP modifying structure corresponds to the 'frequency or duration' reading, and might be represented as follows:



The S-modifying structure corresponds to the 'more like sadness' reading, and might be represented as:



Now the rule of QP Permutation, as discussed above, has an interesting effect on the ambiguous sentence (33). When the QP *-er much* is permuted across the adjective in (35), the 'frequency or duration' reading disappears; (35) cannot mean that I spend more time sad than angry, but only that my feelings are more like sadness than like anger. Since the two readings correspond to a structural difference, as represented in (40) vs. (41), this disambiguation can be described by formulating QP Permutation to apply only to S-modifying structures like (41), and not to VP-modifying structures like (40).

2.2.2. *Rather comparatives*. Let us now turn to sentences with *rather*. As we have already seen in (8a, b) – repeated here – there are two kinds of sentences in which *rather* immediately precedes a *than* clause:

- (8) (a) Mary seduced John rather than was seduced by him.
- (b) Mary seduced John rather than be seduced by him.

These two forms correspond to two distinct readings, which were dubbed the 'P' versus 'DOA' readings. We wish to claim that the tensed sentence in (8a), with a DOA reading, derives from an S-modifying structure something like (41), while the untensed sentence in (8b), with a P reading, comes from a VP-modifying structure something like (40). To derive these *rather* comparative sentences from structures similar to those underlying ordinary comparatives means that the *rather* sentences should behave like ordinary comparatives with respect to some of the phenomena discussed above. In particular, our claim makes the following predictions:

- (i) There should be *rather* sentences with the properties of the ordinary comparative in (31), viz., sentences in which *rather* is base-generated in the VP-internal position, and which have only a reading corresponding to a VP-modifying structure; (in the case of *rather* sentences, this means they should have only a P reading).
- (ii) Ordinary comparatives in which the QP appears in VP-final position can be derived either from S- or VP-modifying structures (producing an ambiguity in example (33)); similarly, there should be sentences with VP-final *rather than*... which derive from an S-modifying structure (and which have DOA readings), and sentences with VP-final *rather than*... which derive from a VP-modifying structure (and which have P readings).
- (iii) To account for the disambiguation that accompanies permutation in the ordinary comparative sentence (35), we hypothesized that Bresnan's QP Permutation rule applies only to S-modifying structures, and not to VP-modifying structures; sentences with VP-final *rather than*... should similarly display permutation (of *rather*),⁵ but only for those sentences that derive from S-modifying structures, and not those that come from VP-modifying structures.

2.2.3. *Evidence*. With regard to prediction (i), we claim that *rather* in example (42) is base-generated in VP-internal position, with a P reading only:

- (42) Hal would rather go to the movies than study.

In its dominant reading, (42) attributes to Hal a preference for cinema over studying. To complicate matters, (42) also has a (barely detectable) DOA

[5] The rule that would thus permute *rather* would be an AP permutation rule, rather than a QP permutation rule. As yet we have not demonstrated the existence nor investigated the properties of such an AP permutation rule, so we cannot yet claim to have predicted the movability of *rather* from VP-final position. Below we will show that *rather* and other APs do permute, and argue that this permutation is accomplished by an extension of the QP Permutation transformation discussed above.

reading. Compare the similar *would rather* sentence in isolation in (43a), and in (43b), placed in a context that brings out a DOA reading:

- (43) (a) I would rather be dancing with a beautiful woman right now, than lying in this muddy foxhole.
 (b) If I had stayed a civilian, instead of joining the army, I would (◊) rather (◊) be dancing with a beautiful woman right now, than lying in this muddy foxhole.

We claim this DOA reading arises when *rather* is transformationally moved from a position immediately preceding the comparative clause, and is not simply an alternative reading of the base-generated VP-internal structure. Demonstration of this requires some of the discussion to be developed in connection with predictions (i) and (ii); so we will postpone further treatment of prediction (i). Below, we will argue that the P reading of (42) has *rather* base-generated in its surface VP-internal position, and that the minor DOA reading of that sentence has transformationally moved *rather*.

With regard to prediction (ii), we have already seen that sentences with VP-final *rather than*... permit both DOA and P readings; cf. examples (8a) and (8b). In the case of *rather than* constructions, unlike ordinary comparatives, the distinction is overtly marked by the presence or absence of tense on the verb in the *than* clause. We claim that the ambiguity of (33) is just the same phenomenon as the DOA vs. P distinction in VP-final *rather than*... sentences: both arise from an underlying structural distinction between S- vs. VP-modifying structures.

Some concrete evidence for this claim involves the permutation of *rather*, which we will now examine at some length. In prediction (iii) we anticipated that *rather* should be moveable in VP-final *rather than*... constructions, and that this movement of *rather* should be associated with S-modifying (DOA) structures, but not with VP-modifying (P) structures. These expectations are borne out. (44) displays *rather* in several alternative positions; all these sentences have DOA readings only:⁶

- (44) (a) Hal was detained rather than (was) arrested.
 (b) Hal was rather detained than (was) arrested.
 (c) Hal rather was detained than (was) arrested.

Furthermore, and crucially, *rather* thus occupies alternative positions only in the case of tensed-verb *than* clauses, and not in the case of untensed clauses:

- (45) (a) Hal got detained rather than got arrested.
 (b) Hal rather got detained than got arrested.

[6] The lack of a P reading in (44b), (46b) and (48b) is accounted for in the discussion immediately preceding examples (51).

- (46) (a) Hal got detained rather than get arrested. [i.e., Hal contrived to get himself detained in order to avoid arrest.]
 (b) *Hal rather got detained than get arrested.
 (47) (a) John threw out the leftovers rather than ate them.
 (b) John rather threw out the leftovers than ate them.
 (48) (a) John threw out the leftovers rather than eat them.
 (b) *John rather threw out the leftovers than eat them.

If the VP-internal *rather*'s in (44) through (48) are indeed derived through permutation of the *rather*'s in the (a) sentences, then these examples verify prediction (iii): *rather* is permutable out of VP-final *rather than*... constructions in DOA sentences, but not in P sentences; and (in view of (35)), the claimed source of DOA vs. P readings in S- vs. VP-modifying structures is supported. It remains to be argued that *rather* has been transformationally moved in (44) through (48), and by the same rule that moves the quantifier in (35).

In footnote 5 above, we pointed out that a rule permuting *rather* would be an AP permutation rule, not the QP Permutation rule of Bresnan (1973). We must argue that such an AP permutation rule exists, and has applied in (44b, c), (45b) and (47b). We must also argue that the rule was *not* applied in (42), under the dominant P reading of that sentence – for if the VP-internal *rather* in (42) could only arise via permutation from a VP-final *rather than*... construction, then our hypothesis (iii) above would predict that no P reading at all should occur.

One (strictly theoretical) argument for AP Permutation arises from considerations of symmetry in Bresnan's (1973) theory of comparatives. In Bresnan's account, all rules and characteristics described for comparatives hold for both QPs and APs. The one exception to this symmetry is the QP Permutation rule, for which Bresnan offers no corresponding AP Permutation rule. Thus the AP Permutation rule required to move *rather* in (44b, c), (45b), and (47b) would fill the gap in the parallel between QPs and APs in Bresnan's account of comparative structures.

Empirical evidence to back up this theoretical argument is offered by sentences in which a comparative AP can either appear VP-internally, or before a VP-final *than* clause:

- (49) (a) She would play the piano more likely than (she would) sing madrigals.
 (b) She would more likely play the piano than (she would) sing madrigals.

If Comparative Ellipsis (CE) has not applied to delete *she would* in the comparative clause of (49b), then contraction is permitted:

- (50) She'd more likely play the piano than *she'd* sing madrigals.

Unless (49b) and (50) are derived through permutation of the AP *more likely*,

the underlined contraction in (50) would (in Bresnan's theory) precede the site from which *x much* had been deleted. This would predict, falsely, that contraction should be blocked in (50). So, permutation must have occurred in (49b) and (50). This provides evidence, independent of *rather* comparatives, for the existence of a rule of AP Permutation.

Having established that AP Permutation exists, we will now argue (i) that this rule has applied to move *rather* in (44b, c), (45b), and (47b), but not in (42), under the dominant P reading of that sentence, and (ii) that the rule that accomplishes this AP movement is the same rule that moves QPs in sentences like (35). If QP Permutation and AP Permutation are the same rule, we would expect them to observe the same constraints. The form of our argument, then, will be to show that a rule that moves *rather* in (44), (45), and (47) obeys constraints similar to those on QP Permutation, while a rule to move *rather* in (42) would behave quite differently.

Consider first sentences like (42), in which *rather* appears in VP-internal position with a P reading. In all such cases an auxiliary (usually a modal), must be present in the noncomparative clause.⁷ The examples in (51), like (42), have P readings, expressing the preference of the subject NP for one activity over another. But the examples in (52), with no auxiliaries present, have no such readings:

- (51) (a) He might rather wait here than go with you.
- (b) Jane would always rather lie than face punishment.
- (c) I had rather not speak than play the fool.
- (d) I will rather suffer myself to be made a pack-horse than bear other mens faults.⁸ 1675.
- (52) (a) I always rather sing than dance.
- (b) I rather always sing than dance.
- (c) We love rather to dazzle the Multitude than consult our proper Interest. 1711.

In contrast, comparative QP-S-modifiers can end up in VP-internal position regardless of whether there is an auxiliary present in the matrix clause:

- [7] Sentences like (i) are not cases of P sentences with an absent *than* clause:
- (i) Mary rather enjoys meat.

Indeed, one would be hard put to suggest a *than* clause to add to (i) that would not drastically alter the meaning of the *rather*. Instead, (i) is an example of the simple adverbial *rather* that occurs in many other places as a degree word, including before even comparative adjectives and adverbs, where other comparatives are excluded:

- (ii) rather quickly, rather tall, rather more quickly (than ever before), rather taller (than I expected) (cf. *more taller).

[8] *Will* seems no longer to be among the modals that permit an immediately following *rather* to take a P reading. From example (51d), we presume that, in the 17th century, *will* was similar to *would*, *might*, and *had* in this respect, though in the absence of informants, it is hard to tell what reading (51d) had. Sentences (51d) and (52c) are, as with previous dated examples, drawn from the *Oxford English Dictionary*.

COMPARATIVE *RATHER*

- (53) I (would) act more foolish than clever.

This is true also for permuted comparative APs:

- (54) By the looks of you, you (would) more likely play rock than sing madrigals.

And the same is true for *rather* sentences with DOA readings (note the tensed verbs in the comparative clauses of (55a, b)):

- (55) (a) The hermit rather ate meat continually, than abstained, as you have suggested.
- (b) John was rather detained than (was) arrested.

From (53) and (54) we conclude that, for ordinary comparatives, QP/AP Permutation does not require the presence of an auxiliary element in the matrix sentence. Consequently, if the *rather* comparatives in (51) were to be generated by way of QP/AP Permutation, an extra constraint would have to be placed on this rule to the effect that when the AP is *rather*, an auxiliary must be present in the matrix clause. Furthermore, that constraint would hold only for *rather* sentences with P readings (as in (51)), and not for those with DOA readings (as in (52) and (55)). Clearly this constraint is *ad hoc*. However the hypothesis that the permutation rule has operated in (52) and (55) requires no such additional constraint. We conclude that the data in examples (51) through (55) provide evidence that QP/AP Permutation has transposed *rather* in the sentences of (52) and (55), but not in those of (51).

Sentences in which *rather* co-occurs with auxiliary *have*, as in (51c), offer another argument that P sentences with VP-internal *rather* do not involve permutation. (56a) is one such sentence, similar to (51c):

- (56) (a) I had rather eat roastbeef than choke down raw squid.
- (b) *I had eat roastbeef rather than choke down raw squid.

If (56a) is derived via permutation of *rather*, it is not clear what it is derived from, for *(56b) is ungrammatical. Some *ad hoc* device would be required to block *(56b), yet allow (56a) to be generated from the same underlying structure. In contrast, (57a), with *had rather* and a DOA reading, does not raise this problem:

- (57) (a) I had rather eaten roastbeef than choked down raw squid.
- (b) I had eaten roastbeef rather than choked down raw squid.

(57b), the non-permuted version corresponding to (57a) is impeccably grammatical.

Had rather examples also show another parallel between DOA sentences and permuted QPs and APs – a parallel lacking for similar P sentences. P

reading examples like (56a) do not permit *rather* to precede the auxiliary, *(58a), while DOA sentences do permit this, (58b):

- (58) (a) *I rather had eat roastbeef than choke down raw squid.
 (b) I rather had eaten roastbeef that choked down raw squid.

Furthermore, in general, permuted QPs and APs can precede an auxiliary that might be present:

- (59) (a) I more would act foolish than clever.
 (b) I more had acted foolish than clever.
 (c) By the looks of you, you more likely would play rock than sing madrigals.
 (d) By the looks of you, you more likely (would) have played rock than (have) sung madrigals.

The examples (56) through (59) once again support the line of reasoning developed in connection with examples (51) through (55) above: Constraints on sentences having VP-internal (or initial) *rather*, and DOA readings, parallel those on permuted QP and AP sentences, while constraints on P reading sentences differ. As before, we take this as evidence that QP/AP Permutation has transposed *rather* in DOA sentences (57a) and (58b), but not in P sentence (56a).

At this point we should return to tie up an end that we left loose with respect to prediction (i), and example (42). Above, we claimed that the dominant P reading of (42) had *rather* base-generated in VP-internal position, while the minor DOA reading involved transformational movement of *rather*. We have now provided some evidence for these claims, and demonstrated the validity of prediction (i): There is reason to think that the DOA reading of (42) involves a transformationally moved *rather*, just as do the DOA sentences of (52), (55), (57a), and (58b). But in the P reading of (42), as also in (51) and (56a), there is no independent evidence for transformational movement of *rather*, and no independently motivated rule that would perform such a permutation. We may conclude that unambiguously P-reading sentences with VP-internal *rather* have *rather* generated in that position by the base. In Section 2.2.4. we will present one more argument concerning permutation of *rather*.

2.2.4. *Conditions on Comparative Ellipsis*. As we noted in Section 2.2.1. above, the application of QP/AP Permutation tends to favour the concomitant application of Comparative Ellipsis (CE). Thus ?(36) was somewhat worse than (35):

- (35) I'm more sad than angry.
 (36) ?I'm more sad than I'm angry.

According to Bresnan (1973), (36) should be altogether ungrammatical. Bresnan claims that application of CE is a necessary precondition on the permutation of the QP in (35). We do not find (36) to be so bad, but admit that there is some interaction between the application of CE and that of QP/AP Permutation of ordinary comparatives.

If, as we claim, *rather than* sentences are comparatives, and subject to the various rules and constraints that apply in the derivation of comparatives, then they should display the same interaction between CE and QP/AP Permutation that ordinary comparatives do. Accordingly, consider the following examples:

- (60) (a) Mary was detained more often than arrested.
 (b) Mary was detained more often than she was arrested.
 (61) (a) Mary was more often detained than arrested.
 (b) Mary was more often detained than she was arrested.

In (60, 61) we see the interaction between the two rules, for ordinary comparatives. In the sentences of (60) a QP occurs in its base-generated position, while in (61) that QP has been permuted. In the (a) examples of (60, 61), CE has applied, while in the (b) examples it has not.

Informants find both (60a) and (61a) to be good; but when asked to compare (60b) with (61b), they find the former, in which CE has applied, better than the latter, in which it has not. This just shows the previously noted interaction between CE and QP/AP Permutation: reduced acceptability results when a QP has been permuted, but CE has not been applied.

Now consider the parallel case with *rather than* sentences⁹:

- (62) (a) Mary was detained rather than arrested.
 (b) Mary was detained rather than was arrested.
 (63) (a) Mary was rather detained than arrested.
 (b) Mary was rather detained than was arrested.
 (63') (a) Mary rather was detained than arrested.
 (b) Mary rather was detained than was arrested.

The informant data here are considerably less clear than for the ordinary comparatives of (60, 61). Most informants, asked to compare (62b) with (63b), prefer (62b), where CE has applied. But most of these same informants also prefer (62a) to (63a). For this pattern of responses, it is impossible to tell

[9] Note that the subject NP of the second clause in (62) and (63) must disappear, as is usual with *rather than* sentences, regardless of whether *rather* has been permuted:

*Mary was rather detained than she was arrested.
 *Mary was detained rather than she was arrested.

The effect of CE in (62, 63) is simply to delete identical portions of the predicate of the *rather than* clause. We will discuss the (almost) obligatory deletion of subject NPs in *rather than* clauses in Section 3.3. below.

why (62b) is preferred to (63b). It could be due to the interaction between the permutation and ellipsis rules, as in (60, 61); but it could merely reflect an across-the-board rejection of permutation in these *rather than* sentences. Note that these data do not disconfirm our hypothesis about the interaction of the two rules in *rather than* sentences, though they fail to support the hypothesis. Other informants reported a pattern that does support the hypothesis: (62a) and (63a) are both acceptable, but (62b) is better than (63b). This is the same pattern that was found for (60, 61).

The data are somewhat improved for some informants by substituting (63') for (63). Such informants report (62a) and (63'a) to be nearly comparable in acceptability, but find (62b) better than (63'b), again paralleling the pattern reported for (60, 61).

In summary, the somewhat variable results we obtained from informants on (60), (61), (62), (63), and (63') tend to support the hypothesis that *rather than* and ordinary comparatives are both subject to similar interaction between the rules of QP/AP Permutation and CE. The permutation of the QP or AP favours the ellipsis of material from the second clause. Several informants reported the pattern predicted by this hypothesis: no informants reported the reverse of this pattern, though several produced responses that did not bear on the hypothesis one way or the other, as described above.

The interaction between CE and QP/AP Permutation, noted for ordinary comparatives in (60, 61) extends to examples where *rather* is permuted. This provides another argument that these rules have applied in the derivation of *rather than* sentences such as those in (62, 63), and thus that *rather than* sentences are true comparatives.

2.3. *Extraction from comparatives*

Bresnan (1975), among others, observes that comparative clauses are syntactic islands. While it is true that rules do not usually extract NPs from comparative clauses, it is also true that NPs are often not freely extractable from a matrix clause which contains a comparative clause:

- (64) (a) John fries potatoes more often than Sally swims in the Gulf.
 (b) *What does John fry potatoes more often than Sally swims in?
 (c) ?What does John fry more often than Sally swims in the Gulf?

Extraction from the matrix of a comparative sentence, ?(64c), is considerably worse than extraction from the matrix of a similar adverbial clause sentence, (65c):

- (65) (a) John fried potatoes while Sally swam in the Gulf.
 (b) *What did John fry potatoes while Sally swam in?
 (c) What did John fry while Sally swam in the Gulf?

We do not know why the matrix clause of a comparative should thus show a tendency to insularity. But we wish to show that this insularity interacts with

the presence of an S- vs. VP-modifying underlying structure for ordinary comparatives, and that the same interaction occurs for *rather than* sentences, just where it would be predicted by our hypothesis that such sentences are comparatives, and derive from S- or VP-modifying structures.

Consider then the following examples:

- (66) (a) I play Hearts more often than Bridge.
 (b) What card games do you play more often than Bridge?
 (67) (a) I more often play Hearts than Bridge.
 (b) What card games do you more often play than Bridge?

In (67a) the QP *more often* has been permuted from the base position that it occupies in (66a). As we argued above, this permutation takes place only in S-modifying structures. So (67a) can only derive from an underlying S-modifying structure, in contrast to (66a), which has a VP-modifying source as well as an S-modifying source. In the (b) examples above, an NP has been extracted from the matrix clause of the permuted and nonpermuted versions of this sentence. All our informants found both (66a) and (67a) good, and (66b) better than (67b). Thus with an ordinary comparative, it is apparently easier to extract an NP from the matrix clause of a VP-modifying structure than from that of an S-modifying structure.

Now consider some examples with *rather than*:

- (68) (a) I stayed in Chicago rather than go to Pittsburgh.
 (b) Where did you stay rather than go to Pittsburgh?
 (69) (a) I stayed in Chicago rather than went to Pittsburgh.
 (b) Where did you stay rather than went to Pittsburgh?

By our hypothesis, (68a), with a tenseless verb *go* in the *rather than* clause, derives from a VP-modifying structure, while (69a), with tensed verb *went*, derives from an S-modifying source. As before, the (b) examples show extraction of an NP from the initial clause of these two structures. Once again, the data for the *rather than* cases is not quite as clear as that for ordinary comparatives. Our informants split into two groups. One group found (68a) and (69a) acceptable, and (68b) better than (69b). For this group it is easier to extract an NP from the initial clause of a tenseless *rather than* sentence than from that of a tensed sentence. For the second group, (68b) was still better than (69b), but (68a) was also better than (69a). So for this group, the difference in acceptability of the (b) examples is not necessarily due to the effects of NP extraction. These informants reported that (69b), with a tensed verb, was ungrammatical. We believe that this judgment may be an artifact of the informant situation. Some informants seem to establish a 'mental set' for tenseless *rather than* sentences; when presented with a tensed sentence, they try to give it a P reading, and reject it syntactically. Providing some discourse context sometimes helps such informants see an alternative DOA reading, which they then judge syntactically acceptable. Thompson (1972: footnote 3)

reports similar difficulties in getting informants to see DOA readings, and accept tensed *rather than* sentences.

The results of our informant work with the sentences of (66), (67), (68), and (69) are similar to those reported in Section 2.2.4.: One group of informants – the group that rejects (69a) – provides no evidence for or against our hypothesis. But another group supports the predicted parallelism between *rather than* sentences and ordinary comparatives. For this group, for ordinary comparatives it is easier to extract an NP from the initial clause of VP-modifying structures than from that of S-modifying structures; and for *rather than* sentences it is easier to extract from tenseless sentences – by our hypothesis, VP-modifying structures – than from tensed sentences – S-modifying structures. This parallel behaviour with respect to NP extraction supports our claim that *rather than* sentences are comparatives, and that tensed-verb sentences derive from S-modifying structures, while their tenseless counterparts derive from VP-modifying structures.

Note that in (67) we ensured an S-modifying source by permuting a QP, while in (69) we simply inserted a tensed verb in the second clause – by hypothesis, thus also ensuring an S-modifying structure. These two very different kinds of syntactic manipulations produced parallel results with respect to the possibility of NP extraction. If our hypothesis that (67) and (69) both come solely from S-modifying structures is rejected, then it may be difficult to find other syntactic similarities between (67) and (69) that would account for the similar extraction behaviour that they display.

3. PROBLEMS

There are at least three major questions we encountered (beyond those already pointed out above), to which we have no answer. We present them here in hopes that others who work on this topic may find an explanation. The first question poses no particular threat to our analysis. The second two potentially do, depending on what the correct answers turn out to be.

3.1. Right Node Raising

In the linguistic literature, Right Node Raising (RNR) is consistently claimed or assumed to apply only to coordinate structures.¹⁰ This is not the case. For certain adverbial clauses, RNR can extract identical NPs out of the matrix and subordinate clauses, and this is also true for some comparative sentences.

- (70) Mary loves, although I detest, any film by Fellini.
 (71) Mary would cook, more readily than eat, turtle soup.

[10] See Ross (1967), Bresnan (1974), Hankamer (1971), Postal (1974), Abbott (1976), among many others.

COMPARATIVE RATHER

Likewise, RNR can apply to some *rather* sentences:

- (72) John boiled rather than fried his eggs.
 John rather boiled than fried his eggs.
 (73) John would boil rather than fry his eggs.
 John would rather boil than fry his eggs.

The above facts pose no particular problem for our analysis of *rather than*; they do suggest that another look at RNR is in order. However RNR does interact with the DOA vs. P readings of *rather than* sentences in a way that our syntactic analysis of this distinction does not predict. Consider the contrast between (74b) and *(75b), (pointed out to Dieterich by Chris Clifford, and discussed in Dieterich (1978)):

- (74) (a) John boiled his eggs rather than fried them.
 (b) John boiled rather than fried his eggs.
 (75) (a) John boiled his eggs rather than fry them.
 (b) *John boiled rather than fry his eggs.

Why should RNR be blocked in the P-reading sentence *(75b), when it is good in the minimally contrasting DOA sentence (74b), and good in the sentences of (73), which, on semantic grounds at least, also have P readings? Two possible accounts occur to us, but we cannot make a strong case for either of them. First, perhaps the modal *would* in (73) produces a P reading in a sentence where the comparative clause is structurally S-modifying. If so, then perhaps RNR is associated with S-modifying comparative structures (as in (73) and (74)), and blocks with the VP-modifying structure in (75). This proposal would make what we have been calling the 'P reading' a product of a syntactic conspiracy: P readings could be produced either by a VP-modifying underlying structure, or by the presence of certain modals in an S-modifying structure. This feature is perhaps a drawback to the suggested analysis.

Another possible account of the contrast in (74, 75) is based on stylistic factors. Abbott (1976: 641) claims that some RNR sentences are bad due to 'factors that make processing difficult or that produce clumsy and stylistically inappropriate examples'. While Abbott was concerned with different problems from ours, her suggestions could perhaps be extended to apply to (74b) and *(75): the latter sentence might be bad because the sequence *boiled rather than fry* violates some sort of 'parallelism' requirement. This required parallelism would include at least the following condition: when *rather than* is followed by only one node of category C which does not branch to major categories other than C, and when *rather than* is preceded by a word or words of category C, both C elements (preceding and following) must 'match' in some sense. What it means to 'match' depends on the specific category C. For verbs, the inflection must match. Note that the matching requirement would

be a morphological, not a phonological one. Thus (76) has only a DOA reading:

- (76) The boys boil rather than fry their eggs.

Here both verbs must be interpreted with matching inflection (in this case, third person plural present).

We leave these sketchy proposals, noting that some convincing explanation for the contrast between (74b) and *(75b) must ultimately be found.

3.2. Clause fronting

Thompson (1972) noticed that tensed *rather than* clauses cannot be fronted, while untensed ones can:

- (77) (a) *Rather than boils his potatoes, John fries them.
(b) Rather than boil his potatoes, John fries them.

These data were one basis for Dieterich's (1978) claim that untensed *rather than* clauses are adverbial subordinators, while their tensed counterparts derive from a distinct (co-ordinate clause) structure. It is difficult to explain the contrast in (77) in terms of our present analysis of *rather than* clauses as S- or VP-modifying comparatives, for ordinary comparative clauses behave somewhat differently when we try to front them. Recall the ambiguous comparative sentence of (33):

- (33) I'm sad more than (I'm) angry.

Following Bresnan (1973), we identified the 'frequency or duration' reading of this sentence with a VP-modifying structure (40), and the 'more like sadness' reading with an S-modifying structure (41). It is somewhat difficult to front the comparative clause of (33), but insofar as it is possible to do so, the resulting sentence seems to have only the 'more like sadness' reading:

- (78) ?More than (I'm) angry, I'm sad.

Unfortunately, this is the reading associated with the S-modifying structure – just the structure that resists fronting in *(77a), under our major hypothesis about the source of tensed vs. tenseless *rather than* sentences. In the several cases we examined previously, tensed-verb *rather than* clauses acted like S-modifying ordinary comparatives, while tenseless-verb clauses acted like VP-modifying comparatives. In this one case of clause fronting, these parallels are reversed. Thus our hypothesis about the source of tensed vs. untensed *rather than* clauses makes the wrong prediction in this particular case. We have no way of explaining the contrast in (77) in terms of the syntactic structures that we have previously motivated for *rather than* clauses. This must count against our analysis for the present, though some other explanation for the data in (77, 78) may be found.

3.3. Absent subject

Rather sentences can have a comparative clause subject that is distinct from the matrix subject:¹¹

- (79) (a) I saw John rather than he saw me.
(b) I'll marry Bill rather than my daughter marry him.
(c) I had a topic that I was going to bring up during the meeting, and rather than everyone just sit (we could discuss it now).

((79c) is a live example collected at a conference (not a linguistics conference), in 1978).

However, when the subject of a *rather than* clause is understood as coreferential with the matrix subject, it customarily does not appear on the surface:

- (80) I sang rather than (*I) danced.
I spilled the beans rather than (*I/*me) be tortured.

Given the tendency towards subjectlessness displayed in (80), it might be proposed that the material following *rather than* is base-generated as a VP, not an S. However, there are several arguments against this proposal. There sometimes occur examples of *rather than* sentences with identical subjects overtly expressed:

- (81) I suppose people do worry. But once you have made the major decision to go to war, you have agreed to take all the risks of war, including the killing of innocents. Even if it were just the guilty on one side it would still be a problem, because it is still human beings being killed. Whether you like them or not, it is better that they live rather than they die.

—Washington Post, 2/25/79.

(81) is a quote attributed to Julius Nyerere, President of Tanzania. Informants who were not previously acquainted with our interest in *rather than*, when asked to read this passage, found nothing wrong with it at all.

Other arguments against the base-VP proposal present themselves. First,

[11] There is some question as to whether these examples actually have distinct subjects in the matrix and comparative clauses. An alternative proposal for the sentences of (79) might be to derive them from sources with a deleted causative verb in the *than* clause. For (79b) this would be something like:

- (i) I'll marry Bill rather than let/have my daughter marry him.

Note that a pronominal version of (i) would have an accusative pronoun, not a nominative:

- (ii) I'll marry Bill rather than her/*she marry him.

In (ii) the pronoun, the logical subject of *marry*, appears to have been raised to a position as object of some verb that does not appear on the surface; a reasonable candidate would be the *let* or *have* of (i).

DOA sentences, as illustrated by many previous examples, undergo subject-verb agreement, most easily and naturally stated if the subject appears at some underlying level. Second, both DOA and P sentences allow quantifiers which have scope over the subject:

- (82) (a) We both sang rather than both danced.
 (b) We chose to follow different careers rather than both become doctors.

It has been argued (e.g. by Postal, 1976), that quantifiers such as these have floated off a subject NP. In (82b), *both* could have floated off the matrix subject, but in (82a), with two *both*s, the Q-Float rule would have to perform a quantifier distribution – previously unattested – unless there was an underlying embedded subject for the second *both* to have floated off of. Third, *than* elsewhere introduces only an S or an NP (see Hankamer, 1973). Thus, a VP following *rather than* would require an *ad hoc* complication of the subcategorization restrictions for *than*, or alternatively would require us to recognize a new *than*, distinct from that which occurs in ordinary comparatives. Fourth, the subjectless examples of (80) would have to have drastically different deep structures from the sentences in (79) and (81), where overt subjects appear, in spite of their semantic and syntactic behaviour similarities. A fifth argument presents itself in a theory in which auxiliaries are directly dominated by S, rather than being a part of a VP; *rather than* sentences allow auxiliaries associated with the verb in the expression following *than*:

- (83) He was still in school at that time, rather than had already graduated, as you claim.
 And even when no auxiliary appears, the verb of the *than* expression sometimes shows evidence of a deleted auxiliary:
 (84) They would have died rather than refused.
 They would rather have died than refused.

The participial inflection of *refused* in (84) is the result of affix hopping from a perfective auxiliary. If the auxiliary is directly dominated by S, rather than by VP, then these examples provide further evidence that the material following *rather than* is dominated by a base-generated S node.

These arguments provide considerable support for the position that *rather than* expressions are derived from underlying clause via a rule that deletes an identical subject NP from the *than* clause. Judging by the relative frequency of subjectless vs. subject-containing *rather than* expressions, this rule is strongly preferred, and seems to be obligatory in many cases, such as those of (80). The existence of and strong preference for this subject deleting rule marks a difference between *rather than* comparatives and ordinary ones, as was noted in Section 1.1. above. This rule does not seem to have been previously

motivated, independently of *rather than* clauses. But note that the rule does operate outside of *rather than* sentences, for example with *instead of*:

- (85) Mary seduced Bill instead of (*she) was seduced by him.
 Mary seduced Bill instead of (*she/*her) being seduced by him. (cf. example (i) footnote 11).
 and also with *sooner than* comparative clauses with tenseless verb:

- (86) Mary seduced Bill sooner than (*she/*her) be seduced by him.
 Contrast (86) to (87), in which we have a purely temporal (as opposed to a preference) reading of *sooner than*, and in which the subject NP alone cannot be deleted:

- (87) John has to pick up his son sooner than (he/* \emptyset) has to pick up) his wife.

We have no explanation for why *rather than* comparatives (and the *sooner than* and *instead of* sentences that pattern with them), permit or require deletion of the subject NP from the embedded clause, when ordinary comparatives do not. This is another problem for further investigation.

4. SEMANTICS OF RATHER THAN, AND LOGICAL CONNECTIVES IN NATURAL LANGUAGE

The semantics of untensed P-reading *rather than* sentences involves a propositional attitude connection between the two clauses: one of the truth conditions on a sentence of the form *p rather than q* (with untensed verb in *q*), is that the subject of *p* intends *p* to eliminate the possibility of *q* (see Thompson, 1972: 242). As Thompson points out, this intention condition would explain the strangeness of the sentence:

- (88) It rained rather than snow.

(88) is semantically anomalous because it is impossible to construe the dummy subject *it* as 'intending' anything. As further evidence, negation and modal conditions characteristically operate on the intention condition between the two clauses of a P sentence:

- (89) (a) Possibly, Mary seduced John rather than be seduced by him.
 (b) Mary didn't seduce John rather than be seduced by him.

In (89a), *possibly* can be taken to have scope over the entire sentence, and in this case the possibility attaches not to the truth or falsity of either clause, but to the intention relation between them: Mary's reasons for seduction might have been to avoid being seduced. Similarly, (89b) denies that Mary's

intention was to avoid seduction: it would be perfectly reasonable to continue (89b) as follows:

- (90) Mary didn't seduce John rather than be seduced by him, in fact he wasn't interested at all before she made her move.

Very different semantically are tensed, DOA-reading *rather than* sentences. The sentence (91) asserts that Harry walked, and denies a previous assertion that he drove:

- (91) Harry walked to work rather than drove.

If (91) has the form *p rather than q*, it is true just in case *p* is true and *q* false.¹² Thus (91) and other tensed, DOA *rather than* sentences would appear to be truth-functional sentences, corresponding to the truth table for $p \wedge \sim q$:

<i>p</i>	<i>q</i>	$\sim q$	$p \wedge \sim q$
t	t	f	f
t	f	t	t
f	t	f	f
f	f	t	f

If this is true, then rather than, with a tensed verb in the second clause, would be a lexicalization of the logical connective 'and not'.

This fact is of particular interest in light of Gazdar and Pullum's (1976: 230) claim that 'only three definable truth functional connectives are admissible as lexical items in natural languages'. The three connectives that their constraints permit are 'and', 'inclusive or', and 'exclusive or'. 'And not' should be excluded according to Gazdar and Pullum, because it fails their test of commutativity. That is, $p \wedge \sim q$ has a different truth table from $q \wedge \sim p$.

Gazdar and Pullum consider and reject another lexical candidate for 'and not', namely *without*. They reject *without* as a logical connective on the grounds that 'the syntactic properties of *without* show it to be nothing like a co-ordinating word linking sentences at equal rank. It is very clearly a subordinating predicate, making one sentence part of the predicate of another' (p. 221). In contrast, recall that the syntactic evidence of this paper has shown that *rather than* does not subordinate a tensed clause to the predicate of the preceding clause. Furthermore, *without* claiming that tensed-clause *rather than* is a co-ordinating word, we can show that it passes

[12] There does seem to be a presupposition, or conventional implicature in the sense of Karttunen and Peters (1975), attached to such sentences. This condition has to do with the preceding content of the conversation in which the *rather than* sentence occurs: (91) can only be uttered in case someone has previously asserted or assumed that Harry drove to work. Such presuppositions are best stated as felicity conditions on the use of a sentence, independent of its truth value. Thus the presence of this 'prior assertion' condition does not affect our contention about the truth-functionality of these sentences.

all the syntactic tests that Gazdar and Pullum use to reject *without* as a logical connective. These tests are three: first, '*without* cannot permit tense in the clause it introduces'; as we have seen, DOA *rather than* does. Second, '*without* defines a context in which Equi-NP Deletion may apply, giving evidence that it introduces a subordinate clause'. *Rather than* clauses also lose their subjects, but there is no evidence that this is the result of Equi. Equi does not operate in other comparative clause contexts, and never does Equi leave a tensed verb following the subject NP that it deletes. Third, 'in a true co-ordinate structure the constituents can take negation independently, but the negation in a *without*-clause is within the scope of negation (or any other operator) on the main clause' (all quotes, p. 221). Gazdar and Pullum's examples of the effects of negation are these:

- (92) (a) The bomb wasn't tested, and the earth wasn't destroyed.

[G & P (5e)]

- (b) *The bomb wasn't tested, without the earth being destroyed.

[G & P (5f)]

Like 'and not' of (92a), tensed *rather than* clauses can take negation independently in either clause:

- (93) He didn't even enroll in the course, rather than didn't pass it, as you charged.

And unlike *without* in (92b), a negative in the initial clause does not extend its scope into a tensed *rather than* clause.

- (94) He didn't even enroll in the course, rather than failed it, as you charged.

(92b), insofar as we can interpret it, would be true in case the bomb was tested and the earth was destroyed; that is, the negation in the first clause affects the connection between the two clauses. (94), in contrast, would certainly not be true if he did enroll and did fail – just the reverse; thus in (94) the negation in the first clause affects only the first clause, not the denial of the proposition in the second clause. So Gazdar and Pullum's syntactic tests do not rule DOA *rather than* out of consideration, and in view of the apparent truth functionality of tensed *rather than* sentences, we must recognize this form as a viable natural language candidate for the logical connective 'and not'.

If the connective 'and not' is thus lexically represented in English, then this in turn casts doubt on Gazdar and Pullum's commutativity test, which rules out the possibility of 'and not' being so represented. Gazdar and Pullum base their commutativity condition on the assumption that linear order cannot be represented in underlying structure. Thus the evidence of tensed *rather than* sentences damages the contention that linear order cannot be represented underlyingly. Since this assumption is basic to various approaches to syntax, including relational grammar (as represented in Perlmutter and Postal (1978),

for example, our *rather than* data pose a challenge to the adequacy of such approaches, which they must address.

5. CONVENTIONALIZATION, AND SYNTACTIC AND SEMANTIC CHANGE

The fact that at an older stage of English there was an adverb *rath(e)* with a temporal meaning of 'soon', 'quick', or 'early', and that the present day *rather* has an 'in place of (DOA), or 'instead of (P) sense, is not really surprising. English (and other languages, such as Italian), often use the same word to express temporal relationships as to express a preference relationship:

- (95) I'd die before I'd surrender
I'd die sooner than surrender.
I'd die more readily than I'd surrender.
I'd die quicker than I'd surrender.

This is perhaps the result of an implicature along the following lines: if I would do *x* at a time preceding the occurrence of *y*, then maybe I prefer the occurrence of *x* to the occurrence of *y*. In time, this implicature seems to have become conventionalized for certain lexical items, so that, e.g., *sooner* may actually be ambiguous between temporal and preference readings (which in addition show syntactic differences); and *rather* loses the temporal meaning altogether – accompanied by the disappearance of all forms other than the one that looks like a comparative adjective.

Why *soon* and *rath(e)* conventionalized a 'preference' meaning when other temporal words like *early* and *before* did not, is a mystery to us.

6. SOME QUESTIONS FOR FURTHER STUDY

We have motivated a syntactic distinction between two underlying structures for *rather than* sentences. Sentences with tensed-verb comparative clauses, we argued, derive from S-modifying comparative structures, while those with tenseless-verb clauses derive from VP-modifying structures. We have discussed the semantic distinction (DOA vs. P readings), that attaches to these syntactic differences. Thus in answer to Thompson's (1972: 249) challenge, we have motivated underlying structural differences corresponding to this meaning difference, and avoided the necessity for Thompson's proposed meaning-changing transformation. However, it is not clear to us why this particular meaning distinction should arise from this particular syntactic difference. This question deserves the attention of students of syntactic function, and of the relation between syntax and semantics.

Some less sweeping topics for further study include the origin and syntactic behaviour of *druthers*:

- (96) If I had my *druthers*, we'd nationalize the oil companies.

And the relationship between *rather* before comparative clauses, and the adverbial *rather*, meaning 'somewhat':

- (97) (a) I rather like her.
(b) She's rather wonderful.
(c) – Do you like him?
– Rather!

7. CONCLUSION

Rather than sentences, either with tensed or untensed verb in the second clause, have the underlying form of comparative sentences. The tensed forms, with DOA readings, come from structures in which the comparative clause is an S-modifier, while tenseless forms, with P readings, derive from VP-modifying comparative structures. The DOA/P meaning distinction, as seen most clearly in an example like (8), arises not from optional application of a Subject/Verb agreement rule, but from an underlying structural difference. *Rather than* preceding a tensed clause was seen to be a good candidate for representing the truth-functional connective 'and not', contradicting the claim that this connective cannot be represented lexically in natural language, and raising a challenge for theories that cannot represent linear order in underlying structure.

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