

**ON THE NATURE OF COMPARATIVE SUBCLAUSES: A  
CROSSLINGUISTIC APPROACH\***

Although comparatives are traditionally treated as subordinate structures, it has been proposed (Lechner 1999: 183–193; 2004: 185–198) that they rather resemble coordination and should be analyzed accordingly. However, various cross-linguistic phenomena show that a coordination analysis cannot be universally applied to comparative structures as they conflict with the assumptions on which Lechner’s theory is based. The aim of this essay is to prove that comparatives are always subordinate structures and that a coordination analysis is fundamentally flawed.

The paper is divided into nine major sections. In the first section the main arguments for subordination will be considered; the second section will briefly describe Lechner’s coordination proposal. Sections 3–8 concentrate on specific issues of comparatives, showing the impossibility of applying a coordination analysis. Finally, section 9 will argue that coordination is not necessary to account for ellipsis in comparatives.

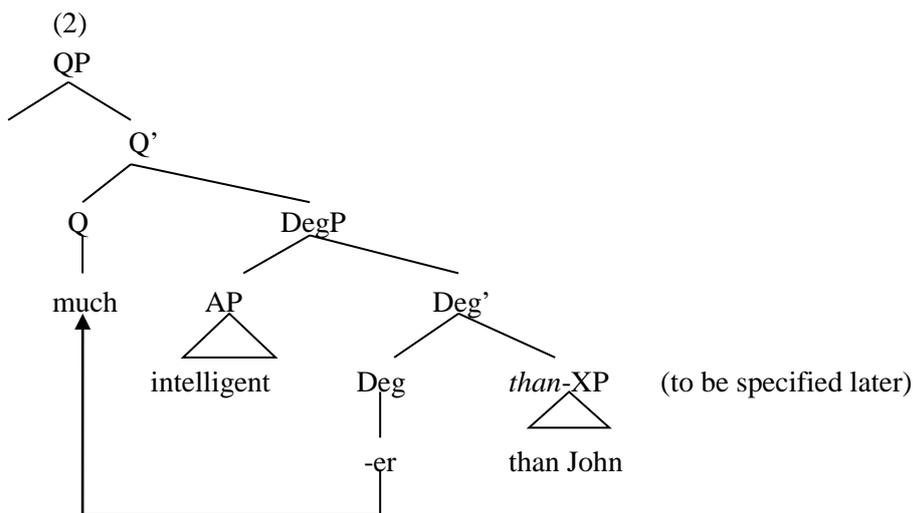
**1. COMPARATIVES AS SUBORDINATION**

Let us begin with a general characterization of comparative structures. Consider:

- (1) Peter is more intelligent than John.

The structure of comparatives consists of two major parts: the matrix clause (*Peter is more intelligent*) expresses the reference value of comparison and the comparative subclause (*than John*) expresses the standard value. Their relation can be described in the following way (based on Kántor 2008: 97; see also Lechner 2004: 53–56; for the semantics of comparison, see Kennedy in press: 1–3).

The structure of the string *more intelligent than John* is shown below:



The reference value is expressed in the matrix clause by a DegP, headed by the Deg head *-er* in English and *-bb* in Hungarian, which – being a bound morpheme – morphologically merges with the

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adjective/adverb in the Specifier in morphological comparatives (e.g. *taller*; see also Abney 1987: 189–204; Corver 1990: 34) or moves up to the Q head in periphrastic comparatives (e.g. *more intelligent*; see Kántor 2008: 100)<sup>1</sup>. The Specifier of the DegP hosts an AdjP/AdvP, which gives the semantic dimension of comparison (Kántor in 2008: 97; see also Lechner 1999: 25); the Complement of the Deg head expresses the standard value and is realized by the *than*-clause (see Bhatt–Pancheva 2004: 2–6), which is generally taken to be a CP in English (see Kántor 2008: 101).

There are various reasons to believe that the *than*-clause is base-generated as a complement of the Deg head. First, the presence of the element expressing the standard value is obligatory (Kántor 2008: 100) as the Deg head takes two arguments<sup>2</sup>. Second, the Deg head imposes selectional restrictions on the complement: as shown in (3), differential comparatives (comparatives with *-er*) co-occur with a subclause introduced by *than* (see also Bhatt–Pancheva 2004: 3):

(3) Mary is *more* intelligent *than*/\**that*/\**if* Peter (is).

The Deg head imposes a restriction on the following CP: it has to have comparative force and as the only [+ COMP] C head in English is *than*, any other complementiser (heading a CP with the declarative, interrogative etc. force) is inappropriate (see Rizzi 1999: 1 on force).<sup>3</sup>

Comparatives fall into two major types: clausal and phrasal comparatives (see also Kántor 2008: 101–102). The English *than*-XP is a clause, as exemplified by (4a):

(4a) George wrote more books than Andrew read.

(4b) George read more books than Andrew.

(4c) George read more books than Andrew ~~read d many books~~.

(4d) George read more books than Andrew did.

Although *than* is followed by the single DP *Andrew* in (4b), it is underlyingly still clausal since the full clause can be recovered, as shown in (4c); and *do*-insertion is possible for replacing the elided VP, as shown in (4d).<sup>4</sup> The final structure of (4b) is derived from that of (4c), by means of two operations, both of which take place in overt syntax. One is Comparative Deletion (CD), whereby the gradable property of the *than*-XP (which is in our case *d-many books*) is deleted (Lechner 2001: 1; Bresnan 1973: 317–342, Kennedy 1998: 1) The other is Comparative Ellipsis (CE), which deletes all the other

<sup>1</sup> The existence of the QP layer is obviously necessary, as shown by periphrastic comparatives, where the element *-er* (the original Deg head) ultimately precedes the AP (see Kántor 2008: 99–101). Corver (1997) also provides evidence for the existence of a QP in degree expressions such as (i):

(i) He is very intelligent. So much so that he has won several competitions.

Here the dummy *much* immediately precedes the AP; the representation in (2) also accounts for that.

<sup>2</sup> Note that the presence of arguments may remain only implicit. Consider (i), where the standard value (*than it was before*) is not expressed implicitly:

(i) My admiration for him is greater since I met him in person (than it was before).

However, this phenomenon is not restricted to comparatives; for instance, a transitive verb like *eat* may appear without an explicit object:

(ii) Ann is eating.

<sup>3</sup> I adopt Rizzi's view that there are several kinds of force other than declarative and interrogative; they show syntactic differences. As Rizzi (1997: 283) argues, 'Force is expressed sometimes by overt morphological encoding on the head (special C morphology for declaratives, questions, relatives, etc.), sometimes by simply providing the structure to host an operator of the required kind, sometimes by both means (...)'. See also Cheng (1991), Sportiche (1996), Bayer (2004).

<sup>4</sup> In some cases, *than* is followed by a DP in the Accusative Case:

(i) He is taller than me.

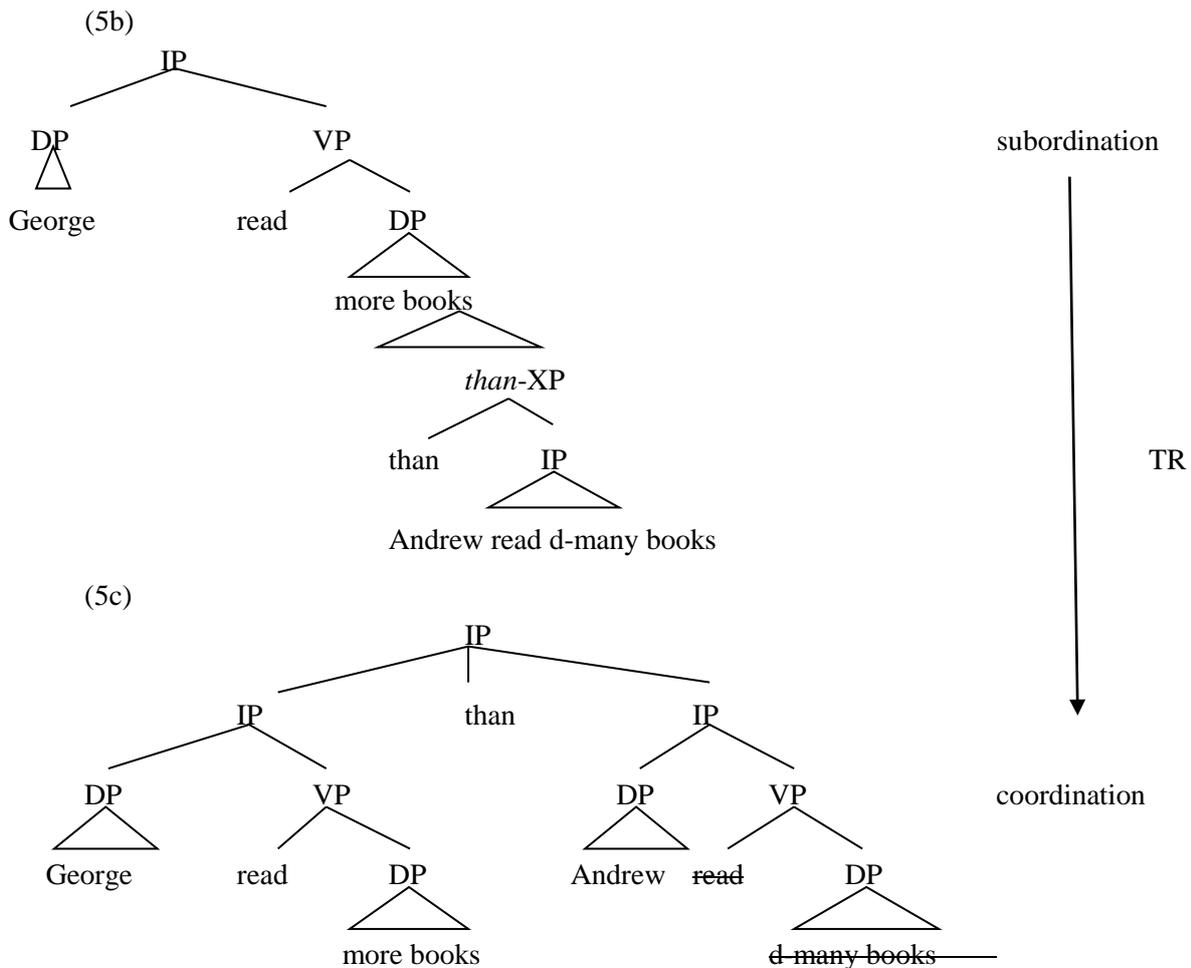
As Newson (2008: 3) argues, in English the Default Case is the Accusative, which means that in the absence of a Case assigner, DPs are in the Accusative Case. This is so for instance in Small Clauses, where the I head fails to assign Nominative Case to [Spec; IP], see also Carnie (2002: 149–150).

elements that can be recovered from the matrix clause (Lechner 2001: 2; Bierwisch 1989; Bresnan 1973; McCawley 1988; Pinkham 1985).

## 2. COMPARATIVES AS COORDINATION

As was already mentioned in the introduction, Lechner (1999: 183–193) proposed that comparatives are coordinated structures. His claim is that the comparative subclause is base-generated as a subordinate clause, but it is then adjoined via rightward movement to the matrix clause, ending ultimately in coordination. Let us first see the syntactic representation of this hypothesis. According to Lechner (1999: 189; 2004:187–189), the initial structure of a comparative sentence would be like the one in (5b), whereas the final structure derived by rightward movement would be like the one in (5c), the representation I am going to refute (note that Lechner does not suggest that the *than*-XP should be a CP, therefore he works with IP coordination; on the other hand, he uses ternary branching, which I will adopt in the representations to show which elements are in the same depth):

(5a) George read more books than Andrew.



Originally, ‘the *than*-XP is base-generated as the complement position of the degree head’ in the matrix clause (Lechner 1999: 189), which is a structure similar to (2). However, the *than*-XP is then forced to be extraposed to the right and be adjoined to the matrix IP node by a movement process

called *than-XP Raising* (TR) and ‘is reinterpreted as part of a coordinate structure’ (Lechner 1999: 190). In other words, TR causes the element *than* to act as a coordinator between the original matrix clause and the original subordinate clause. Comparative Deletion and Comparative Ellipsis operate after TR has applied; i.e., when the two clauses are coordinated.

As Lechner states: ‘comparatives have to be treated as hybrid constructions with properties of both sub- and coordination’ (Lechner 1999: 183; see also Moltmann 1992, Smith 1961). In other words, subordination in Lechner’s concept only serves to generate the structure but does not impose any specific characteristics on the subclause, which is in turn a structure essentially similar to the matrix clause with which it is – and in fact has to be – coordinated. Hybrid nature means that even if the *than*-clause is base-generated as a subordinate clause, it is at the same time base-generated so that it may be coordinated, i. e. coordination is an essential part of the derivation (Lechner 1999: 190). Moreover, it is actually a more vital part than subordination since comparatives are, according to Lechner, *interpreted* as coordinate structures.

The IP that takes part in coordination<sup>5</sup> is not necessarily the topmost one: Lechner claims that whenever there is ambiguity in comparatives, as in (6a), this can be explained in terms of Isomorphism. Isomorphism means that the two coordinated clauses must have a strictly parallel structure: ‘the antecedent and the Gap have to be embedded at the same depth’ (Lechner 2004: 104, based on Hankamer 1971, 1979, Hudson 1976, Sag 1976). As a result, whenever there is ambiguity, it can be traced back to the fact that the *than-XP* may be adjoined to two different IPs and there are therefore two competing structures when it comes to interpretation (see Lechner 1999: 187): either the higher IPs are coordinated, as in (6b) or the lower ones, as in (6c):

(6a) George wanted to read more books than Andrew.

(6b) [George wanted to read more books] than [Andrew ~~wanted to read d many books~~].

(6c) George wanted [to read more books] than [Andrew ~~read d many books~~].

In order to derive coordinate structures, the *than-XP* always has to be a clause, otherwise it could not be coordinated with an IP since Isomorphism would be violated.<sup>6</sup> Isomorphism in Lechner’s system does not only account for possible ambiguities but it also makes deletion and ellipsis possible: elements in the second clause may be deleted if they have an antecedent in the first clause in the same depth. On the other hand, it is Isomorphism (or strict parallelism) that provides a ground for coordination at all.

To sum up what has been said about Lechner’s theory so far, it can be concluded that his proposal is based on the assumption that the two clauses show a rather strict structural parallelism. Thus in order to analyse comparatives universally as coordinate structures, four major factors have to be observed:

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<sup>5</sup> Of course, the idea that *than* should be treated as a coordinator also rises the problem that it is restricted to conjoin IPs (or, at most, CPs). In ordinary coordination, such restrictions do not hold; compare:

- (i) I want to have a dog and/or a cat. (DPs)
- (ii) I can resist everything but temptation. (DPs)
- (iii) The house should be painted yellow and/or green. (AdjPs)
- (iv) The house is new but comfortable. (AdjPs)
- (v) She drives fast and/or recklessly. (AdvPs)
- (vi) She was driving slowly but recklessly. (AdvPs)
- (vii) Mary cleaned the windows and/or she did the washing up. (IPs)
- (viii) Mary did not clean the windows but she did the washing up. (IPs)

<sup>6</sup> This is a problem inasmuch as in some languages (for instance in Hungarian and Italian) there seem to exist phrasal comparatives as well. Lechner claims that phrasal comparatives are actually reduced clausal comparatives (Lechner 2001: 1999: 138–141; 2004: 124–127) but this, as we shall see in section 3, cannot be maintained in cross-linguistic terms.





- (9) Maria ama Giorgio più di quanto Susanna ami  
 Mary love-3<sup>rd</sup> Sg. Pres. Ind. George more of what Susan love-3<sup>rd</sup> Sg. Pres. Subj.  
 te.  
 you-Acc.

‘Mary loves George more than Susan loves you.’

As can be seen, *di* – as opposed to what we have been dealing with so far – takes a complement other than a single DP. This is, however, a regular phenomenon shown by Italian prepositions, such as *su* and *da* in (10):

- (10a) Sono d’accordo su quanto dici.  
 be-1<sup>st</sup> Sg. Pres. Ind. agreed on what say-2<sup>nd</sup> Sg. Pres. Ind.  
 ‘I agree with what you say.’
- (10b) Era diverso da quanto i medici  
 be-3<sup>rd</sup> Sg. Past Ind. different-Masc. from what the-Masc. Pl. doctors  
 hanno detto.  
 have-3<sup>rd</sup> Pl. Pres. Ind. say-Past Part.

‘It was different from what the doctors said.’

The examples in (10) – together with (9) – are instances of headless relative clauses. Below are some English instances of headless relatives:

- (11a) I agree with what you say.  
 (11b) What he says and what he means are not necessarily the same.

Headless relatives lack the presence of a modified noun in the matrix clause; however, they themselves behave as nominal expressions, as shown by their ability to be taken by P heads as in (11a) or by the fact that they show agreement in coordination as in (11b), see also Newson et al. (2006: 441); Vries (2002: 42). There is thus reason to purport the existence of a  $\emptyset$  D head to which the clause itself is adjoined (see Vries 2002: 44).

Relative clauses constitute one major type of subordinate clauses; the element combined with prepositions in Italian is either a  $\emptyset$  D, to which a clause beginning with *quanto* (‘what’) is adjoined, as in (10), or *quello* (‘that’ demonstrative; this may appear in the form *quel*). The element *quello* is readily combined with *che* both in comparatives, as in (12a) and in ordinary relative clauses taken by prepositions, as in (12b):

- (12a) Roma è più bella di quello che  
 Rome be-3<sup>rd</sup> Sg. Pres. Ind. more beautiful-Fem. Sg. of that-Dem. that  
 pensassimo.  
 think-1<sup>st</sup> Pl. Past Subj.

‘Rome is more beautiful than we thought.’

- (12b) Sono d’accordo su quello che dici.  
 be-1<sup>st</sup> Sg. Pres. Ind. agreed on that-Dem. that say-2<sup>nd</sup> Sg. Pres. Ind.  
 ‘I agree with what you say.’

On the other hand, *quanto* is said to stand for *quello che* in itself (see Benincà–Cinque in press: 23); the combination *quanto che* is only marginally acceptable, in comparatives as well as in other relative clauses with prepositions:

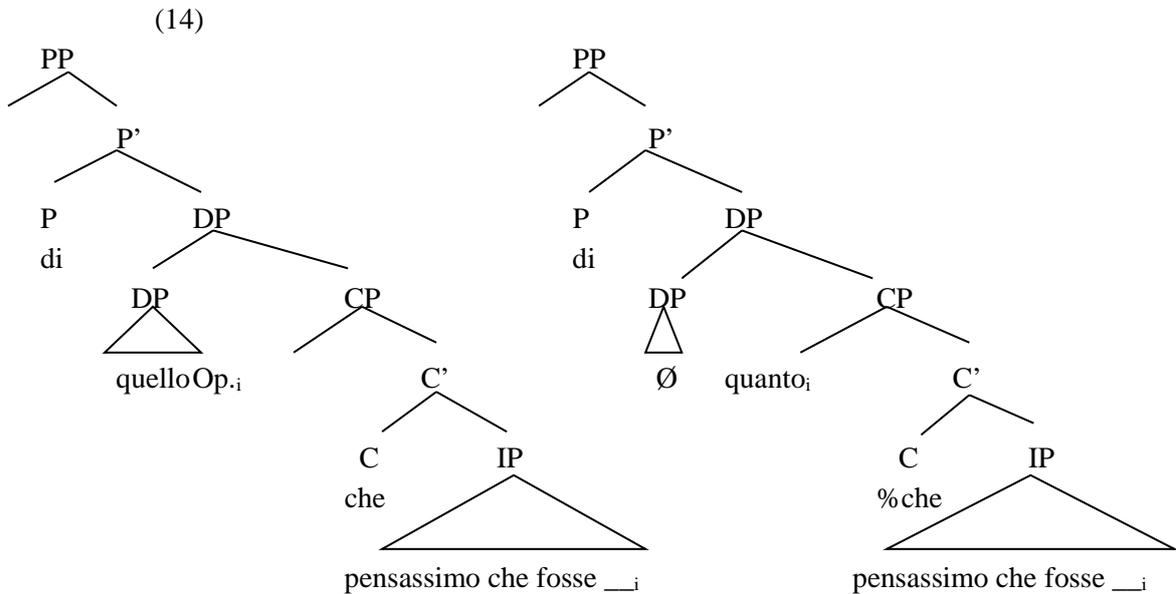
- (13a) % Roma è più bella di quanto che  
 Rome be-3<sup>rd</sup> Sg. Pres. Ind. more beautiful-Fem. Sg. of what-Dem. that  
 pensassimo.  
 think-1<sup>st</sup> Pl. Past Subj.

‘Rome is more beautiful than we thought.’

- (13b) % Riflettiamo su quanto che abbiamo ascoltato.  
 reflect-1<sup>st</sup> Pl. Pres. Ind. on what that have-1<sup>st</sup> Pl. Pres. Ind. listen-Past Part.

‘We reflect on what we have listened to.’

The syntactic behaviour of *di* in Italian comparatives is thus in parallel with that of any prepositions. The structure of the relative clause and the difference between *quanto* and *quello* can be illustrated in the following way:



The distribution of *quanto/quello* and the presence of the C head *che* are not independent; and this is due to their different syntactic status: whilst *quello* belongs essentially to the matrix clause, *quanto* is base-generated in the subclause and moves up to the Specifier position of the highest CP. If it cooccurs with *che*, however, we have a violation of the Doubly Filled Complementizer Filter, according to which the relative operator in [Spec; CP] and the C head cannot co-occur both overtly (Chomsky–Lasnik 1977: 446; Haegeman–Guéron 1999: 448). The reason why *quello che* is perfectly grammatical is that *quello* is not a *wh*-operator: it heads the DP to which the comparative subclause is adjoined, whilst this DP is headed by a  $\emptyset$  head in the case of simple free/headless relatives.

The difference between *quello che* and *quanto*-relatives can be observed even if there is no PP projection:

- (15a) Faccio quanto mi piace.  
 do-1<sup>st</sup> Sg. Pres. Ind. what I-Dat. appeal-3<sup>rd</sup> Sg. Pres. Ind.  
 ‘I do what I like.’ (*headless/free relative*)

- (15b) Faccio                      quello      che mi      piace.  
do-1<sup>st</sup> Sg. Pres. Ind. that-Dem. that I-Dat. appeal-3<sup>rd</sup> Sg. Pres. Ind.  
‘I do what I like.’ (*ordinary relative*)

As I have mentioned, *quello* clearly belongs to the matrix clause, which is also shown by the fact that it can appear without the CP headed by *che* in certain cases:

- (16a) A: Pietro    è                                      alto            150 cm.  
Peter   be-3<sup>rd</sup> Sg. Pres. Ind. tall-Masc. 150 cm  
‘Peter is 150 cm tall.’
- B: No, è                                      più    alto            di quello/\*quanto.  
no   be-3<sup>rd</sup> Sg. Pres. Ind. more tall-Masc. of that-Dem./\*what  
‘No, he is taller than that.’
- (16b) A: Pietro    è                                      cambiato.  
Peter   be-3<sup>rd</sup> Sg. Pres. Ind. change-Past Part.  
‘Peter has changed.’
- B: Sono                                      d’accordo    su   quello/\*quanto.  
be-1<sup>st</sup> Sg. Pres. Ind. agreed            on   that-Dem./what  
‘I agree with that.’

As can be seen, *quello* may be a complement of the preposition *di* on its own, to which the relative clause is adjoined, as shown in (14): this relative clause carries the information about the standard value of comparison. In (16), however, *quello* points back to a degree of tallness previously mentioned in the context and hence does not require a CP adjunct. If *quello* were an operator moved to a Specifier position in the Left Periphery, this construction would not be possible, as shown by the ungrammaticality of *quanto* here.

Comparative subclauses may be realized as relative clauses in other languages as well. This is exactly the case in Hungarian (see also Kenesei 1992b: 43):

- (17a) Szebb                      annál,                      mint amilyen szép      az anyja  
more.beautiful    that-Dem. Ade. than d-much beautiful    the her.mother  
vlt.  
be-3<sup>rd</sup> Sg. Past Ind.  
‘She is more beautiful than her mother was.’
- (17b) Nem értem                                      azt,                      amit mondasz.  
not understand-1<sup>st</sup> Sg. Pres. Ind. that-Dem. Acc. what say-2<sup>nd</sup> Sg. Pres. Ind.  
‘I do not understand what you say.’

In (17b), the matrix pronominal element is the DP *azt*, to which the CP *amit mondasz* is adjoined; the CP adjunct is actually required by *azt*, in order to specify the standard value of comparison – except when it can be derived from the previous context or when it has a deictic function. Within this CP, the initial element *amit* is a relative operator, which is base-generated as the complement of the verb

*mondasz*.<sup>9</sup> In (17a), the matrix pronominal element is *annál*, which expresses the standard value. Accordingly, its relative clausal adjunct will also be comparative in nature; this is why this CP is headed by *mint*, the Hungarian counterpart of English *than*, which is likewise a C head (see Kenesei 1992a: 587, 1992b: 43). As a C head, *mint* ‘expresses the comparative illocutionary force of the subordinate clause’ (Kántor 2006: 584; see also Rizzi 1999: 1) and requires the presence of a DegP expressing the standard value of comparison, which is in this case *amilyen szép*.

What is more, the behaviour of the matrix pronominal element *annál* patterns with that of *quello*, both being able to stand without the CP complement:

- (18) A: Péter 150 cm magas.  
 Peter 150 cm tall  
 ‘Peter is 150 cm tall.’
- B: Nem, magasabb annál.  
 no taller that-Dem.Ade.  
 ‘No, he is taller than that.’

Italian and Hungarian are not unique in having a relative clausal comparative; this is also possible in certain dialects of English and in Slavic languages, such as Serbo-Croatian:

- (19a) % John is taller than what Mary is.  
 (Chomsky 1977: 87, ex. 51a)

- (19b) Marija je viša nego što je Petar.  
 Maria is taller than what is Peter-Nom.  
 ‘Mary is taller than Peter is.’  
 (Pancheva 2006: 10, ex. 23a)

As can be seen above, the comparative operator is a *wh*-operator in English (Chomsky 1977: 87) and Serbo-Croatian. Operators may be overt in Italian, as shown by headless free relatives introduced by *quanto* but they are in most cases covert; Italian in fact lacks ordinary *wh*-relatives altogether (Bianchi 2000: 57; based on Kayne 1976 and Cinque 1982).

That there is operator movement both in the case of *quanto* and *quello che* is shown by island violations. Island violations work differently in English and Italian: the two languages are distinguished by the Subjacency Parameter: whereas in English movement may maximally cross one IP, in Italian movement may maximally cross one CP (Haegeman–Guéron 1999: 631, based on Rizzi 1982: 54, 58–59), i.e. whilst in Italian it is grammatical to cross a CP, the crossing of two CP nodes will count as a violation.<sup>10</sup> This phenomenon can be observed in comparatives as well:

<sup>9</sup> The exact position of the relative operator is unknown. See Kenesei (1992: 586–590).

<sup>10</sup> Consider the following examples:

- (i) tuo fratello [CP a cui<sub>i</sub> [IP mi domando [CP **che storie**<sub>j</sub> [IP abbiamo raccontato *t<sub>j</sub> t<sub>j</sub>]]]]]  
 your brother to whom myself ask-1sg which stories they have told  
 (\*) ‘your brother to whom I wonder which stories they have told’*
- (ii) \*tuo fratello [CP a cui<sub>i</sub> [IP mi domando [CP **che storie**<sub>j</sub> [Paola crede [CP *t’<sub>i</sub> che*  
 your brother to whom myself ask-1sg which stories Paola thinks that  
 [Giorgio abbia raccontato *t<sub>j</sub> t<sub>j</sub>]]]]]]]  
 George have-subj-3sg told  
 (\*) ‘your brother to whom I wonder which stories Paola thinks that Giorgio has told’*

(Haegeman–Guéron 1999: 631, ex. 160a&c)

As we can see, the *wh*-movement of *a cui* in (i) crosses the *wh*-phrase *che storie* in the lower [Spec; CP], which leads to a grammatical construction in Italian, as opposed to English, where grammaticality is reduced (Haegeman–Guéron 1999: 631). In (ii), however, the movement of *a cui* crosses both *che storie* and *che*, i.e. two CPs and the structure is therefore ruled out.

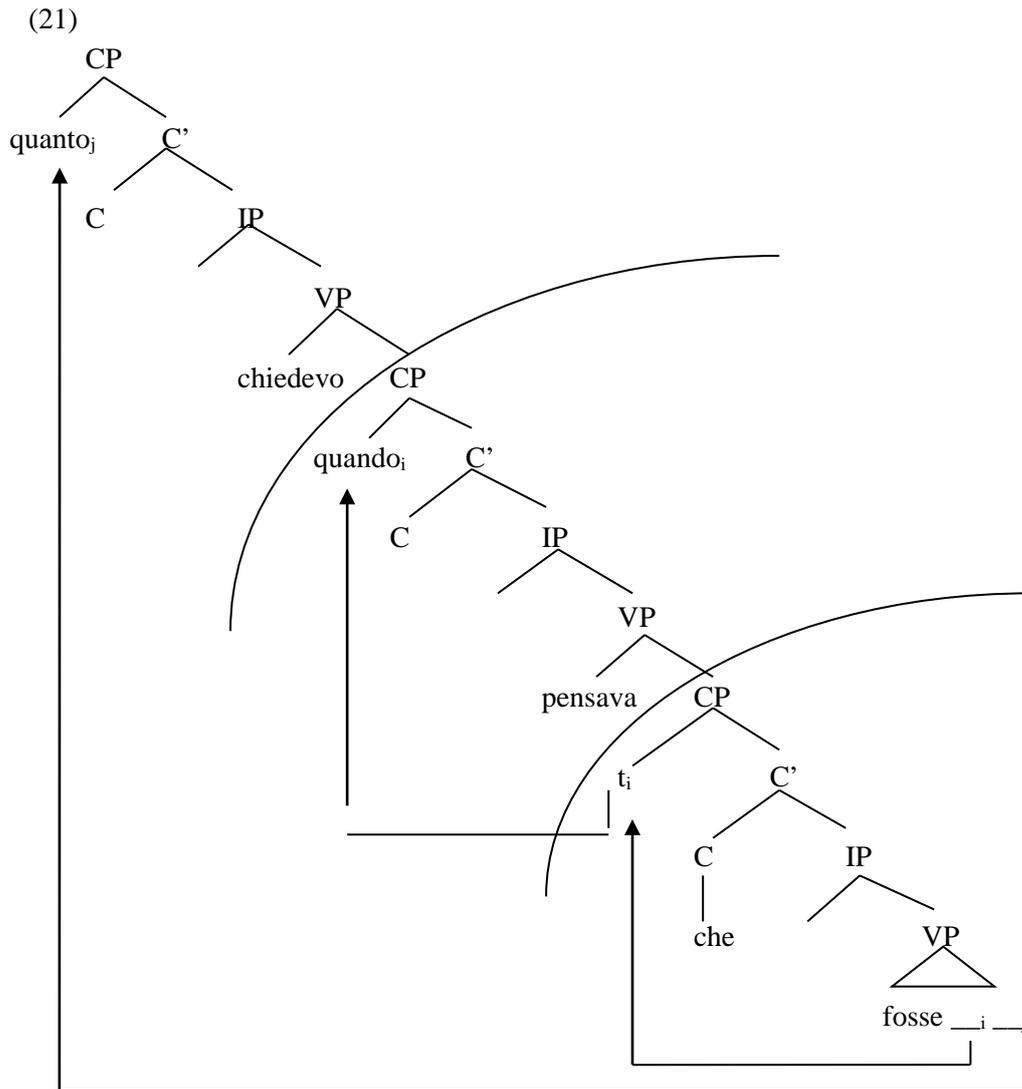
(20a) Era                   più forte di quanto/quello che pensavo                   **che**  
 be-3<sup>rd</sup> Sg. Past Ind. more strong of what/that-Dem. that think-1<sup>st</sup> Sg. Past Ind. that  
 fosse.  
 be-3<sup>rd</sup> Sg. Past Subj.

‘It was stronger than I thought.’

(20b) \*Era                   più forte di quanto/quello che chiedev  
 be-3<sup>rd</sup> Sg. Past Ind. more strong of what/that-Dem. that ask-1<sup>st</sup> Sg. Past Ind.  
**quando** pensava                   **che** fosse.  
 when think-3<sup>rd</sup> Sg. Past Ind. that be-3<sup>rd</sup> Sg. Past Subj.

‘It was stronger than what I asked when he thought it was.’

In (20a), the operator crosses only one CP node (headed by *che*) and the structure is therefore grammatical. In (20b), however, the operator crosses two CP nodes (the first has *quando* in its Specifier, the second is headed by *che*), which leads to ungrammaticality. The structure of (20b) is as follows:



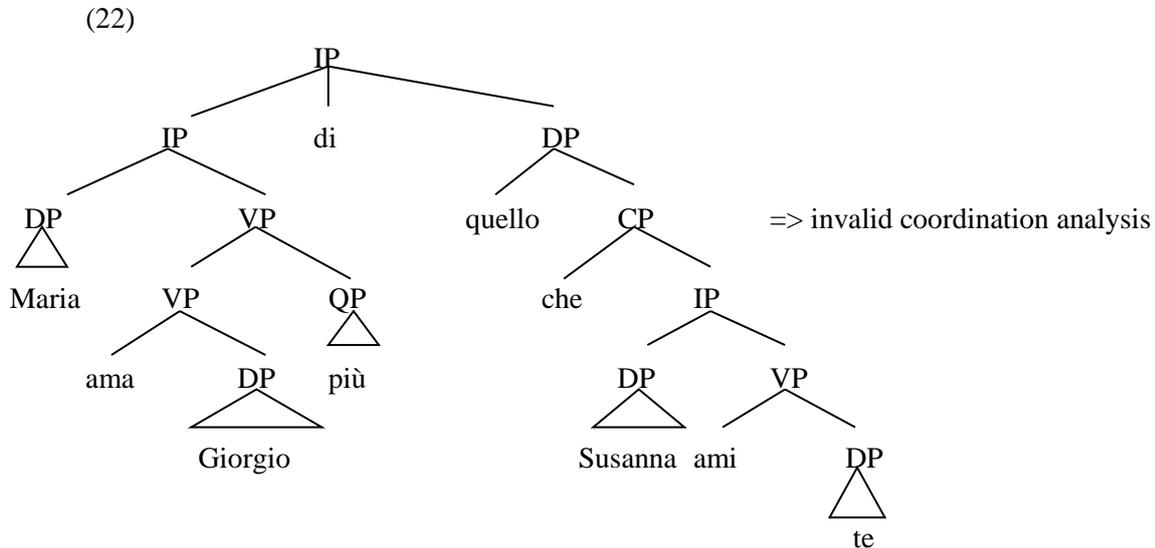
As we can see, there are two CPs in (20b) and the result is ungrammatical. The reason is that if *quando* ‘when’ moves up to the Specifier of the second CP, its movement leaves a trace in the lowest [Spec; CP] as well: thus neither the lowest nor the second [Spec; CP] is available for *quanto* ‘what’ as a landing site. This means that *quanto* should move directly to the topmost CP, which involves crossing two CPs and hence the structure is ungrammatical. The same holds for comparatives with *quello che*: as there is no overt operator moving here, it has to be assumed that there is a covert operator.

We can conclude, then, that in Italian clausal comparatives the subclause expressing the standard value is a relative clause. This is already problematic for a coordination analysis since the comparative subclause then shows a phenomenon restricted to subordinate clauses. Relative clauses are not considered as hybrid constructions, yet their structure is actually the same as that of comparative subclauses.

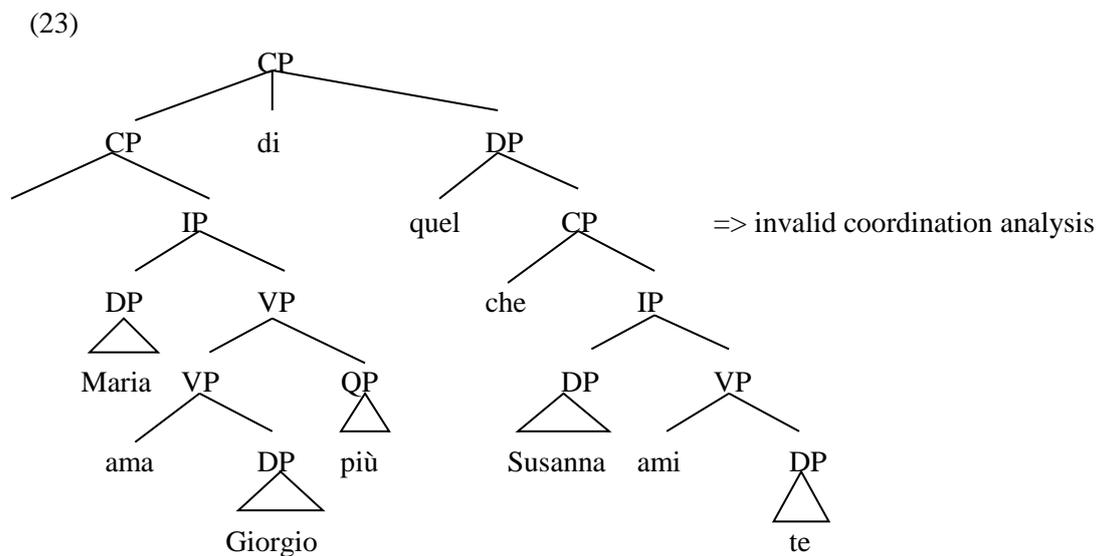
However, there is an even more serious problem for coordination. As shown in (15), clausal comparatives introduced by *di* do not really differ from phrasal comparatives: the difference is only within the DP taken by PP, namely that there is a CP adjoined to this DP.

The CP adjunct may have a structure parallel with that of the matrix clause; the position of *più di quello che* is nevertheless problematic. Following Lechner’s proposal, *più* should be located in the first clause and the coordinator should be *di*: in this case, however, *quello* – which obviously cannot form part of the conjunction – should be located in the second clause, together with *che*, which would result

in an asymmetric structure (besides the fact that we should actually coordinate an IP and a DP with different functions, i.e. only the latter is [+COMP]; note that the coordination of a DP and CP is rejected by Lechner 2004: 44; see also Bánréti 1992: 720–721, 2007: 13):



Isomorphism would require that the two conjuncts have the same structure, which is obviously not satisfied in (22). An element like *d-many* (what we claim to be the comparative operator) should be in the same depth as *più* in order to be deleted, which is impossible as the VP is much lower in the second clause. One might suppose that the situation can be resolved if we do not coordinate IPs but CPs, by projecting an extra CP layer on top of the first clause as well. This, however, still does not address the issue of isomorphism:



We can conclude that the comparative subclause is quite often realized as a relative clause in various languages, which demonstrates that the subclause has a subordinate nature lacking any properties necessary for postulating a coordinate or even a hybrid nature. Besides the fact that relative clauses are otherwise always subordinate, the presence of the matrix pronominal element also means a problem for coordination, since it cannot be placed in without violating Isomorphism.

## 5. SUBJUNCTIVE MOOD IN COMPARATIVES

Some comparative subclauses may be in the subjunctive mood, which is typical of subordinate clauses and therefore refute the idea that such comparative clauses would have a hybrid nature allowing for coordination.

Consider the Italian example in (9), repeated here as (24):

- (24) Maria ama Giorgio più di quanto Susanna  
 Mary love-3<sup>rd</sup> Sg. Pres. Ind. George more of what Susan  
 ami/<sup>?</sup>%ama te.  
 love-3<sup>rd</sup> Sg. Pres. Subj./<sup>?</sup>Ind. you-Acc.

‘Mary loves George more than Susan loves you.’

As can be seen, the verb in the clause expressing the standard value is in the subjunctive mood. The subjunctive in Italian appears in subordinate clauses with only two exceptions: formal imperative clauses as in (25a) and clauses expressing wonder or uncertainty, as in (25b), see Alberti (2000: 90–91), Herczeg (1985: 309–311); the latter, though standing on its own, is introduced by the subordinating conjunction *che* and can thus – formally – be considered as a special instance of subordination where the matrix clause is missing:

- (25a) Finisca quella lettera!  
 finish-2<sup>nd</sup> Sg. Pres. Subj. that-Dem.-Fem. Sg. letter  
 ‘Finish that letter!’

- (25b) Che siano già partiti?  
 that be-3<sup>rd</sup> Pl. Pres. Subj. already leave-Past Part. Masc. Pl.  
 ‘Have they already left?’

It is clear that (24) is neither imperative nor a clause expressing wonder or uncertainty. As there is comparative illocutionary force (Rizzi 1999: 1), the subjunctive mood is most probably required by this in Italian. This is not an absolute requirement: sentences like (26b) are possible in colloquial speech; although they are marked, for some speakers they are the informal counterparts of sentences like (26a):

- (26a) Roma è più bella di quanto pensassimo.  
 Rome be-3<sup>rd</sup> Pl. Pres. Ind. more beautiful-Fem. Sg. of what think-1<sup>st</sup> Pl. Past Subj.  
 ‘Rome is more beautiful than we thought.’

- (26b) % Roma è più bella di quanto pensavamo.  
 Rome be-3<sup>rd</sup> Pl. Pres. Ind. more beautiful-Fem. Sg. of what think-1<sup>st</sup> Pl. Past Ind.  
 ‘Rome is more beautiful than we thought.’

In Italian, there is a restriction on the appearance of the subjunctive: the subject of the matrix clause and the subject of the embedded clause have disjoint reference so that the subjunctive may appear in the embedded clause. This is exemplified in (24) and (26).

The appearance of the subjunctive in comparative subclauses is not unique to Italian. It could also appear in Old English: there was a tendency for the subclause to be in the subjunctive if the matrix clause was positive, whereas they were in the indicative if the matrix clause was negative (Traugott 1992: 264). An example for the first case is shown below:

- (27) ... for ðan þe he brycð swiðor on ðone suðdæl þonne he *do*  
 for that part. it breaks-forth more on that south than it *does-Subj.*  
 on þone norðdæl  
 on that north

‘because it (the Mediterranean [Sea]) washes more violently on the southern shore than it does on the northern’

(*Or* 1.1.24.24; ex. from Traugott 1992: 262, ex. 236)

This tendency was changed during the Early Middle English period, when the indicative became the rule in the Midlands; in the south, however, it is found even in Chaucer’s time (Fischer 1992: 357):

- (28) It is ful lasse harm to lete hym pace/ Than he *shende* all the servantz  
 it is full less ill to let him go than he should-Subj. alle the servants  
 in the place.  
 in the place

‘It is less ill to let him go, apace, / Than ruin all the others in the place.’

(*CTI*.4409–10 [1: 4401–2]; ex. from Fischer 1992: 357, ex. 428)

The use of the subjunctive in comparative subclauses shows that these clauses are subordinate in their nature since they show a phenomenon characteristic of subordinate clauses. A coordination analysis could scarcely account for the fact that the second – and only the second – clause involved in coordination should be in the subjunctive.

## 6. WORD ORDER IN COMPARATIVE SUBCLAUSES

In some languages, such as English, the word order of comparative subclauses is not distinct from that of main clauses. Consider:

- (29) I love you more than Peter loves you.

As can be seen, the word order in both clauses is SVO, which – besides the fact that there is no special subordinate word order – results in a structural parallelism ideal for coordination.

In German, however, this is not so, as the word order of the *als*-clause (the German equivalent of the English *than*-clause) is SOV:

- (30a) Dieses Auto ist länger als die Parklücke groß  
 this-Neut. Sg. car be-3<sup>rd</sup> Sg. Pres. Ind. longer than the-Fem. Sg. parking spot big  
 ist.  
 be-3<sup>rd</sup> Sg. Pres. Ind.

‘This car is longer than the parking spot is big.’

- (30b) Ich esse das Brötchen schneller als  
 I eat-1<sup>st</sup> Sg. Pres. Ind. the-Neut. Sg. bread faster than  
 er die Fenster putzt.  
 he the-Pl. windows clean-3<sup>rd</sup> Sg. Pres. Ind.  
 S O V

‘I eat the bread faster than he cleans the windows.’

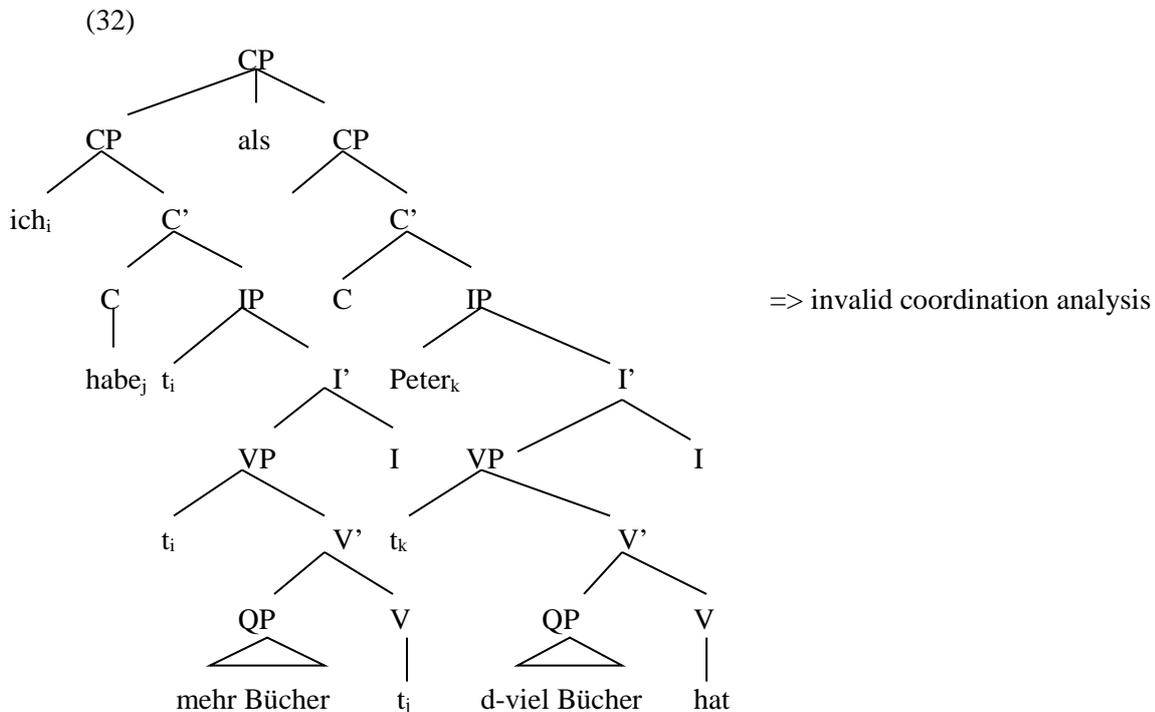
The underlying word order in German is in fact SOV: this is because the German VP (together with the IP) is always head-final (Haider 1993: 34) and in order to derive main clauses, the inflected verb moves up to the topmost C head (see Fanselow 2004a: 30, based on Den Besten 1989; Richter–Sailer 1998: 133–134). This movement is said to be blocked if the C head is filled by a complementizer – which is exactly what happens in the case of the *als*-comparative (Meinunger 2004: 63). Although there are instances when verb movement is permitted in subordinate clauses (Meinunger 2004: 61), this is not true the other way round: all clauses where the inflected verb is at the end of the clause are subordinate and so is the comparative subclause.

A distinctive word order in the subclause also violates Isomorphism and hence CD and CE would not be able to operate. However, it does; given the word order shown in (30), a sentence with CD and CE has the following underlying structure:

- (31) [Ich habe mehr Bücher] als [Peter ~~d-viel~~ Bücher  
 I have-1<sup>st</sup> Sg. Pres. Ind. more books than Peter d-many books  
 hat].  
 have-1<sup>st</sup> Sg. Pres. Ind.

‘I have more books than Peter.’

The structure of (31) in coordination would be as follows:



As we can see, the order of the verb (*habe/hat*) and the object (*mehr Bücher/d-viel Bücher*) is exactly the opposite in the subclause and in the matrix clause. This violates the criterion that deleted elements

must be in the same depth as their antecedents in order to be deleted. Deletion and ellipsis, however, do operate and the structure does converge, which means that there is no reason for claiming that comparatives are subject to Isomorphism.

A further problem arises in connection with the above representation. As we mentioned in section 2, Lechner (1999) works with the coordination of IPs. However, given that there is V2 order in the first clause, V-to-C movement must have taken place and hence the first clause is undoubtedly a CP. If, as shown above, we assume the second clause (the original subclause) to be a CP as well, there will actually be an empty C head in the second conjunct to which the inflected verb *hat* could (and should) move. This, however, does not happen, as shown by the overt word order in (30) and thus the lack of V-to-C movement in the second conjunct is left unexplained by a coordination analysis.

The German word order found in comparative subclauses, then, would be a problem for a coordination analysis not only because it is an indication of the subordinate nature in itself, but also because the use of such word order in the second (and only in the second) clause of comparison would be unmotivated. Furthermore, the parallelism between the two clauses would also be lost, which is clearly a violation of Isomorphism that requires deleted elements to be in the same depth as their antecedents. Still, Comparative Deletion and Comparative Ellipsis do operate, which indicates that coordination – which is impossible in the case of (31) – is not a necessary step for deletion.

## 7. MOVEMENT (OUT) OF THE COMPARATIVE SUBCLAUSE

In some languages, either the movement of the entire comparative subclause or the extraction of some part of the subclause is permitted. This is contrary to the nature of coordination where none of the above operations is allowed as stated by Ross's Coordinate Structure Constraint, according to which no conjunct may be moved out of a coordinate structure, nor may an element contained within a conjunct be extracted (Ross 1967: 89).

The *than*-XP may most easily be moved to FocP if it is expressed not by a clause but by a DP or a PP, as shown by Hungarian and Italian respectively:

(33a) PÉTERNÉL vagyok magasabb.  
Peter-Ade. be-1<sup>st</sup> Sg. Pres. Ind. taller  
'I am taller than PETER.'

(33b) Di PIETRO sono più alto.  
of Peter be-1<sup>st</sup> Sg. Pres. Ind. more tall-Masc. Sg.  
'I am taller than PETER.'

In English, the *than*-XP may be fronted as a contrastive topic:

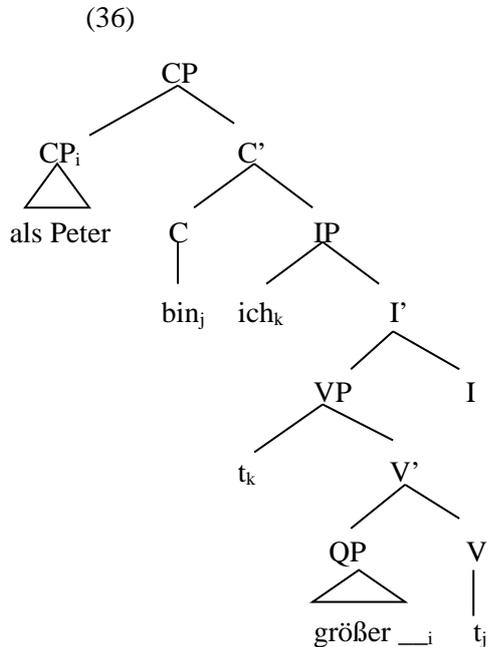
(34) Than Peter, I am much taller.

In German, when motivated by focalisation, an ordinary comparative such as (35a) may change to the structure shown in (35b):

(35a) Ich bin größer als Peter.  
I be-1<sup>st</sup> Sg. Pres. Ind. taller than Peter  
'I am taller than Peter.'

- (35b) [Als PETER]<sub>i</sub> bin ich größer \_\_<sub>i</sub>.  
 than Peter be-1<sup>st</sup> Sg. Pres. Ind. I taller  
 ‘I am taller than PETER.’

The structure of (35b) in a subordination analysis is as follows:



As we can see, in a subordination analysis the CP *als Peter* acts as one constituent and therefore can be moved out from within the QP without any structural violations.

This is, however, not so in a coordination analysis. The ordinary counterpart of (35b), as represented in (35a), would have the following structure in coordination:

- (37) [Ich bin größer] als [Peter ~~d-groß~~ ist].

If we assume, for the time being, that comparatives are given a coordination analysis, the following problems arise. In order to derive the structure in (35b), the second clause of coordination and the coordinator should be moved out, which is highly problematic for a number of reasons. First, since the clauses involved in comparison are supposed to form one single constituent, extracting either of them is prohibited, as stated by the Coordinate Structure Constraint. Secondly, the coordinate conjunction – which in this case should be *als* – cannot act as a coordinator if it is moved to the front of the clause. Thirdly, the extraction of [*als Peter*] triggers inversion in the first clause: the verb precedes the subject and as German is a V2 language, this means that there is one (and only one) constituent preceding it in the same clause. The elements *als* and *Peter* in a coordination analysis therefore should have their landing site in the first coordinated conjunct; moreover, they should actually be moved to the same position once there is only one constituent preceding the verb.

The above problems with focalization become even more evident in cases like (38a) and (38c) – their ordinary counterparts are shown in (38b) and (38d), respectively:

- (38a) [Hübscher als sie]<sub>i</sub> bin ich nicht \_\_<sub>i</sub>.  
 prettier than she be-1<sup>st</sup> Sg. Pres. Ind. I not  
 ‘I am not prettier than her.’

- (38b) [Ich bin nicht hübscher] als [sie ~~d-hübsch~~ ist].

- (38c) [Schneller als er die Fenster putzt]<sub>i</sub>, esse  
 faster than he the-Pl. windows clean-3<sup>rd</sup> Sg. Pres. Ind. eat-1<sup>st</sup> Sg. Pres. Ind.  
 ich nicht.  
 I not

‘I do not eat faster than he cleans the windows.’

- (38d) [Ich esse nicht schneller] als [er die Fenster ~~d-schnell~~ putzt].

Assuming that there is coordination in comparatives, in (38) an element from the first clause (*hübscher* or *schneller*), the purported coordinating conjunction (*als*) and the second clause would have to be fronted in a coordination analysis. As in (37), *als* is moved out but elements are extracted not only from the second but also from the first conjunct. This is problematic especially because – as there is again inversion in the first clause – the extracted elements are supposed to act as one single constituent preceding the verb (*bin* or *esse*). In order to do so, they should occupy the same position, which is impossible if they are not base-generated as one possible constituent, which is clearly not the case in coordination, where we would actually have movement of non-constituents (see Izvorski 1995: 2). As shown by (38c), extraction does involve the entire QP since *als* is followed by a CP-sized constituent (*er die Fenster putzt*).

In a subordination analysis, however, these elements form one XP: thus either a QP (*hübscher als sie* and *schneller als er*) or a CP (*als Peter*) is preposed, as in (38) and (35b) respectively. German is relatively free in focalization: not only arguments or adjuncts but also parts of the predicate may be fronted (see Fanselow 2004b: 10):

- (39a) Er hat [VP [DP ein Haus] gekauft].  
 he have-3<sup>rd</sup> Sg. Pres. Ind. a-Neut. Acc. house buy-Past Part.  
 ‘He has bought a house.’
- (39b) [DP Ein Haus]<sub>i</sub> hat er [VP gekauft].  
 a-Neut. Acc. house have-3<sup>rd</sup> Sg. Pres. Ind. he buy-Past Part.  
 ‘He has bought a house.’
- (39c) [VP [DP Ein Haus] gekauft] hat er.  
 a-Neut. Acc. house buy-Past Part. have-3<sup>rd</sup> Sg. Pres. Ind. he  
 ‘He has bought a house.’

In fact, extraposition phenomena in German prove that comparatives are subordinate rather than coordinate structures as movement in coordination would be impossible, whereas extraposition of either the *als*-clause or the QP is similar to ordinary cases of German fronting.

Extraposition thus shows that comparatives are subordinate structures: this is a phenomenon restricted to subordinate clauses and not explainable in terms of coordination as there is no appropriate landing site for the moved elements and the position of the coordinator is not retained.

## 8. INTERVENING CLAUSES

As I have already stated, Lechner’s coordination analysis is based on the assumption that the deleted elements in one – in this case the second – clause must be in the same depth as their antecedents in the

other (the first) clause. In most cases, the comparative clauses show a parallel structure allowing this. However, the subclause may also contain a clause that has no counterpart in the matrix clause:

(40a) I love you more than you think.

(40b) Ich liebe dich mehr als du denkst.  
 I love-1<sup>st</sup> Sg. Pres. Ind. you-Acc. more than you think-2<sup>nd</sup> Sg. Pres. Ind.  
 'I love you more than you think.'

(40c) Jobban szeretlek, mint gondolnád.  
 more love-1<sup>st</sup> Sg. Pres. Ind. you than think-2<sup>nd</sup> Sg. Pres. Cond. Def.  
 'I love you more than you think.'

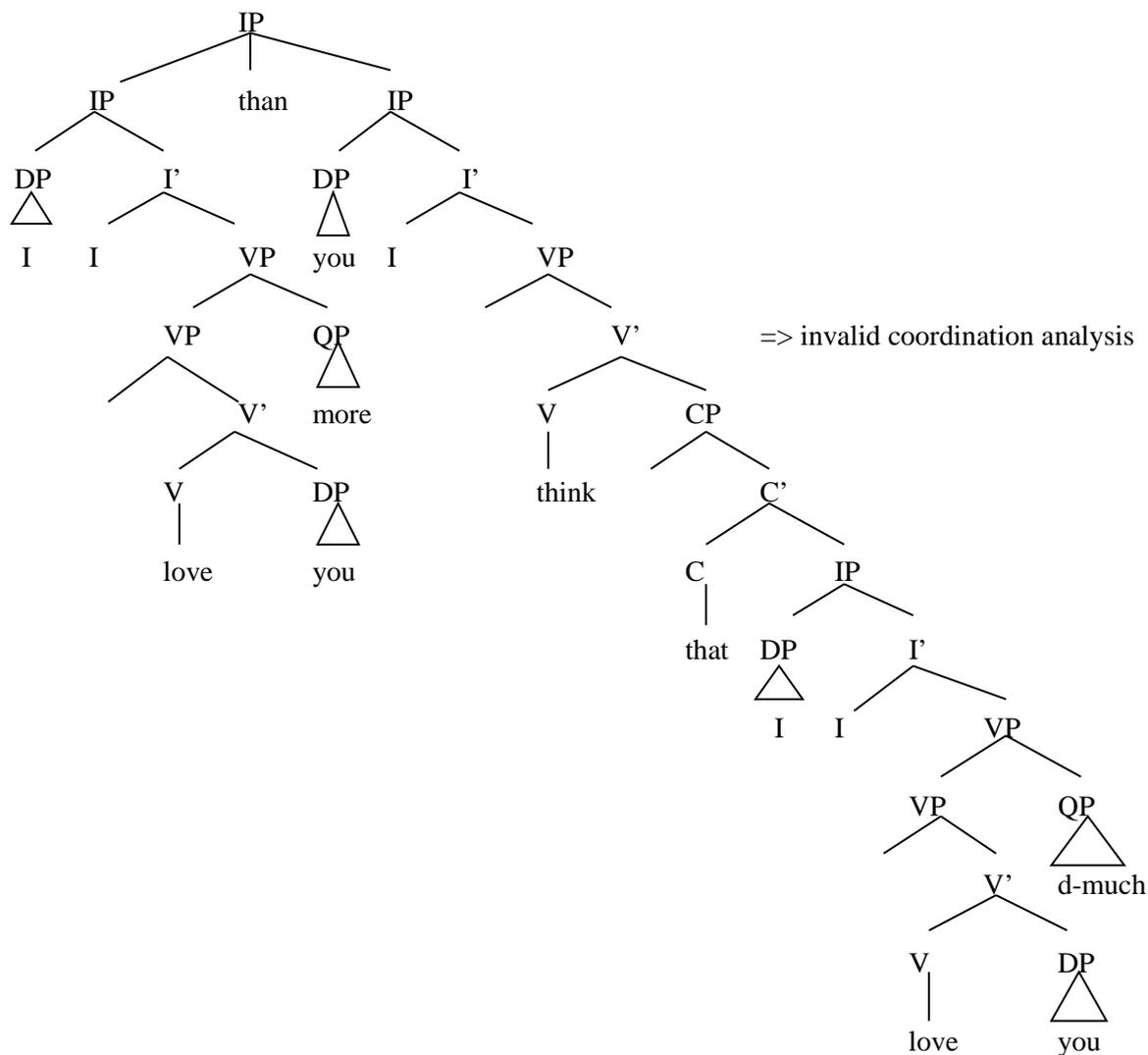
(40d) Ti amo più di quanto pensi.  
 you-Acc. love-1<sup>st</sup> Sg. Pres. Ind. more of what think-2<sup>nd</sup> Sg. Pres. Subj.  
 'I love you more than you think.'

The underlying structure of (40a) is as follows:

(41) [I love you more] than you think that [I love you d-much].

Clearly, this would result in an asymmetric structure:

(42)



Since the two bracketed IPs in (41) are not in the same depth, it is not possible to account for the fact that the CP taken by the verb *think* is entirely deleted. There is a reason to claim that this clause exists; the verb *think* subcategorizes for a complement, which is in most cases a CP. Since the complement is not overt in PF, it must be recoverable from the previous clause, which in this case means that it is the IP *I love you*, as it is suggested by the meaning of the sentences as well.

Hungarian data show the existence of this CP more straightforwardly. The verb *gondolnád* has objective conjugation, which indicates that it does take a definite XP, in this case an object clause (see É. Kiss 2003: 49, 52). Furthermore, the comparative operator and the entire structure may be overt in Hungarian:

(43a) Jobban szeretlek, mint amennyire gondolnád.  
 more love-1<sup>st</sup> Sg. Pres. Ind. you than d-much think-2<sup>nd</sup> Sg. Pres. Cond. Def.  
 ‘I love you more than you think.’

(43b) Jobban szeretlek, mint amennyire gondolnád,  
 more love-1<sup>st</sup> Sg. Pres. Ind. you than d-much think-2<sup>nd</sup> Sg. Pres. Cond. Def.  
 hogy szeretlek  
 that love-1<sup>st</sup> Sg. Pres. Ind. you  
 ‘I love you more than you think.’

The operator *amennyire* must be base-generated in the CP selected by *gondolnád*, since the degree of loving (reference value) is not compared to the the degree of thinking but to the degree of love the addressee supposes from the speaker’s part. The operator is thus base-generated as an adjunct of the verb in the lowest CP and then regularly moves up to the highest [Spec; CP] following the complementizer *mint*.

We may conclude that in some comparative constructions the subclause contains a clause that would act as an intervening string of elements in a coordination analysis: the elements to be deleted would not have their antecedents in the same depth and therefore deletion could not take place. This is on the other hand not problematic in a subordination analysis, which again proves that comparative structures are always subordinate.

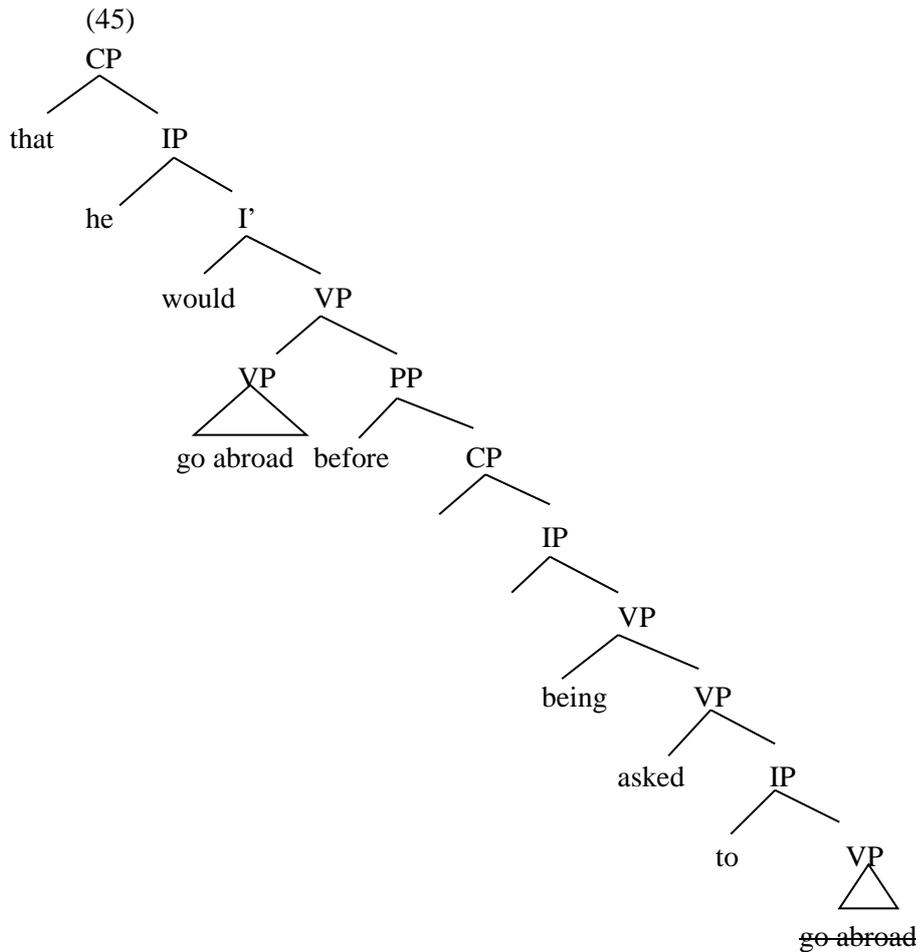
## 9. DELETION WITHOUT COORDINATION

In the previous sections I showed Lechner’s analysis to be inadequate to account for the structure of comparatives in various languages, from which it follows that comparatives should be analyzed as subordinate and not as hybrid structures. The main argument for coordination and TR (*than*-XP *Raising*) would be the possibility of accounting for Comparative Deletion and Comparative Ellipsis. As we have seen, in a number of cases this possibility is already lost. The question arises whether we have deletion in subordinate structures besides comparatives.

Consider the following:

(44) She thought that he would go abroad [<sub>PP</sub> before being asked to ~~go abroad~~].

In the example above, deletion takes place within the PP headed by *before*, which PP is adjoined to the VP. The structure can be represented in the following way:



As can be seen, the VP *go abroad* is deleted within the clause taken by the P head *before*; this PP is, however, an adjunct of the VP in the matrix clause, which means that there would be no reason to suppose that there is a coordinate structure responsible for deletion. Similarly, in comparatives we have a QP adjunct in the matrix clause, within which CD and CE may take place. If deletion is possible in non-coordinate structures as well, TR is actually unnecessary to account for CD and CE. Therefore, we claim that there is no need to analyze comparatives as hybrid structures but they should be treated purely as subordinate structures.

## CONCLUSION

The aim of this essay was to prove that comparatives are always subordinate structures and that the proposal made by Lechner (1999) for a coordination analysis cannot be maintained in terms of various cross-linguistic data. We saw that the major assumptions on which Lechner's theory is based are in fact all violated and therefore it would be highly problematic to consider comparatives as coordinate, not even as hybrid constructions. On the other hand, there is ample evidence that comparatives resemble typical subordinate structures and the problematic points for coordination can easily be accommodated into the framework of a subordination analysis. Moreover, the main argument in favour of coordination is also lost as deletion in obviously non-coordinate constructions happens similarly to comparatives, which means that the necessity for coordination is removed. As a conclusion we can say that comparatives should universally be analyzed as subordinate structures.

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