

Comparative Correlatives and Verb Second

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The Verb Second requirement, which says that the finite verb must be placed in second position, is a pervasive property of root clauses in all the Germanic languages, with the exception of English (which has only residual Verb Second patterns, in questions and negative inversion contexts), and sets root clauses squarely apart from embedded clauses, where as a rule (barring CP–inversion contexts) Verb Second does not materialise. Den Besten’s (1977) classic study analysed the Verb Second restriction in a way that profoundly inspired and continues to inspire all subsequent studies of the left periphery. In another early piece of work, Den Besten (1978) presented support from Dutch for a *wh*-movement analysis of comparative deletion in sentential comparatives (i.e., comparatives in which what follows *than*, or its Dutch counterpart *dan* (on which Den Besten focused), is a CP), corroborating Chomsky’s (1977) analysis. The *wh*-constituent moved leftward in sentential comparatives is covert — in ‘seventies terms, it was effaced by a local deletion rule; in current terms, we would take it to be a null operator.

Both (null) operators and Verb Second play a key role in the analysis of comparative correlative constructions (*The more you eat, the fatter you get*) cross-linguistically.¹ Jespersen (1961:Vol. V, pp. 381–2) notes that, especially in earlier and literary varieties of English, the second clause of the comparative correlative can have the finite verb invert with its subject, producing a Verb Second order, as in (1).²

- (1)
- a. The more I know of the world, the more am I convinced. [Austen]
 - b. The farther we go back, the nearer we approach the natural state, the more do we meet the intricate multiplicity of nature. [Sayce]
 - c. The more we read the history of past ages, the more we observe the signs of our times, the more do we feel our hearts filled and swelled up by a good hope for the future destinies of the human race. [Macaulay]
 - d. The less you find, the less you see, the less you understand, the simpler is your existence. [Merriman]

Culicover and Jackendoff (1999:550) point out that (not surprisingly) inversion of subject and finite verb manifests itself obligatorily in the second clause in contexts in which inversion is generally triggered in root clauses — specifically, by a *wh*-operator:

- (2)
- a. The harder it rains, how much faster do you run?
 - b. The harder it rains, how much faster a flow do you see in the river?

In the first clause of the English comparative correlative, however, subject–auxiliary inversion would be profoundly ungrammatical — thus, there is no grammatical counterpart to a sentence such as (1a) which has inversion in the first clause (regardless of whether or not there is inversion in the second as well):

1 On comparative correlatives (otherwise known as ‘comparative conditionals’, on the grounds of their conditional interpretation; cf. fn. 6, below), see *i.a.* Ross 1967, Thiersch 1982, Fillmore, Kay and O’Connor 1988, McCawley 1988, 1998, Von Stechow 1994, Beck 1997, Culicover and Jackendoff 1999, Culicover 1999, Borsley 2003, Den Dikken 2003.

2 Jespersen (*ibid.*) states that ‘[i]nversion is pretty frequent in the postposed main statement, especially if it is preceded by more than one *the*-clause; this often contributes to clearness as to which is the superordinate’.

(1a') *The more do I know of the world, the more {am I/I am} convinced.

This follows straightforwardly from the fact that, as their name suggests, comparative correlatives are *correlative* constructions, with the first clause serving as a (free) relative clause adjoined to the second clause, which is the root of the construction.³ Den Dikken (2003) defends this analysis in detail, and argues that in standard English comparative correlatives such as *the more you eat, the fatter you get*, we are dealing, inside the relative clause, with a case of movement to the left periphery of a null operator — the null counterpart of the operator *how* in archaic English comparative correlatives of the type in (3) (cf. Jespersen 1961:Vol. V, p. 381).⁴

(3) By *how* much the lesse he looked for this discourse, by so much the more he lyked it.
[Lyly; frequent in his work]

In Dutch comparative correlatives, the operator is always overt. It has two alternative incarnations: one as a *wh*-operator (*hoe* ‘how’; cf. (3)) and one as an article or relative pronoun with genitive case (*des*):

- (4) a. *Hoe* meer je leest, *hoe* minder {je begrijpt/*begrijp je}.
how more you read how less you understand/understand you
b. *Hoe* meer je leest, *des te* minder {?je begrijpt/begrijp je}.
how more you read the-GEN TE less you understand/understand you
c. *Des te* meer je leest, *des te* minder {je begrijpt/begrijp je}.
the-GEN TE more you read the-GEN TE less you understand/understand you
all: The more you read, the less you understand.

The first clause in the examples in (4) is uneventful in signalling movement to the left periphery overtly as a case of pied-piping movement triggered by a *wh*- or relative pronoun, giving rise to no inversion of subject and finite verb, in keeping with the status of the first clause as a relative clause. But things are more complicated in the second clause, in particular when it comes to the distribution of subject–verb inversion inside it. It is this tangle of facts that I would like to try to begin to disentangle in this essay. With particular reference to the Dutch facts, I will address the question of whether or not the verb inverts with its subject within the constituent clauses of the comparative correlative construction, and under what circumstances inversion (Verb Second) is possible or forced. The discussion will lay out the basic pattern of facts and sketch out an account for them against the background of the macrosyntactic structure of comparative correlatives.

Let me start by pointing out that, no matter what the preferences for inversion or lack thereof in the examples in (4), in *embedded* contexts all examples in (4) behave exactly the same way: the only grammatical word order in the second clause of the embedded comparative correlative is the verb-final order, as is shown in (5).

3 Hungarian presents a nasty problem here: though its comparative correlatives behave largely like garden-variety correlatives (which Hungarian features productively), the relative clause is ill-behaved in allowing, and often even forcing, inversion of the finite verb and the verbal modifier (generally viewed as an effect of verb movement), something which otherwise never happens in relatives. A full discussion of the extremely complicated facts of Hungarian comparative correlatives is beyond the scope of this paper.

4 Of course, in *The more you eat, the fatter you get*, it is not just the operator that is null: there is no preposition corresponding to the *by* of (3), nor is there a quantifier corresponding to *much*. But the gross structure of present-day English comparative correlatives is arguably parallel to that of archaic English (3), the perfect model for the microsyntactic analysis of comparative correlatives cross-linguistically (cf. Den Dikken 2003 for discussion).

- (5) a. Ik denk dat *hoe* meer je leest, *hoe* minder {je begrijpt/*begrijp je}.
I think that how more you read how less you understand/understand you
 b. Ik denk dat *hoe* meer je leest, *des te* minder {je begrijpt/*begrijp je}.
 c. Ik denk dat *des te* meer je leest, *des te* minder {je begrijpt/*begrijp je}.

This dependency of the word order inside the second clause of the Dutch comparative correlative on the root/non-root asymmetry confirms that the second clause is the head of the construction (abbreviated hereinafter as HEADCL). And of course, the fact that the first clause has verb-final word order regardless of the external syntactic context is readily compatible with the claim that it is a (free) relative clause (RELCL). So what we have at this time is the following perspective on the macrosyntax of comparative correlatives:

- (6) *The macrosyntactic structure of comparative correlatives*
 [RELCL [REL+CPR]_i ... t_i ...], [HEADCL [CORREL+CPR]_j ... t_j ...]

This structure still leaves many a microsyntactic detail unaddressed, but as a starting point, (6) is promising.

Two questions arise immediately in the light of what we have seen so far. One is how comparative correlatives are embeddable at all; the other concerns the verb-placement facts in the HEADCL in (4). À propos the former, let me hasten to add that, while (5a–c) are all grammatical, it should not be inferred from this that embedding the comparative correlative is unconstrained — on the contrary, it is highly restricted: it succeeds well only in finite complements to bridge verbs. (7a) is appreciably worse than the examples in (5), and embedding the comparative correlative in non-finite contexts, as in (7b) and (8b), is entirely impossible.

- (7) a. ^(?)Het is aantrekkelijk/interessant dat *hoe* minder je werkt, *hoe* meer je verdient.
it is attractive/interesting that how less you work how more you earn
 b. *Het is aantrekkelijk om *hoe* minder {te werken/je werkt}, *hoe* meer te verdienen.
it is attractive COMP how less to work/you work how more to earn
 (8) a. [Minder werken en meer verdienen] is aantrekkelijk.
less work-INF and more earn-INF is attractive
 b. *[Hoe minder werken, hoe meer verdienen] is aantrekkelijk.
how less work-INF how more earn-INF is attractive

But even where embedding does succeed, the comparative correlative behaves quite differently from more familiar constructions. Particularly germane here is the contrast between (5b,c) on the one hand, and (10b) on the other. What these sentences share is the presence of the sequence *des te*+comparative; but the examples in (9) and (10) are not correlative constructions: they correspond instead to English sentences featuring *all the more*+CPR. Now, while *des te*+CPR is freely fronted in the root clause in (9b), analogously to what we find in (4b,c), it is absolutely impossible to front it in the embedded clause in (10b).

- (9) a. Het is *des te* belangrijker dat je morgen komt.
it is the-GEN TE important-CPR that you tomorrow come
 b. *Des te* belangrijker is het dat je morgen komt.
the-GEN TE important-CPR is it that you tomorrow come
 It is all the more important that you come tomorrow.
 (10) a. Ik denk dat het daarom *des te* belangrijker is dat je morgen komt.
I think that it therefore the-GEN TE important-CPR is that you tomorrow come
 b. *Ik denk dat *des te* belangrijker het daarom is dat je morgen komt.
I think that the-GEN TE important-CPR it therefore is that you tomorrow come

Thus, (10b) contrasts markedly with (5b,c). And as a matter of fact, (9b) contrasts with (4b,c) as well: inversion is obligatory following the fronted *des te*+CPR in the former (cf. **Des te belangrijker het is dat je morgen komt*), but in the latter examples we see that, although inversion is the preferred option in (4b), it is by no means obligatory in comparative correlatives with *des te*+CPR in the second clause (and in comparative correlatives with *hoe*+CPR, inversion in the HEADCL is in fact impossible, as seen in (4a)).

Both these conclusions suggest that the HEADCL of the comparative correlative is not a garden-variety CP. But just around the corner, there are facts that suggest that, on the contrary, the HEADCL of the comparative correlative *is* a CP: it is possible, after all, to insert the complementiser *dat* immediately to the right of the fronted comparative in the HEADCL — both in root and in embedded contexts:⁵

- (11) a. *Hoe* meer je leest, *hoe* minder dat {je begrijpt/*begrijp je}.
how more you read how less that you understand/understand you
- b. *Hoe* meer je leest, *des te* minder dat {je begrijpt/*begrijp je}.
how more you read the-GEN TE less that you understand/understand you
- c. *Des te* meer je leest, *des te* minder dat {je begrijpt/*begrijp je}.
the-GEN TE more you read the-GEN TE less that you understand/understand you
- (12) a. ?Ik denk dat *hoe* meer je leest, *hoe* minder dat je begrijpt.
I think that how more you read how less that you understand
- b. ?Ik denk dat *hoe* meer je leest, *des te* minder dat je begrijpt.
I think that how more you read the-GEN TE less that you understand
- c. ?Ik denk dat *des te* meer je leest, *des te* minder dat je begrijpt.
I think that the-GEN TE more you read the-GEN TE less that you understand

The empirical lie of the land when it comes to the internal syntax and external distribution of the HEADCL of the Dutch comparative correlative can thus be summed up as in (13). The three surprises are highlighted by the pointing fingers: the fact that non-inversion is grammatical in the HEADCL in root contexts, and the fact that *dat* is freely inserted after the fronted comparative, both in root and in embedded contexts.

(13) <i>the HEADCL</i>	INVERSION	NON-INVERSION	DAT-INSERTION
ROOT context	✓ (except in (4a))	✓ ☞	✓ ☞
EMBEDDED context	* ☞	✓	✓ ☞

5 We can be sure that the *dat* following the fronted comparative in (11) and (12) is indeed the complementiser and not a *d*-word or relative pronoun by looking at the facts in (i) and (ii). In (i), *die* (the *d*-word agreeing in phi-features with plural *gezichten* ‘faces’) is entirely impossible; by contrast, in the (somewhat heavy-handed) cleft version of (i)’s HEADCL given in (iia), only *die* will do — in agreement with the fact that the subordinate clause of an *it*-cleft is a relative clause (cf. (iib)). It is plain, therefore, that a ‘reduced cleft’ approach to the *dat*-clauses in (11) and (12) is a non-starter.

- (i) *Hoe* meer mensen je ziet, *hoe* minder *gezichten* (dat/**die*) je herkent.
the more people you see the fewer faces that/D-WORD you recognise
- (ii) a. ?*Hoe* meer mensen je ziet, *hoe* minder *gezichten* het zijn {*dat/*die*} je herkent.
the more people you see the fewer faces it are that/D-WORD you recognise
- b. Het zijn de *gezichten* {*dat/*die*} je herkent, niet de stemmen.
it are the faces that/D-WORD you recognise not the voices
It’s the faces that you recognise, not the voices.

Let us start with non-inversion in root contexts, something which is completely unheard of elsewhere in the syntax of Dutch: fronting of a non-subject in a garden-variety root-CP always produces subject-finite verb inversion. Suppose that the correlative particle (pied-piping the comparative), unlike topics, *wh*-constituents and other fronted material, has no designated landing-site at the left edge of the clause, and that its only requirement is that, when it fronts, it must end up adjacent to the RELCL. Let us assume this to be a hallmark of correlative constructions in general, and take (14) as our first step towards an understanding of the (non-) inversion facts:

- (14) The fronted correlative particle and the sentence-initial RELCL must be adjacent.

The RELCL itself is arguably extraclausal: it itself never triggers Verb Second, and behaves in this respect like a variety of other clauses, partially identified in Den Besten (1977:fn. 3), all of which involve *conditional* semantics.⁶ Thus, Den Besten notes that (i) verb-initial conditional clauses (15a) and (ii) clauses introduced by (*ook*) *al* ‘(lit.) also all, i.e., even if’ (15b) fail to trigger Verb Second; to these observations we may add that (iii) clauses introduced by *hoe* ‘how’ followed by a non-comparative adjective or quantifier (*veel* in (15c,d)) are not followed by the finite verb of the main clause either.

- (15) a. Mocht je nog geld nodig hebben, {ik wil/*wil ik} je wel helpen.
might you yet money needy have I want/want I you surely help
 Should you need money, I am willing to help you.
- b. (Ook) al gaf je me een miljoen, {ik doe/*doe ik} het niet.
also all gave you me a million I do/do I it not
 Even if you gave me a million, I won’t do it.
- c. Hoeveel je ook leest, {je begrijpt/*begrijp je} het toch niet.
how-much you also read you understand/understand you it still not
 No matter how much you read, you won’t understand it anyway.
- d. [?]Hoeveel je ook leest, je begrijpt {allengs/steeds/des te} minder.
how-much you also read you understand all.the.time/the-GEN TE less
 However much you read, you understand less all the time.

6 It is here that the conditional nature of the comparative correlative (noted by McCawley 1988, 1998 and discussed in some detail in Beck 1997) asserts itself and makes it form a natural class with other sentence-initial conditionals. I hasten to add, though, that sentence-initial conditional clauses introduced by *als* ‘if’ and *zo ... al* ‘so ... all/already’ (which both arguably contain exactly the same element *al* that we saw at work in (15b), with the *-s* of *als* perhaps being a reduction of the *zo* ‘so’ of (ib), thinking of Kayne’s 2003 recent discussion of *as* in English) *do* trigger inversion, obligatorily so. (While (ia) is acceptable without inversion if pronounced with colon intonation and a sizeable pause following the conditional clause, the syntax of that particular construction is doubtless one of parataxis, which is irrelevant here.)

- (i) a. Als je nog geld nodig mocht hebben, {wil ik/[?]ik wil} je wel helpen.
if you yet money needy might have want I you surely help
 If you need money, I am willing to help you.
- b. Zo men er al van gehoord heeft, {denkt men/*men denkt} bij Guinée Bissau zelden aan Afrika.
so one there already of heard has thinks one/one thinks at Guinea Bissau seldom of Africa
 If one has heard of it at all, one rarely associates Guinea Bissau with Africa.

I would be prepared to defend the claim that in (ia,b), subject-finite verb inversion is brought about not by the sentence-initial conditional clause itself but instead by a covert variant of the *dan* ‘then’, which can freely be inserted to the right of the comma in these examples (cf. *Als je nog geld nodig mocht hebben, dan wil ik je wel helpen* ‘If you need money, then I am willing to help you’).

The sentence-initial clause in (15c,d) looks very similar to that found in (4a,b), differing only in that the latter features a comparative while the former does not; and (15d) (all of whose variants I accept) is a particularly close relative to (4a,b) in featuring a token of the comparative in the HEADCL. All of the constructions in (15) behave like the comparative correlative as far as their distribution in non-root contexts is concerned: the pattern established for comparative correlatives (i.e., acceptable under bridge verbs, with verb-final order, but worse in non-bridge contexts and ungrammatical in infinitival clauses; cf. (5), (7)–(8)) is essentially reproduced in (16).⁷

- (16) a. Ik denk dat, mocht je nog geld nodig hebben, hij je wel wil helpen.
I think that might you still money needy have he you surely wants help
 I think that, should you need money, he will surely be willing to help you.
- b. ?Het is prettig/interessant dat, mocht je nog geld nodig hebben, hij je wel wil helpen.
it is pleasant/interesting that might you still money needy have he you surely wants help
- c. ?*Het is voor mij aantrekkelijk om, mocht je nog geld nodig hebben, je te helpen.
it is for me attractive COMP might you still money needy have you to help
- d. *[Mochten ze geld nodig hebben, mensen te kunnen helpen] is aantrekkelijk.
might they money needy have people to can help is attractive

Arguably, the generalisation at work in all these examples is that their sentence-initial conditional clauses are systematically an ‘hors d’œuvre’: something ‘outside the main work’. Treating the sentence-initial clause as an ‘hors d’œuvre’ of course has the additional advantage of allowing us to understand the fact that in (15a) and (15b) that clause appears to flout the otherwise hard-and-fast rule that Dutch subordinate clauses never exhibit V1 or V2 orders — that mystery readily dissolves once we realise, with Den Besten (1977:fn. 3), that these clauses are not true subordinate clauses (in the sense of being subordinate to the matrix clause).

Having established that the sentence-initial RELCL of comparative correlatives (like the initial clauses in (15)) is an ‘hors d’œuvre’, let me assume that it is adjoined to CP — this is clearly the only analysis compatible with the fact that the RELCL can occur to the immediate left of what is clearly a CP, as in the examples in which it is followed by a V2–construction or by a HEADCL featuring the complementiser *dat* (cf. (11)–(12)); I will assume (for simplicity, but otherwise without argument) that the position of ‘hors d’œuvres’ is fixed, hence consistently CP–adjoined.

- (17) [CP [RELCL [REL+CPR]_i ... *t_i* ...] [CP=HEADCL [CORREL+CPR]_j ... *t_j* ...]]

This said, let me return to (14), the requirement that the correlative particle be adjacent to the RELCL. The correlative particle can satisfy this requirement by raising to SpecCP, in which case [CORREL+CPR] will be followed by a C–head lexicalised either by a raised finite verb or by the complementiser *dat* (cf. (18a)). Alternatively, however, (14) can be satisfied by having [CORREL+CPR] adjoin to the IP of the HEADCL (cf. (18b)), in which case the C–head that separates [CORREL+CPR]_j from the RELCL must remain empty: V–movement to C or complementiser insertion in C will then be blocked. And since there is no head position between the IP–adjoined [CORREL+CPR] and the subject (abbreviated as ‘S’ in (18)) in SpecIP, the IP–adjunction scenario will never give rise to inversion of the subject and the finite verb. This, then, is our account of non-inversion in the HEADCL: it results whenever [CORREL+CPR] adjoins to IP, which is one of the two options that present themselves when it comes to satisfying the requirement in (14).

⁷ For completeness’ sake, I note that all examples in (16) are grammatical with the conditional clause placed to the right of the HEADCL. In that case, the conditional clause does not occupy the high, extraclausal position it is sitting in in (16).

- (18) a. $[_{CP} [_{RELCL} [REL+CPR]_i \dots t_i \dots] [_{CP=HEADCL} [CORREL+CPR]_j [_C, C=\{V_{fin}, dat\} [_{IP} S \dots t_j \dots]]]]$
 b. $[_{CP} [_{RELCL} [REL+CPR]_i \dots t_i \dots] [_{CP=HEADCL} C=\emptyset [_{IP} [CORREL+CPR]_j [_{IP} S \dots t_j \dots]]]]$

Moving on to the question of why, in root contexts, the C-head of (18a) can be filled either by a raised finite verb *or* by the complementiser *dat*, let me note first of all that, while root clauses with *dat* are not unattested *per se* (the sentences in (19) are cases in point), such ‘root *dat*-clauses’ are generally confined to special contexts: they serve as exclamatives or wishes. The comparative correlatives in (11), by contrast, do not have this special flavour at all. Moreover, while ‘root *dat*-clauses’ of the type in (19) are fine, and though *dat* tolerates *wh*-constituents to its left in embedded contexts in the spoken vernacular, it is normally impossible to use *dat* in root clauses featuring *wh*-movement to SpecCP — (20b) is impossible, except in echoes: if speaker A utters (20a), his/her interlocutor may reply by producing (20b) followed by an answer to the question (B: *Hoe dat je dat doet? Nou, gewoon, door op die knop te drukken* ‘Well, simply by pressing that button’); in such a context, we are once again not dealing with a garden-variety root sentence.

- (19) a. Dat je dat durft, zeg!
that you that dare, say
 Boy, that you dare to do that!
 b. Dat je er nog jaren lang van moge genieten.
that you there still years long of may enjoy
 May you enjoy it for years to come.
 (20) a. Hoe doe je dat?
how do you that
 How do you do that?
 b. (*Hoe dat je dat doet?
how that you that do

It should be clear, therefore, that the grammaticality of comparative correlatives of the type in (11) treats us to quite a surprise: what we have on our hands here is a root-CP whose specifier position is filled by what, in (11a), is unquestionably a *wh*-constituent (*hoe minder* ‘how less’); but despite all this, the C-head of the HEADCL can freely be filled by *dat* without there being any special illocutionary effect of the type seen in (19), or any friction between the *wh*-constituent in SpecCP and the complementiser *dat* in the root-CP.

The surprising grammaticality of an illocutionarily unmarked ‘root *dat*-clause’ is certainly not a hallmark of sentences with ‘hors d’œuvres’ *per se*: all the examples in (15’) are atrocious.

- (15’) a. *Mocht je nog geld nodig hebben, dat ik je wel wil helpen.
might you yet money needy have that I you surely want help
 b. *(Ook) al gaf je me een miljoen, dat ik het niet doe.
also all gave you me a million that I it not do
 c. *Hoeveel je ook leest, dat je het toch niet begrijpt.
how-much you also read that you it still not understand
 d. *Hoeveel je ook leest, dat je {allengs/steeds/des te} minder begrijpt.
how-much you also read you all.the.time/the-GEN to less understand

And what is particularly interesting is that (21b’), the *dat*-variant of the comparative correlative (21b) featuring the [CORREL+CPR] constituent *in situ* in the HEADCL, is ungrammatical as well:

- (21) a. *Hoe meer je leest, je begrijpt hoe minder.
how more you read you understand how less
 b. ?Hoe meer je leest, je begrijpt des te minder.
how more you read you understand the-GEN TE less
 b'. *Hoe meer je leest, *dat* je des te minder begrijpt.
how more you read that you the-GEN TE less understand
 c. *Des te meer je leest, je begrijpt des te minder.
the-GEN more you read you understand the-GEN TE less

So you really only get *dat*-insertion in the HEADCL of the comparative correlative when [CORREL+CPR] fronts, not when it stays *in situ*, which it can do — albeit marginally — in (only) one of the three variants of the comparative correlative: (21b).^{8 9}

The fact that *dat*-insertion in the HEADCL of the comparative correlative is possible only if there is fronting of the correlative particle to the left edge of the HEADCL suggests that the unusual licensing of *dat* in the root-CP piggy-backs on the relationship between the correlative particle and the RELCL — a relationship which, judging from the adjacency requirement in (14), is a particularly tight-knit one. This relationship seems to be responsible for a variety of ‘parallelism’ or ‘assimilation’ effects found in comparative correlatives, several of which I will be touching upon in the remainder of this essay. An immediately apparent effect of this kind is the fact that when the relative and correlative particles are *identical* (either both *hoe* or both *des+te*), fronting of [CORREL+CPR] is mandatory in the HEADCL: as the contrast between (21a,c) and (21b) shows, leaving the [CORREL+CPR] constituent *in situ* is legitimate only if the correlative particle is not identical with the relative marker.¹⁰ And I believe the distribution of *dat* in the HEADCL of the comparative correlative can likewise be thought of as a ‘parallelism’ effect of sorts.

In particular, I suggest that in a syntactic configuration of the type in (18a), repeated below, the HEADCL can mimic the internal structure of the RELCL, to which it is connected via the fronted correlative particle, and thereby produce a quintessential non-root property: the insertion of *dat* in its C-head.

8 (21b) mimics the word order pattern seen in (15d), where the comparative likewise stays *in situ*. Both are somewhat marginal; for both (15d) and (21b), I have found speakers who reject them outright, but what is interesting is that judgements on (15d) and (21b) appear to be consistent, speakers either rejecting both or finding both of them (marginally) acceptable. The link between (15d) and (21b) seems to be confirmed further by the fact that, whenever a parallel *hoeveel*-construction is unavailable, non-fronting of *des te*+CPR in the HEADCL of the comparative correlative is ungrammatical (cf. (i)).

- (i) a. Hoe meer je leest, des te beter {is het/het is}.
how more you read the-GEN TE better is it/it is
 a'. *Hoe meer je leest, het is des te beter.
 b. *Hoeveel je ook leest, het is {allengs/steeds/des te} beter.
how.much you also read it is all.the.time/the-GEN TE better

9 In English, fronting is generally obligatory in the HEADCL. Note, however, Thackeray’s example quoted in (i), from Jespersen (1961:Vol. V, p. 381); in this example the SUBCL actually functions as the *subject* of the matrix copular clause, occupying SpecIP, which is an additional peculiarity of this particular case. I will not be able to analyse this example in detail here.

- (i) The less that is said about her doings is in fact the better. [Thackeray]

10 An overarching restriction that governs the distribution of *hoe* and *des+te* in comparative correlatives throughout is that, when the relative and correlative markers are distinct, the one used in the HEADCL must be *des+te* — comparative correlatives with [_{RELCL} [*des te*+ CPR] ...] [_{HEADCL} (...) [*hoe*+CPR] ...] are systematically ungrammatical, no matter where *hoe*+CPR is positioned in the HEADCL (cf. **Des te meer je leest, <hoe minder> je begrijpt <hoe minder>*). I have no insights to offer into this non-trivial question.

(18a) $[_{CP} [_{RELCL} [REL+CPR]_i \dots t_i \dots] [_{CP=HEADCL} [CORREL+CPR]_j [_C, C=\{V_{fin}, dat\} [_{IP} S \dots t_j \dots]]]]$

It is interesting to note that this ‘parallelism effect’ is confined to the root/non-root dichotomy: the mimicry does not extend to a more microscopic property of the RELCL, its status as a relative clause. This is shown, once again, by the distribution of the complementiser *dat* in the C–head position — in particular, by a juxtaposition of the triplet in (11) and the ones in (22) and (23).

- (11) a. *Hoe* meer je leest, *hoe* minder *dat* {je begrijpt/*begrijp je}.
how more you read how less that you understand/understand you
 b. *Hoe* meer je leest, *des te* minder *dat* {je begrijpt/*begrijp je}.
how more you read the-GEN TE less that you understand/understand you
 c. *Des te* meer je leest, *des te* minder *dat* {je begrijpt/*begrijp je}.
the-GEN TE more you read the-GEN TE less that you understand/understand you
- (22) a. *Hoe* meer *dat* je leest, *hoe* minder {je begrijpt/*begrijp je}.
 b. *Hoe* meer *dat* je leest, *des te* minder {?je begrijpt/begrijp je}.
 c. **Des te* meer *dat* je leest, *des te* minder {je begrijpt/begrijp je}.
- (23) a. *Hoe* meer *dat* je leest, *hoe* minder *dat* {je begrijpt/*begrijp je}.
 b. *Hoe* meer *dat* je leest, *des te* minder *dat* {je begrijpt/*begrijp je}.
 c. **Des te* meer *dat* je leest, *des te* minder *dat* {je begrijpt/*begrijp je}.

As a comparison of these triplets shows, while it is possible *in the HEADCL* of all three types of comparative correlative to insert the complementiser *dat* to the immediate right of the fronted constituent, *in the RELCL* *dat*-insertion fails in the c–examples (regardless of whether there is a *dat* present in the HEADCL).¹¹ I will turn presently to the question of why this should be the case. But for now, the thing to note is *that* there is this discrepancy between the RELCL and the HEADCL — what it shows is that the mimicry of HEADCL and RELCL is limited to the root/non-root distinction; the HEADCL does not ‘become’ a relative clause under the influence of the close relationship between it and the RELCL in the configuration in (18a). Relative clause-hood is not a ‘communicable disease’, while non-root status is something that can be copied under special circumstances. Precisely why this is remains rather obscure; but in any event, the fact that (11c) is grammatical while (22c) and (23c) are not shows clearly that the ‘parallelism effect’ we are grappling with here is not one that assimilates the HEADCL wholesale to the RELCL to which it is linked via the correlative particle.

11 I have not found examples of the type in (22c) and (23c), and my own judgements confirm that they are ungrammatical. For attested examples of some of the other types, see (i)–(iv), culled from the web with Google.

- (i) a. *Hoe* duurder een geluidskaat is, *hoe* meer *dat* het kaartje kan.
the more-expensive a sound-card is the more that the card-DIM can (do)
 b. *Hoe* duurder de cruise, *hoe* meer *dat* er inbegrepen is.
the more-expensive the cruise the more that there included is
- (ii) a. *Hoe* ouder het munttype is, *des te* zeldzamer dus *des te* meer *dat* de munt waard is.
the older the coin-type is the-GEN TE rarer therefore the-GEN TE more that the coin worth is
 b. *Hoe* langer een goed fles wijn ligt, *des te* beter *dat* hij smaakt.
the longer a good bottle wine lies the-GEN TE better that he tastes
- (iii) *Hoe* beter *dat* u zichzelf presenteert, *des te* meer aanzien krijgen uw producten of diensten.
the better that you REFL-SELF present the-GEN TE more cachet get your products or services
- (iv) *Hoe* meer *dat* jullie mij zien, *hoe* vaker *dat* jullie aan mij zullen denken.
the more that you me see the more-often that you of me will think

This said, let me return to the fact that it is precisely the RELCL featuring *des te*+CPR that resists *dat*-insertion (cf. (22/3c)), while those with a *wh*-phrase in SpecCP allow *dat* perfectly well. This seems to match the general distribution of ‘doubly-filled Comps’ in relative clauses in the dialects of Dutch. As Zwart (2000) points out, though ‘doubly-filled Comps’ are common in declarative and interrogative complement clauses in the dialects of Dutch, the unmarked strategy in relative clauses in Dutch dialects is to leave the C–position unlexicalised. While Zwart’s paper contains a number of examples of headed relative clauses with ‘doubly-filled Comps’, he notes that free relatives may be the predominant vehicle for the use of overt complementisers in relative clauses in Dutch dialects — particularly so in the case of *of* ‘if’. Illustration of free relatives with overt complementisers is provided in (24) (from Zwart 2000, *q.v.* for references to the original sources of the examples). Such sentences strike me as passable in my idiolect; they contrast sharply, for me, with the examples in (25), featuring headed relatives: while the relatives in (25) are attested in the dialects in question, I do not accept their counterparts in my idiolect at all.

- (24) a. Wie *dat* er nou trouwt zijn stommerike. (Aalst dialect)
who that there now marries are stupid-ones
 People who still get married these days are stupid.
- b. Wie *of* tie vis kóft, die skreef tat óp. (Katwijk dialect)
who if that fish bought that wrote that up
 Whoever bought that fish made a note of that.
- (25) a. ’t Jongsje dat à histeren van ’t dek evalen is. (Kruiningen dialect)
the kid D-WORD that yesterday off the deck fallen is
 The kid that fell off the deck yesterday.
- b. De vrouw die wad *of* iech gezeen had. (Maastricht dialect)
the woman D-WORD what if I seen had
 The woman that I had seen.

The triplet in (26), which sums up the distribution of ‘doubly-filled Comps’ in my idiolect (and, I suspect, in many other varieties of Dutch as well), allows us to decide between the hypothesis that *dat* is possible only after a *wh*-operator and the alternative hypothesis that says that *dat* is allowed in embedded questions but not in relative clauses. Two of the three examples in (26) involve relative clauses (i.e., (26b,c)), and two involve *wh*-operators (i.e., (26a,c)). Now, the fact that I find (26c) acceptable (though marginal; worse than the impeccable (26a) but certainly better than (26b), which fails completely for me) indicates that there is nothing wrong, *per se*, with having C filled with *dat* in a relative clause, so long as the relative operator is [+WH] rather than a *d*-word (as in (26b)). This generalisation allows us to make sense as well of the greater incidence of ‘doubly-filled Comps’ in free relatives as compared to headed relatives (cf. (24)–(25)): free relatives, outside correlative contexts, are systematically introduced by a *wh*-operator, while simple headed relatives (i.e., relatives headed by a direct argument of the main verb of the relative clause) generally feature *d*-words.

- (26) a. Vagelijk herinner ik me (met) wie (*dat*) ik gisteren gesproken heb.
vaguely remember I me with who that I yesterday spoken have
- b. Vagelijk herinner ik me de man die (**dat*) ik gisteren gesproken heb.
vaguely remember I me the man D-WORD that I yesterday spoken have
- c. Vagelijk herinner ik me de man met wie (?*dat*) ik gisteren gesproken heb.
vaguely remember I me the man with whom that I yesterday spoken have
 I vaguely remember (the man) to whom I was speaking yesterday.

Returning now to (22/3c), notice that in these examples the relative clause in sentence-initial position is introduced by a (genitively case-marked) *d*-word, *des*, and in tandem with that, *dat*-insertion to the right of the fronted comparative is impossible (in my idiolect; I have not examined speaker variation on the acceptability of (22/3c) but would expect speakers who generally accept ‘doubly-filled Comps’ in relative clauses introduced by *d*-words to allow *dat* in (22/3c) as well). The fact that (22/3c) are ungrammatical thus goes along with the generalisation established in the previous paragraph.¹² And, more importantly, it confirms that the initial clause of the comparative correlative construction is indeed formally a *relative* clause, a necessary ingredient of the correlative analysis of the construction.

Finally, let me come back to the behaviour of the HEADCL in the domain of Verb Second, the central theme of this essay. We have already made major strides in the discussion so far. In particular, the establishment of the structures in (18a,b), repeated below, gives us considerable mileage on the distribution of subject–finite verb inversion in comparative correlatives: we expect to find it in (18a), obligatorily so, but not in (18b), where there is no space for the verb in between the [CORREL+CPR] constituent and the subject.

- (18) a. $[_{CP} [_{RELCL} [_{REL+CPR}]_i \dots t_i \dots] [_{CP=HEADCL} [_{CORREL+CPR}]_j [_{C'} C=\{V_{fin}, dat\} [_{IP} S \dots t_j \dots]]]]$
 b. $[_{CP} [_{RELCL} [_{REL+CPR}]_i \dots t_i \dots] [_{CP=HEADCL} C=\emptyset [_{IP} [_{CORREL+CPR}]_j [_{IP} S \dots t_j \dots]]]]$

We also addressed the distribution of (18a,b) to some extent in the foregoing. But more needs to be said. In particular, we still have no handle on the fact that (4a) absolutely bans inversion in the HEADCL, while in its counterparts in (4b) and (4c) inversion is always well-formed (and sometimes even the preferred option).

In all sorts of ways, (4b) is doubtless the most ‘well-behaved’ comparative correlative of the three. It fronts the [CORREL+CPR] constituent optionally (recall (21b)); when this phrase fronts, it triggers Verb Second obligatorily; and when it does not front, some other phrase may, with Verb Second once again being mandatory:

- (27) a. ?Hoe meer je erover leest, [van dat vraagstuk] zul je des te minder begrijpen.
how more you there-about read of that problem will you the-GEN TE less understand
 b. ?Hoe meer je erover leest, [_i begrijpen] zul je van dat vraagstuk_i des te minder.
how more you thereabout read understand will you of that problem the-GEN TE less
 The more you read about it, the less you will understand about that problem.

12 Notice that the fact that *des te*+CPR is unquestionably *phrasal* also tells us that the roots of this empirical generalisation (that relative clauses introduced by *d*-words resist *dat* in C) cannot be explained away by assuming that the *d*-word introducing the relative clause occupies C⁰ itself. Such would indeed seem to be a straightforward account for (26b): if *die* already occupies C, there is no room for an additional complementiser *dat*. But *des te*+CPR, being *phrasal*, cannot possibly be squeezed into C⁰. The fact that it, too, resists being followed by a lexical complementiser then indicates that the analysis of the complementarity of relative *d*-words/*d*-phrases and lexical complementisers cannot literally be a matter of a ‘doubly-filled Comp–node’. (The same point should be establishable for German pied-piping relatives featuring possessed noun phrases introduced by *dessen*, *deren*. In Dutch, the only case of pied-piping by a *d*-word in relatives is precisely the *des te*+CPR case.) What seems to be going on is that when SpecCP is occupied by a *d*-word/*d*-phrase, C cannot be filled with something that is actually identical to a *d*-word — the complementiser *dat*, which, more so than in English (where vowel reduction distinguishes complementiser–*that* from demonstrative–*that*), is indistinguishable from a *d*-pronoun. This seems to be a dissimilation effect of sorts — one that presumably should not be up to the (morpho-) syntax to explain (in fact, dissimilation would be tough to make sense of from the perspective of feature checking, which demands feature matching); but on the other hand, the fact that the *d*-word in SpecCP can in fact be linearly quite distant from the complementiser *dat* in C (as in the *des te*+CPR cases of pied-piping such as (22/3c)) casts doubt on an account in purely phonological terms. Exactly how best to accommodate these facts is a question I cannot answer at this time.

The b-examples in (4) and (21) and the sentences in (27), taken together, suggest that a *des te*-comparative in the HEADCL can behave like a garden-variety constituent of a root clause in a Verb Second language. So the b-example in (4) exhibits essentially the standard behaviour of a run-of-the-mill Verb Second construction.

Not so, however, for the a- and c-sentences — especially the properties of the a-examples, with their obligatory fronting *and* their absolute ban on subject–V_{fin} inversion in the HEADCL, give occasion to some further thought about the internal constitution of the HEADCL of these comparative correlatives. In exhibiting obligatory verb-final word order in the HEADCL, the *hoe... hoe...* comparative correlative has preserved an otherwise obsolete word order pattern typical of correlatives. Though present-day Dutch does not productively feature correlative constructions, the proverbial stock has handed a couple of these constructions down to the modern Dutch speaker as relics of times past (cf. (28a–d)) — and they exhibit the same lack of subject–V_{fin} inversion that we find in (4a).¹³ A look at the minimal pair in (28d,d') is particularly revealing. The proverb in (28d) is a correlative construction, *with the verb coming last in the HEADCL*. By contrast, in the literal (28d') the sentence-initial free relative is followed by a *Verb Second* construction; this is not a correlative construction, involving left-dislocation instead.

- (28) a. Wat niet weet, †dat/wat niet deert. (proverb)
what not knows D-WORD/what not bothers
 What you don't know about won't bother you.
- b. Wie dan leeft, †die/wie dan zorgt. (proverb)
who then lives who then worries
 We'll cross that bridge when we get to it.
- c. Wie niet waagt, †die/wie niet wint. (proverb)
who not tries D-WORD/who not wins
 Nothing ventured, nothing gained.
- d. Wie het eerst komt, †die/wie het eerst maalt. (proverb)
who the first comes D-WORD/who the first grinds
 First come, first served.
- d'. Wie het eerst komt, die maalt het eerst. (literal)
who the first comes D-WORD grinds the first
 Who comes first gets the first shot at grinding.

I believe that, synchronically, the ban on subject–V_{fin} inversion in these correlatives is due to the fact that the choice of correlative particle in these sentences is a *wh*-element — *hoe* in (4a), *wie* in (28a,c,d) and *wat* in (28b). The thing to realise is that if one were to have performed subject–finite verb inversion under fronting of the *wh*-constituent, one would necessarily have ended up with the semantics of a *wh*-question for the HEADCL (cf. Postma's 1995 and Bennis' 1995 structure-based approach to the interpretation of *wh*-elements): *Wie zorgt dan?* is unambiguously a question, which is obviously an inappropriate illocutionary force for the HEADCL of a (declarative) correlative construction. In the case of (4a), things are in fact even worse: inversion in the HEADCL would deliver **Hoe minder begrijp je*, which is not even well-formed as a question (since *hoe minder* is not usable in *wh*-questions, *hoeveel minder* 'how much less' being employed instead; this is an instance of Corver's 1997 'much-support', which apparently, for reasons I cannot discuss here, is not applicable in comparative correlatives). There are overriding factors, therefore, which categorically ban

13 The *d*-words in the HEADCL of the correlatives in (28a–d) alternate with the corresponding *wh*-words; Google searches show that the variants of (28a–d) with a *wh*-word in the HEADCL vastly outnumber their counterparts with *d*-words in present-day Dutch, whence the daggers (†) in front of the *d*-words.

inversion of the subject and the finite verb in (4a). To produce a grammatical output, the *hoe... hoe...* comparative correlative must either plug the C–head of (18a) up with a complementiser (as in (11a)) or instead employ the structure in (18b), which yields verb–final word order.

So to wrap up this discussion of word order in Dutch comparative correlatives, we have seen that the RELCL systematically features verb–final word order in concert with the fact that it is a (free) relative, whereas the oscillation between Verb Second and V–final word order in the HEADCL is by and large a reflex of the co-existence of two placement possibilities for the fronted [CORREL+CPR] constituent: this phrase may either substitute for SpecCP, in which case Verb Second ensues whenever C is not base-filled by *dat*, or it may adjoin to IP, which, in conjunction with the requirement in (14), delivers a verb–final order. The radical unavailability of Verb Second in the *hoe... hoe...* comparative correlative in (4a) has its roots in the fact that, with substitution of [*hoe*+CPR] for SpecCP in (18a) and concomitant verb-raising to C, the output would inadvertently be parsed as a *wh*-question (Bennis 1995, Postma 1995); to avoid a question interpretation, the *hoe... hoe...* comparative correlative must either fill C with a complementiser (as in (11a)) or instead employ the structure in (18b). In the case of (4b) and (4c), on the other hand, there is a choice between (18a) and (18b) — and consequently, there is a choice of word order in the HEADCL. This analysis also makes sense of the English facts with which I opened the discussion. That earlier varieties of English could have their comparative correlatives vacillate between inversion and non-inversion tallies with the wider distribution of subject–finite verb inversion at earlier stages in the history of English; and the fact that inversion is no longer acceptable in the HEADCL of the English comparative correlative today, unless the [CORREL+CPR] phrase is *wh*-questioned (cf. (2)), also reduces straightforwardly to the limited distribution of inversion in the grammar of contemporary English.

What makes (comparative) correlative constructions unique creatures in the syntax of Dutch is their tolerance (and, in (4a), their requirement) of a verb–final word order in the root. As I have tried to show in these pages, this is by no means accidental or inexplicable: with (14) on the table as a key characteristic of correlatives, the rest basically falls into place given the standard approach to finite verb placement going back to Den Besten (1977).

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