

Three Phenomena Discriminating between “Raising” and “Matching” Relative Clauses

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Abstract: The article discusses three phenomena (relative clause extraposition, stacking and weak island sensitivity) which are incompatible with bona fide “raising” relatives, like the amount relatives studied by Carlson (1977), but not with ordinary restrictive relatives. They thus appear to provide clear evidence that a “matching” derivation of relative clauses is needed in addition to the “raising” one.

Keywords: relative clauses, “matching” and “raising”, extraposition, stacking, weak islands

1. Introduction

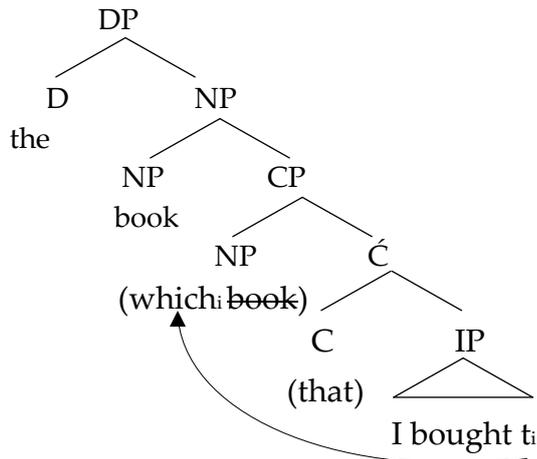
Since the beginning of generative grammar, relative clauses have been the subject of in-depth studies (Smith 1964; Kuroda 1968), and since the early days two distinct analyses have been entertained for these structures. The first, the so-called “matching” analysis, postulates the presence of two Heads, one external to the relative clause and one internal, which is taken to be deleted, or reduced, under identity with the external one (see Lees 1961; Chomsky 1965:137f, 145; Platero 1973; Hale and Platero 1974; among others).¹

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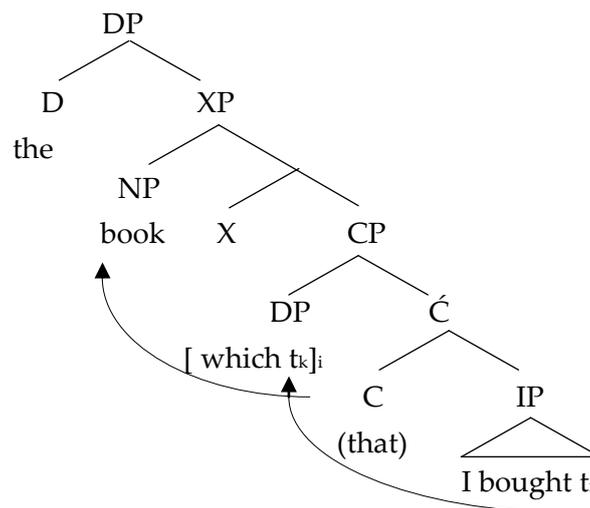
¹ Here I have rendered the original structure in an X-bar format. For a detailed presentation of the early analyses of relative clauses in the generative paradigm, see Stockwell, Schachter and Partee (1973: Ch. 7).

(1) The book [which_i/that/0 I bought t_i]



The second, the so-called “raising” analysis, assumes the presence of a single Head, internal to the relative clause, which raises to the front of the relative clause (see Brame 1967, 1976: §6.1; Schachter 1973; Vergnaud 1974).²

(2) The book_k [[which t_k]_i/that/0 I bought t_i]



Sometimes a distinction is made between the “matching” analysis (1), and a simple “Head external” analysis, where the internal Head is an empty operator (as in Chomsky 1977). Here I treat the latter as a variant of the “matching” analysis.

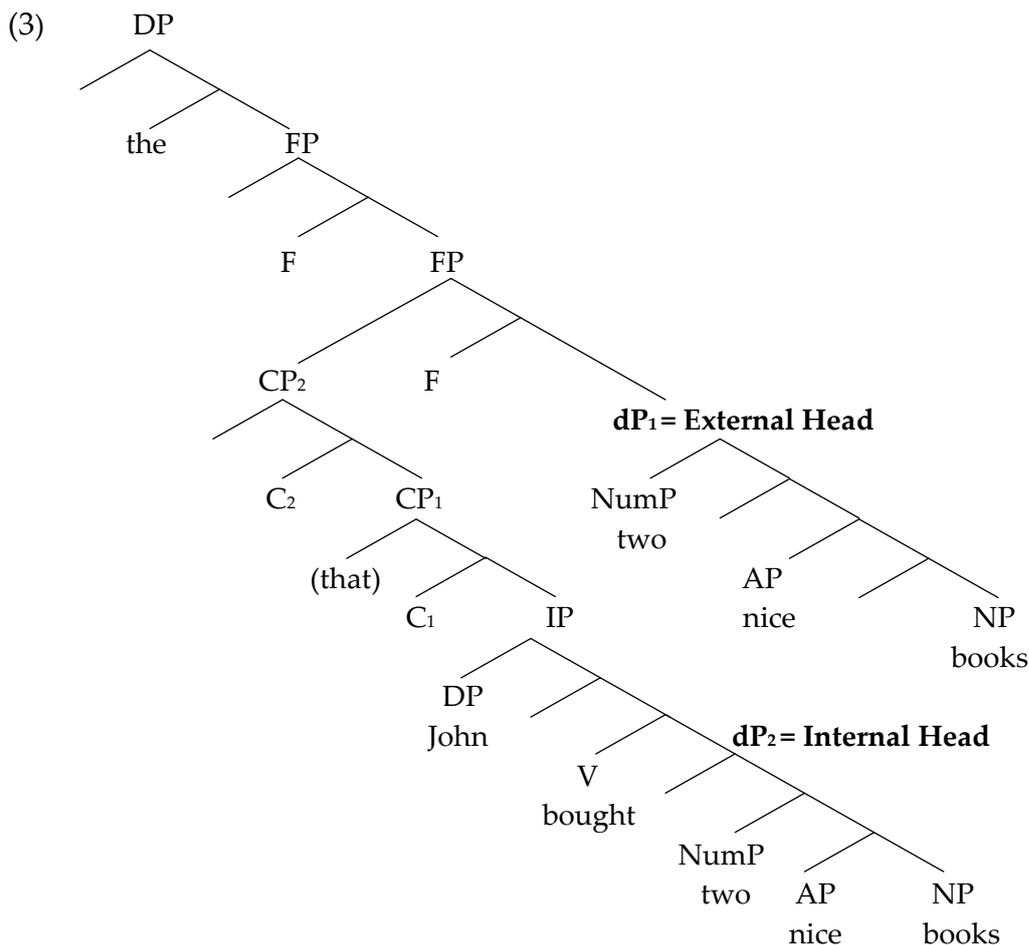
² I abstract away here from the different variants of the “raising” analysis that have been proposed. In addition to those proposed in the studies just cited, see the more recent variants of Kayne (1994), Bianchi (1999), de Vries (2002), Sportiche (2015), among others.

The question whether all relative clauses involve only “matching” (as in the earliest analyses) or only “raising” (as argued more recently by a number of authors) has been a hotly debated and moot issue. Since Carlson (1977), however, the possibility has emerged of a division of labor between the “matching” and “raising” derivations, whose choice may depend on certain semantic properties of the Head and of the variable found within the relative clause. See in particular Carlson (1977), Heim (1987), and Grosu and Landman (1998, 2013).

In the last several years a substantial number of works has appeared arguing for the need to assume both “matching” and “raising”. See, among others, Áfarli (1994), Sauerland (1998, 1999, 2003), Citko (2001), Bhatt (2002), Choueiri (2002), Fox (2002), Manninen (2002, 2003), Aoun and Li (2003), Szczegielniak (2004, 2005), Hulsey and Salzmann (2006a, 2006b), Sauerland (2006), Chomsky (2008: note 51, referring to Szczegielniak 2004), Harris (2008), Krapova (2010), Miyamoto (2010), Hackl and Nissenbaum (2012), Koster-Moeller (2012), Gračanin-Yüksek (2013), Deal (2014).

While the traditional “matching” analysis adopted in these works, which takes the relative clause to be right-adjoined to the external Head, is incompatible with Antisymmetry (Kayne 1994), a way exists to reconcile “matching” with Antisymmetry (cf. Cinque 2003). This becomes possible if relative clauses are merged pre-nominally, as shown in (3):³

³ The pre-nominal merge of relative clauses may be the only option if it turns out that nothing can be merged to the right (and below) the central constituent of a phrase (N, V, A, etc.). Cf. Cinque (2009) for evidence toward this conclusion, which comes from the general left-right asymmetry of natural languages.



(cf. Cinque 2003, 2013)

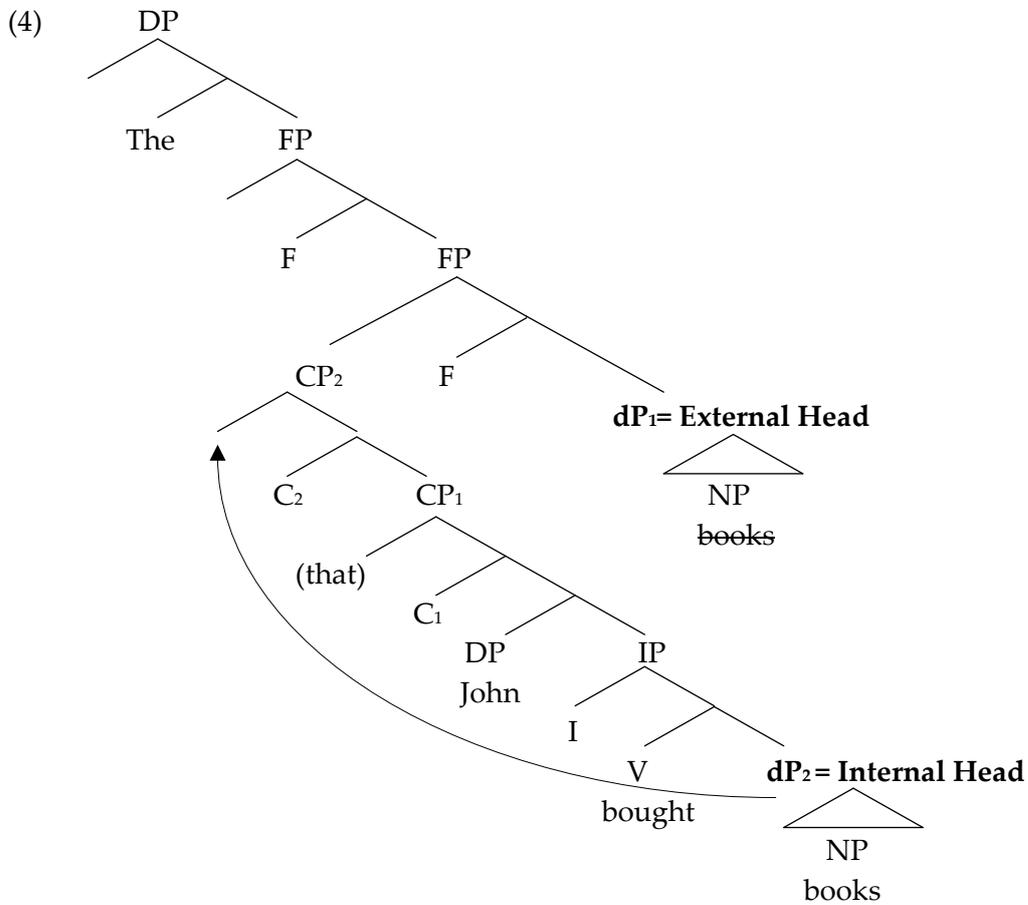
As discussed in Cinque (in preparation) there is reason to believe that finite, restrictive and amount relatives are merged above weak determiners, in Milsark's (1974) sense (i.e. multal and paucal quantifiers, cardinals, and one type of indefinite article, themselves merged above adjectives), and below strong determiners (definite articles, demonstratives, universal quantifiers, etc.) in what is a single double-headed structure underlying the different types of relative clauses attested cross-linguistically.⁴

⁴ Consistent head-final and consistent head-initial languages show the merge position of such relatives on their sleeve, so to speak. The order Dem RC Num A N is found in several Caucasian, Cushitic, Dravidian, Tibeto-Burman, Turkic, Uralic (and other OV) languages, while the order N A Num RC Dem is found in several Mon-Khmer, Tai-Kadai, Niger-Congo, Austronesian (and other VO) languages. See, for example, (ia), from Wolaytta (SOV - West Cushitic) and (ib), from Ponapean (SVO - Austronesian):

- (i) a. he [taa-w kuttuw^a ehida] iccash^u adussa laagge-t-I
 those [me-DAT chicken having-brought] five tall friend-PL-SUBJ.
 'those five tall friends who brought me a chicken'
 (Lamberti and Sottile 1997:215)

Somewhat simplifying this double-headed analysis, the “raising” derivation involves movement of the internal Head to the specifier of the highest CP (CP₂), which under Kayne’s (1994:16) definition of c-command, c-commands the external Head and deletes it (cf. (4)):

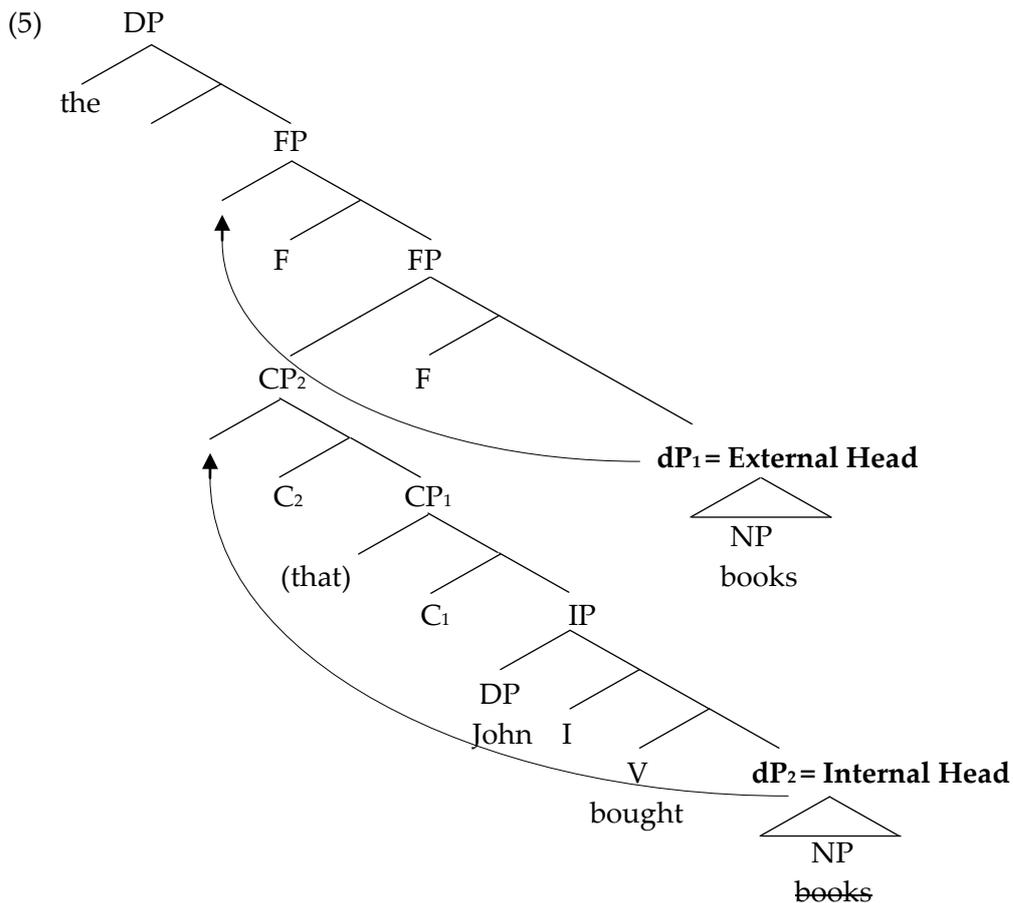
“Raising”:



The “matching” derivation (in languages like English or Italian, whose relative clauses show island sensitivity) involves instead movement of the internal Head to the specifier of the highest CP (CP₂), followed by movement of the external Head to a position c-commanding the internal Head (cf. (5)):

-
- b. pwutak reirei silimen [me lalaid]-o
 boy tall three [who are.fishing]-that
 ‘those three tall boys who are fishing’
 (Rehg 1981:124)

“Matching”:



This causes the internal Head either to be deleted completely (see (6a)), or to be reduced (see (6b)) (cf. Sauerland 1998, 1999, 2003):

- (6) a. the books ~~which books~~ that I bought
 b. the books which ~~books that~~ I bought

I take the specifier of CP₁ to contain a base generated (weak) relative phrase (cf. Kayne 2007; Sportiche 2011: *that, che, deto, što, co*, etc.)⁵, which, following Poletto and Sanfelici (2014), may be assumed to be a modifier of a silent functional NP SORT/TYPE (while the ‘which’ type of phrase is either their functional NP CLASS or INDIVIDUAL). Certain languages allow the (reduced) internal Head and the base generated weak relative phrase to co-occur. See the Middle English case in (7a), and the Venetian and Bavarian cases in (7b–c):

⁵ I take it to be base generated in Spec,CP₁, rather than moved to Spec,CP₁, as it is also found in relative clauses that involve no movement, but just base generated resumptive pronouns.

- (7) a. What wol my dere herte seyn to me,
Which that I drede never-mo to see?
 (Geoffrey Chaucer’s *Troilus and Criseyde* 4:858–9)⁶
- b. el posto **dove che** semo stai (Venetian)
 ‘the place where that we have been’
- c. der Mōn **dem wo** mir g’hoifa hom (Bavarian)
 ‘the man whom where (= that) we have helped’
 (Bayer 1984:215)

The limited contribution of the remaining part of this article is an additional argument that both “raising” and “matching” must be available. The reason is that bona fide “raising” relatives, like the different types of “amount” relatives discussed in Carlson (1977), free relatives (Grosu and Landman 1998), and relatives involving relativization of predicates or adjuncts, are incompatible with extraposition and stacking and show weak island sensitivity, while ordinary restrictive relatives display none of these restrictions. The difference can be made sense of if these three phenomena are incompatible with “raising”, but are compatible with the “matching” derivation which characterizes ordinary restrictives.

2. Three Phenomena Discriminating between “Raising” and “Matching”: Extraposition, Stacking and Weak Island Sensitivity⁷

2.1. Extraposition

Consider Relative Clause Extraposition. At first sight, it might be thought that Relative Clause Extraposition is incompatible with “raising” because of certain conflicting requirements holding of each. Bona fide cases of “raising”, like the different types of amount relatives discussed by Carlson’s (1977), seem to require that the Head be introduced by strong determiners (definite articles, demonstratives, and universal quantifiers). Cf. the grammaticality of (8) vs. the ungrammaticality of (9), where the Head is introduced by weak determiners (Carlson 1977:525):

- (8) a. The/ Those people there were __ at that time only lived a few decades.
 b. That's all there is __.
 c. Every lion there is __ eats meat.

⁶ A modern rendition is: What can my dear heart say to me, whom I fear never to see again?

⁷ Carlson (1977) and Harris (2008) claim that Antecedent Contained Deletion is another phenomenon discriminating between “raising” and “matching”.

- (9) a. *{Some, A} man there was __ disagreed.
 b. *{Five, Most, Several, Many} men there were __ here disagreed.

On the other hand Relative Clause Extraposition is known to be best with indefinite Heads and bad to various degrees with definite ones. See the contrast between (10a) and (10b) (from Guéron and May 1984:6):

- (10) a. I read a book during the vacation which was written by Chomsky.
 b. *I read that book during the vacation which was written by Chomsky.

It is nonetheless noted in the literature that Extraposition is possible even with Heads introduced by strong determiners if some focus is present within the relative clause (Huck and Na 1990) or if certain focus intensifiers (*very* rather than *only*) precede the Head. See, for instance, the examples in (11):

- (11) a. The guy just came in that I met at TRENO'S yesterday.
 (Huck and Na 1990:54)
 b. That man came into the room that I was telling you about.
 (Rochemont and Culicover 1990:60)
 c. The very man just walked in that I had been telling her about.
 (Kayne 1994:124)

With this proviso, let us consider then the application of Extraposition to bona fide “raising” relatives:

2.1.1 *Extraposition in Free, Amount and Existential-There Relatives and Relatives on Predicates*

- (12) a. *Whatever friends are gone [I once had].
 (from Bresnan 1973, cited in Akmajian and Lehrer 1976:402, fn. 8) (cf. *Whatever friends I once had are gone* and *?The friends are gone I once had*, also from Bresnan 1973) [free relative]⁸

⁸ Generally, extraposition of a relative clause not introduced by a *wh*-pronoun or *that* is not possible. However, as noted in the literature, it becomes possible (or at most only slightly marginal) if the subject of the extraposed clause is pronominal. See (i):

- (i) a. ?A book just came out [I've been meaning to read]. (Kayne 1994:156, note 20)
 b. I saw someone yesterday [I hadn't seen for years]. (Sag 1997: §6.1, after Dick Hudson, pers. comm)
 c. Something happened [I couldn't really talk about]. (Sag 1997: §6.1, after Dick Hudson, pers. comm)

- b. ?*What meat was soon eaten that there was.
 (cf. Carlson 1977:526 What meat that there was was soon eaten.)
 [free relative from an existential-*there* context]
- c. ?*Every doctor rushed to room 222 that there was.
 (cf. Every doctor that there was rushed to room 222.) [existential-*there* context]
- d. *The one thing is honest [that I want a man to be].
 (cf. Heycock and Kroch 1999:379: The one thing that I want a man to be is honest.) [relativization of a predicate]
- e. ?*The gifted mathematician is very rare nowadays that Bill was.
 (cf. The gifted mathematician that Bill was is very rare nowadays.)
 [relativization of a predicate]⁹
- f. ?*Every pound is worth a fortune that Max weighs.
 (cf. Every pound that Max weighs is worth a fortune.) [degree relative]
- g. *I was shocked by the advantage yesterday that she took of her mother.
 (Hulsey and Sauerland 2006:115) [idiom chunk]¹⁰
- h. ?*The careful track is well-known that she was keeping of her OWN expenses
 (cf. The careful track that she was keeping of her OWN expenses is well-known.) [idiom chunk]
- i. ?*The (very) way impressed me that he solved the problem.
 (cf. The (very) way that he solved the problem impressed me.) [manner adverb relativization]
- j. ?*The longest was two decades that Sheldon had to wait.
 (cf. The longest that Sheldon had to wait was two decades. (Ross 1984:264))
 [temporal adverb relativization]

2.1.2. *Extraposition and Heim's (1979) Ambiguity Sentences*

A second case showing that “raising” is incompatible with extraposition is provided by Harris’ (2008) discussion of Heim’s (1979) ambiguity sentences. In Heim (1979) it is noted that a sentence like (13) is ambiguous between the two readings in (14).

(13) John guessed the price that Mary guessed.

⁹ On the relativization of such post-copular predicates, see Grosu and Krifka (2005, 2007), who actually distinguish various types and give an analysis which is independent of the reconstruction of the Head into the relative clause, which I still assume here.

¹⁰ It should be noted, however, that for others this sentence is only slightly marginal.

- (14) A. John and Mary happened to guess the same price, but not necessarily anything about one another. John and Mary need not even know of the other's existence.
 B. John guessed something about Mary; that is, John guessed the answer to the question "What price did Mary guess?".

As Harris argues, Heim's (1979) sentences reflect a structural ambiguity: Reading A is derived from a "matching" relative clause structure and Reading B from a "raising" one.

Reading B has a meaning comparable to that of a Free relative like 'John guessed what(ever) price Mary guessed', which strengthens the idea that Reading B involves "raising", like Free relatives do. Crucially, what Harris further notes is that Reading B disappears if the relative clause is extraposed (see (15)), thus lending further support for the idea that "raising" is incompatible with extraposition:¹¹

- (15) John guessed [the price t] yesterday [that Mary guessed] (A/#B)

2.1.3. *Incompatibility of Relative Clause Extraposition with Inverse Case Attraction*

Another piece of evidence that extraposition is incompatible with "raising" appears to be provided by the impossibility of extraposition when the relative clause displays Inverse Case Attraction. This type of Case attraction, whereby the overt Head of the relative clause bears the Case that would be assigned internally to the relative clause rather than the Case that would be assigned in the matrix, has rightly been taken to depend on a "raising" derivation of the Head (Aghaei 2003, 2006; cf. also Bianchi 1999:92–94). Two Farsi varieties (Dari - as noted in Houston 1974; and Persian - as noted in Aghaei 2003, 2006; also see Payne 1982), an Albanian dialect (that of Xranje - as noted in Bevington 1979) and a Finnish variety (Ingrian - as noted in Kholodilova 2013) all admit extraposition in the absence of Inverse Case Attraction but ban it in the presence of Inverse Case Attraction, which, as noted, arguably involves "raising".

Dari (Afghanistan Farsi - Houston 1974:43)

- (16) a. **doxtar ey** (Ø) ke jon mišnose inja æs (No Inverse Case
 girl ART (NOM) COMP John know.PRS.3SG here be.PRS.3SG Attraction)

¹¹ Apparent counterexamples for the idea that extraposition is incompatible with "raising" are Lisa Selkirk's sentence *There isn't the water in the sink that there is in the bathtub* (pers. comm to Irene Heim as reported in von Stechow 1999:5), which was brought to my attention by Cécile Meier, and Richard Kayne's (pers. comm) *He made the same amount of headway this year that I made last year*. Perhaps these are hidden comparatives (= ... as there is in the bathtub; as I made last year), which allow extraposition more readily.

- b. **doxtar ey ra ke jon mišnose inja æs** (Inverse Case
girl ART ACC COMP John know.PRS.3SG here be.PRS.3SG Attraction)
 ‘The girl that John knows is here.’

- (17) a. **doxtar ey (∅) inja æs [ke jon mišnose]** (Extrapolation with
 girl ART here be.PRS.3SG [COMP John know.PRS.3SG] no Inverse Case
 ‘The girl that John knows is here.’ Attraction)

- b. ***doxtar ey ra inja æs [ke jon mišnose]** (Extrapolation with
girl ART ACC here be.PRS.3SG [COMP John know.PRS.3SG] Inverse Case
 Attraction)

Persian (Iranian Farsi – Aghaei 2006:81, 85):¹²

- (18) a. **zan-i [ke diruz did-i]** (No Inverse Case Attraction)
 woman-RES (NOM) [that yesterday see.PST-2SG]
 ?emruz ?injā-st
 today here-be.PRS.3SG
 ‘The woman whom you saw yesterday is here today.’

- b. **zan-i ro [ke diruz did-i]** (Inverse Case Attraction)
 woman-RES (ACC) [that yesterday see.PST-3SG]
 ?emruz ?injā-st
 today here-be.PRS.3SG
 ‘The woman whom you saw yesterday is here today.’

- (19) a. **zan-i ?emruz ?injā-st** (Extrapolation with no
 woman-RES (NOM) today here-be.PRS.3SG Inverse Case Attraction)
[ke diruz did-i]
 [that yesterday see.PST-2SG]

- b. ***zan-i ro ?emruz ?injā-st** (Extrapolation with
 woman-RES ACC today here-be.PRS.3SG Inverse Case Attraction)
[ke diruz did-i]
 [that yesterday see.PST-2SG]
 ‘The woman is here today who you saw yesterday.’

¹² As noted in Aghaei (2003), Inverse Case Attraction is not possible in Persian non-restrictive relative clauses (see (i)), which appears to suggest that in non-restrictives “raising” is unavailable (cf. also Bianchi 1999: Ch. 4 and 5 for a discussion of the lack of reconstruction in (Italian) non-restrictive relatives):

(i) *?an mard-e mosen ro [ke diruz did-am] ?emruz raft (Aghaei 2003:2)
 that man-EZ old ACC [that yesterday see.PST-1SG] today go-PST.3SG
 ‘That old man, who I saw yesterday, went today.’

Albanian dialect of Xranje (Bevington 1979:273f):

- (20) a. Djali [që e pashë unë] iku (No Inverse Case Attraction)
 the boy (NOM) [that him saw I] left
 ‘The boy that I saw left.’
- b. Djalen [që e pashë unë] iku (Inverse Case Attraction)
 the boy (ACC) [that him saw I] left
 ‘The boy that I saw left.’
- (21) a. Djali iku [që e pashë unë] (Extraposition with no
 the boy (NOM) left [that him saw I] Inverse Case Attraction)
 ‘The boy that I saw left.’
- b. *Djalen iku [që e pashë unë] (Extraposition with
 the boy (ACC) left [that him saw I] Inverse Case Attraction)
 ‘The boy that I saw left.’

Ingrian Finnish (Kholodilova 2013: §3.3)

The same is true of Ingrian Finnish. As reported in Kholodilova (2013:100), “Inverse Attraction is not compatible with extraposition of the relative clause, which is possible and quite frequent in other cases [..]. In [(22)], the relative clause is extraposed, therefore the head cannot undergo Inverse Attraction.”

- (22) lammas/ *lampà loikò koi-n luon minkä
 sheep.NOM/ sheep-GEN lie.PRS.3SG home-GEN near what.GEN
 miä eilen ost-i-n.
 I.NOM yesterday buy-PST.1SG
 The sheep lies in front of the house that I yesterday bought
 ‘The sheep that I bought yesterday is lying in front of the house.’

2.2. Stacking

The second phenomenon incompatible with bona fide “raising” relatives is stacking, as already recognized in Carlson (1977) (also see Grosu and Landman 1998; Grosu and Giurgea 2015).¹³

¹³ I am assuming the following characterization of stacking (from Stockwell, Schachter and Partee 1973:442), “Relative clauses are said to be stacked if a structure exists such that the first clause modifies the head noun, [and] the second modifies the head noun as already modified by the first clause.” Sometime the existence of stacking is questioned, by claiming that it is a form of asyndetic coordination. However, cases exist whose intersective import is different from simple coordination. See, for example, the following two cases:

- (23) a. *Chi ho invitato (che) non conoscevo è Gianni [free relative]
 ‘He who I invited (that) I did not know is Gianni.’
- b. *jo laRkii kharRii hai jo ravii kii dost hai, [free relative correlative]
 which girl standing is which R.GEN friend is,
 vo (laRkii) bahut lambii hai¹⁴
 that (girl) very tall is
 ‘The girl that is standing that is a friend of Ravi’s is very tall.’
- c. *The sailor that there was on the boat that there had been on the island died in the explosion. [existential-*there* context]
 (cf. The sailor who was on the boat who had been on the island died in the explosion.)
- d. *Jake noticed the headway WE MADE I said WE COULD MAKE. [idiom chunk]
- e. *This desk weighs every pound THEY SAID IT WOULD WEIGH that I HAD HOPED IT WOULD (WEIGH). [degree relative]
- f. *Waylon put what THERE WAS that HE COULD in his pocket.
 [ACD relativization]¹⁵
- g. *Il bravo idraulico che era che anche suo padre [relativization of a predicate]
 the good plumber that he was that also his father
 era stato non è facile oggiigiorno da trovare
 had been is not easy to find today
- i. ?*The way [John drives the car] [that nobody else drives it]¹⁶
 [manner adverb relativization]

2.3. Weak Island Sensitivity

The same bona fide “raising” relative clauses that are incompatible with extraposition and stacking turn out to be sensitive to weak islands. See (24) through (29).

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- (i) a. Questo è l’unico articolo che ha scritto di cui non si vergogna
 This is the only article that he wrote of which he is not ashamed. (≠ This is the only article that he wrote and of which he is not ashamed.)
- b. Il primo libro che ho letto che mi ha veramente divertito è Alice nel Paese delle Meraviglie
 The first book that I read that really amused me was Alice in Wonderland. (Stockwell, Schachter and Partee 1973:445) (≠ the first book that I read and that really amused me was Alice in Wonderland.)

¹⁴ Grosu and Landman (1998:165)

¹⁵ Carlson (1977:540)

¹⁶ Law (2001)

Idioms (Rizzi 1990; Bianchi 1993):

- (24) a. L'attenzione che ho deciso di prestare a Gianni è poca
 'The attention that I decided to lend to Gianni is negligible.'
 (Rizzi 1990:79)
- b. *L'attenzione che non ho ancora deciso a chi prestare è poca (wh-island)
 'The attention that I haven't decided yet to whom to lend is negligible.'
 (Rizzi 1990:80)
- c. *L'attenzione che non ho prestato a Gianni sarebbe (negative island)
 stata cruciale
 'The attention that I did not lend to Gianni would have been crucial.'
- d. *Che credito ti sei pentito di avergli dato? (factive island)
 'what credit do you regret having put in him?'
 (Bianchi 1993:350)
- e. *L'attenzione che è ora che prestate a Gianni non deve (extraposition island)
 essere poca
 'The attention that it's time that you lend to Gianni must not be negligible.'

Free relatives:¹⁷

- (25) a. What(ever) he says isn't true
- b. *Whatever pilots we asked them whether you had contacted. (wh-island)
 (Postal 1998:46)
- c. *What these players don't weigh is at least 300 pounds. (negative island)¹⁸
 (Rullmann 1995:7)
- d. *Whatever friends I am glad I once had are gone. (factive island)
- e. *Whatever friends it was time that you had are gone. (extraposition island)

Existential-there contexts (Carlson 1977; Bianchi 2002:203)

- (26) a. What meat that there was was soon eaten.
 (cf. Carlson 1977:526)
- b. *What meat I wondered whether there was would not have been sufficient.
 (wh-island)
- c. *What meat there wasn't would have been eaten immediately. (negative island)

¹⁷ Sensitivity to weak islands holds at least for those free relatives whose wh-phrase is non-referential.

¹⁸ Other such cases are however better. See *What a gymnast shouldn't weigh is 300 pounds* (Andrew Radford, pers. comm.).

- d. *What little meat everybody regretted that there was... (factive island)
 e. *What meat that it was time that there was wasn't sufficient.
 (extraposition island)

Lexically selected and unselected adverbials (Rizzi 1990:78ff):

- (27) a. This is the way that I think he should behave.
 b. *This is the way that I want to know whether he behaved. (wh-island)
 c. *This is the only way that he didn't behave. (negative island)
 d. *This is the way that I regret that he behaved. (factive island)
 e. *That is the way that it was time that he behaved. (extraposition island)

Degree (measure) phrases (cf. Rizzi 1990:78f):

- (28) a. John weighed 200 lbs.
 b. *The 200 lbs that I wondered whether he weighed. (wh-island)
 c. *The 200 lbs that he did not weigh in his youth would be too much.
 (negative island)
 d. *The 200 lbs that I am glad that he weighs would be too much for me.
 (factive island)
 e. *The 200 lbs that it would be time for him to weigh are not that much.
 (extraposition island)

Predicate relativization:

- (29) a. Non è certo il grande chirurgo che lui ritiene di essere.
 'He is certainly not the great surgeon that he thinks he is.'
 b. *Non è certo il grande chirurgo che si chiedeva come poter diventare. (wh-island)
 'He is certainly not the great surgeon that he wondered how he could become.'
 c. *Riuscirà a diventare il grande chirurgo che suo padre non è? (negative Island)
 'Will he manage to become the great surgeon that his father wasn't?'
 d. *Il grande chirurgo che sono contento che sia diventato... (factive island)
 'The great surgeon that I am glad that he became.'
 e. *Il bravo ragazzo che è ora che diventi non avrebbe mai fatto questo.
 (extraposition island)
 'The good boy that it would be time that he becomes would never had done
 such a thing.'

3. Possible Accounts

Here I tentatively sketch possible reasons why “raising” relatives should be incompatible with extraposition and stacking, and why they should show weak island sensitivity.

3.1. Extraposition

Combining Kayne’s earlier analysis of extraposition (Kayne 2000: §15.3), in terms of Merge of the CP projection outside of the DP, attraction of the relative clause out of the containing DP, and raising of the internal Head to CP, with his recent suggestion that heads are silent (Kayne 2015), I’ll assume the derivation to be as shown in (30a–c).

The relative clause internal Head cannot raise inside the DP as its attractor is outside. The external Head however can (as is the norm in a head-initial languages, where the Head comes to precede the relative clause) thus reducing the internal Head (30a).

The silent head (F) attracting the relative clause to its Spec, and CP₁ and CP₂ are merged outside of the DP, above either the matrix VP (if the host is the object) or the matrix IP (if the host is the subject, as in the present case).¹⁹ Once the relative clause is

¹⁹ Here I follow Guéron (1980) and Baltin (1981, 2006) in taking the position of an extraposed element to depend on the position of its host (roughly, the higher the host, the higher an extraposed element will attach). Evidence for this comes from VP-fronting and VP ellipsis: elements extraposed from subjects are necessarily excluded from the constituent targeted by these operations, as shown in (i), whereas elements extraposed from objects are necessarily included:

- (i) [Some] would ride with Fred [who knew his brother].
 - a. Ride with Fred, some would who knew his brother.
 - b. *Ride with Fred who knew his brother, some would.
- (ii) John said that he would call [people] up [who are from Boston], and . . .
 - a. * . . call people up he did who are from Boston.
 - b. . . call people up who are from Boston he did.

Baltin concludes from these facts that extraposed constituents with subjects as their hosts are adjoined to IP, whereas those with objects as their hosts are adjoined to VP. More generally, he draws the generalization in (iii).

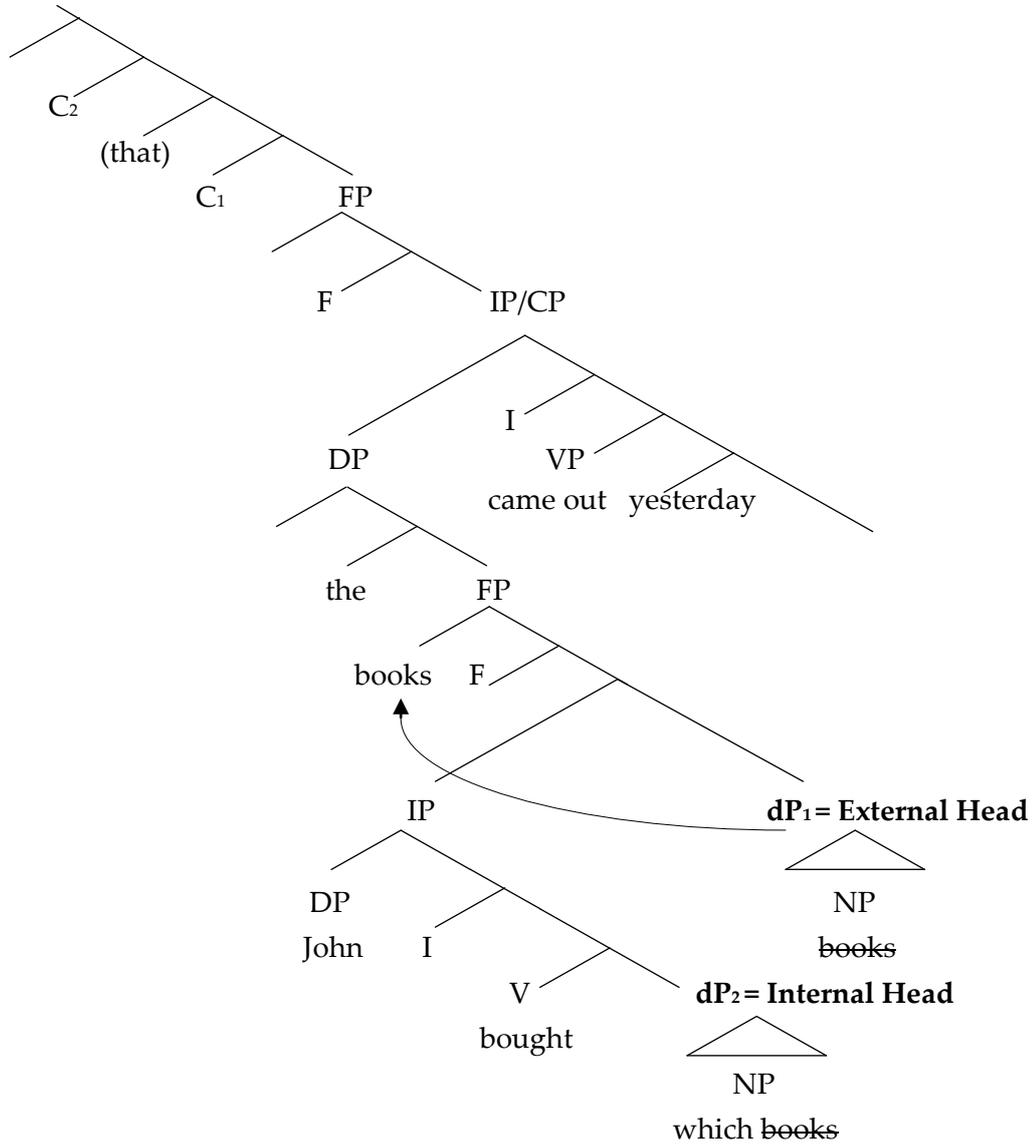
- (iii) An extraposed phrase is adjoined to the first maximal projection that dominates its host.

If adjunction to VP (and higher) prevents elements within the VP from c-commanding the extraposed relative clause, the contrast in (iv), noted in Culicover and Rochemont (1997: examples (7a) and (7b) receives an account.

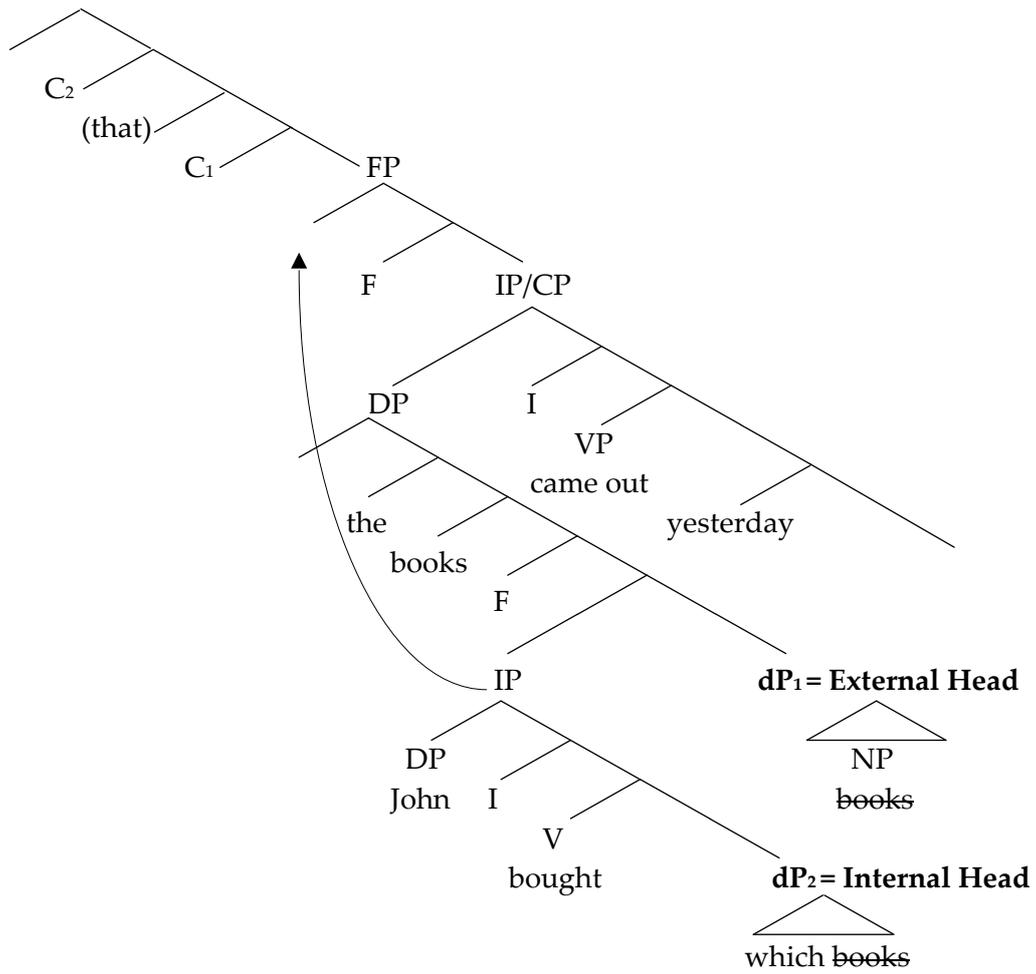
- (iv) a. I sent her_i many gifts last year that Mary_i didn’t like.
- b. *I sent her_i many gifts that Mary_i didn’t like last year.

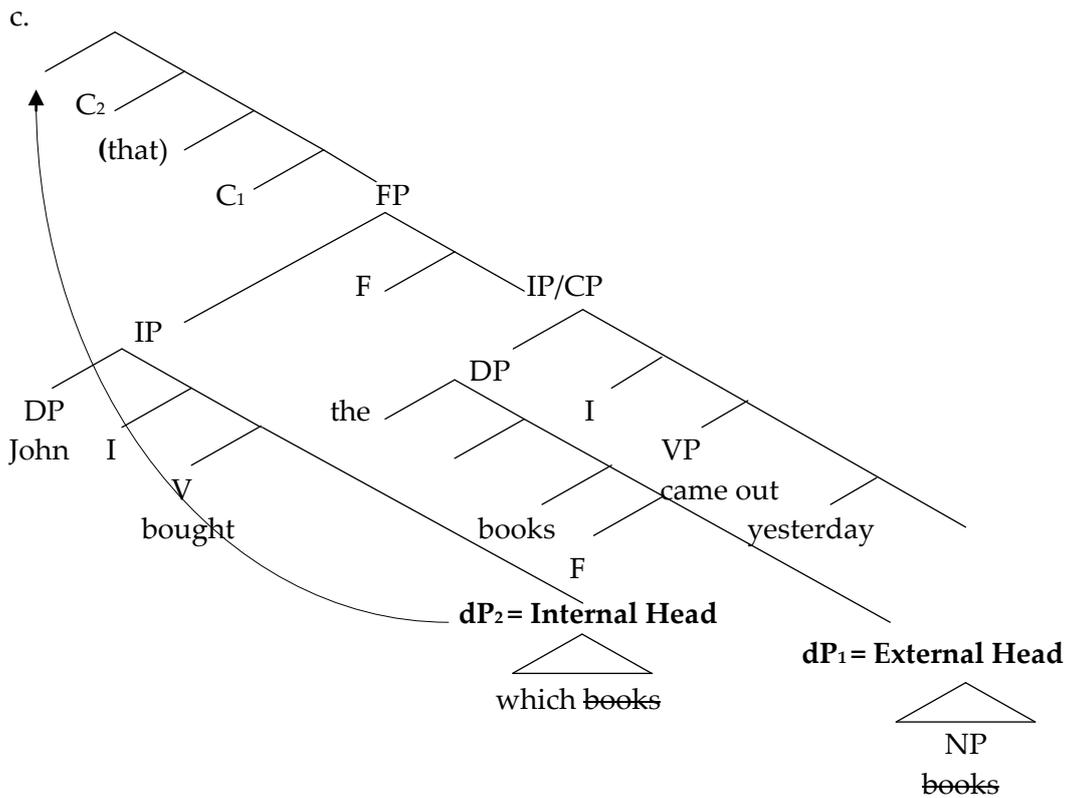
attracted to the Spec of the higher head outside of DP (as in Kayne’s analysis) (30b), the (reduced) internal Head raises to Spec,CP₂ (30c).

(30) a.



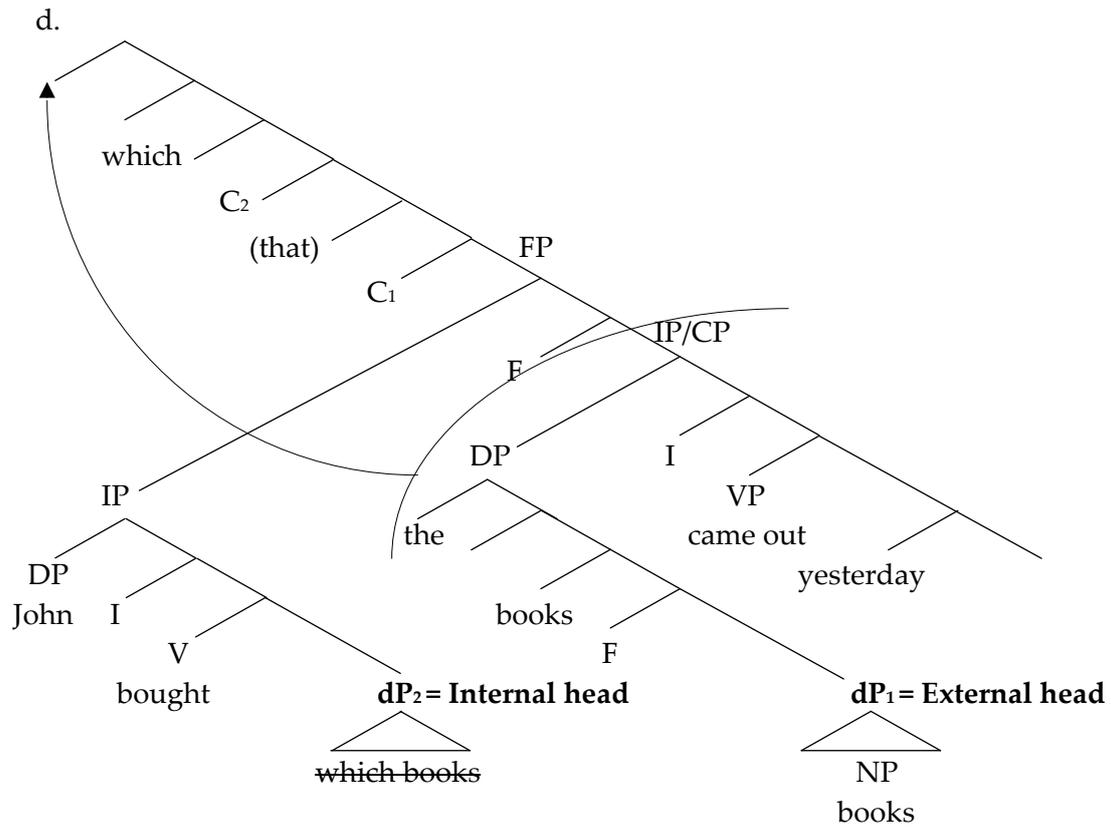
b.





Linearly this gives: which (that) John bought [the books came out yesterday].

At this point, remnant movement (as in Kayne’s analysis) takes place raising [the books came out yesterday] above CP₂ (26d), yielding the extraposed configuration *The books came out yesterday which/that John bought*.

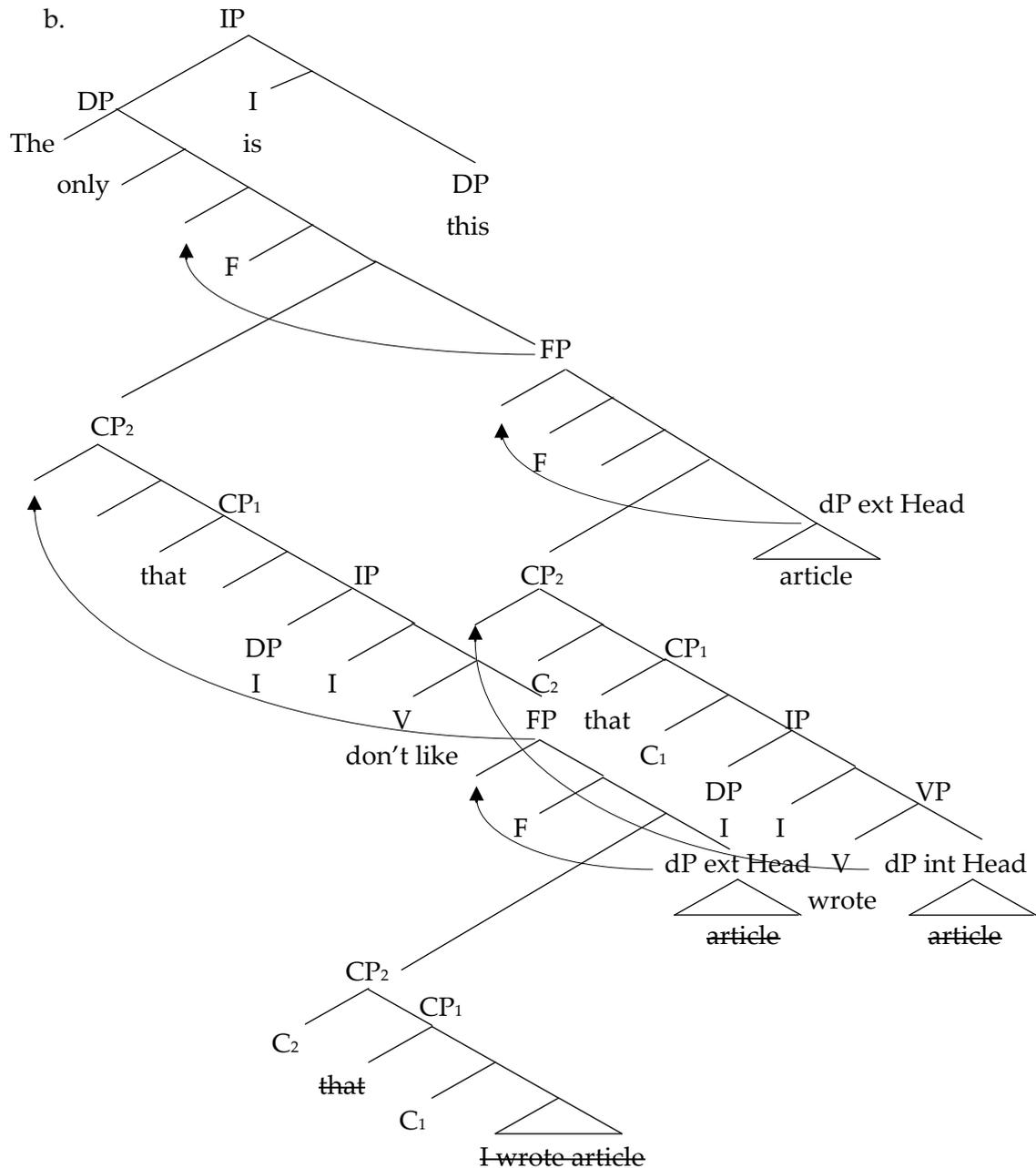


Thus, assuming that extraposition is a function of the merging of CP₁ and CP₂ outside of the DP, in a specifier of the clause (Kayne 2000: §15.3), that the external Head is still attracted to Spec,FP within DP as a function of the derivation of head-initial structures in head-initial languages, that the internal Head (deleted, or reduced to 'which') is attracted to Spec,CP₂ after the relative clause has left the DP, there is no way for the internal Head to be the *overt* Head in extraposition structures: a welcome result that may account for the observed incompatibility of extraposition with "raising" relatives.

3.2. Stacking

Consider now Stacking, exemplified with the sentence in (31a), whose structure and derivation is illustrated in (31b).

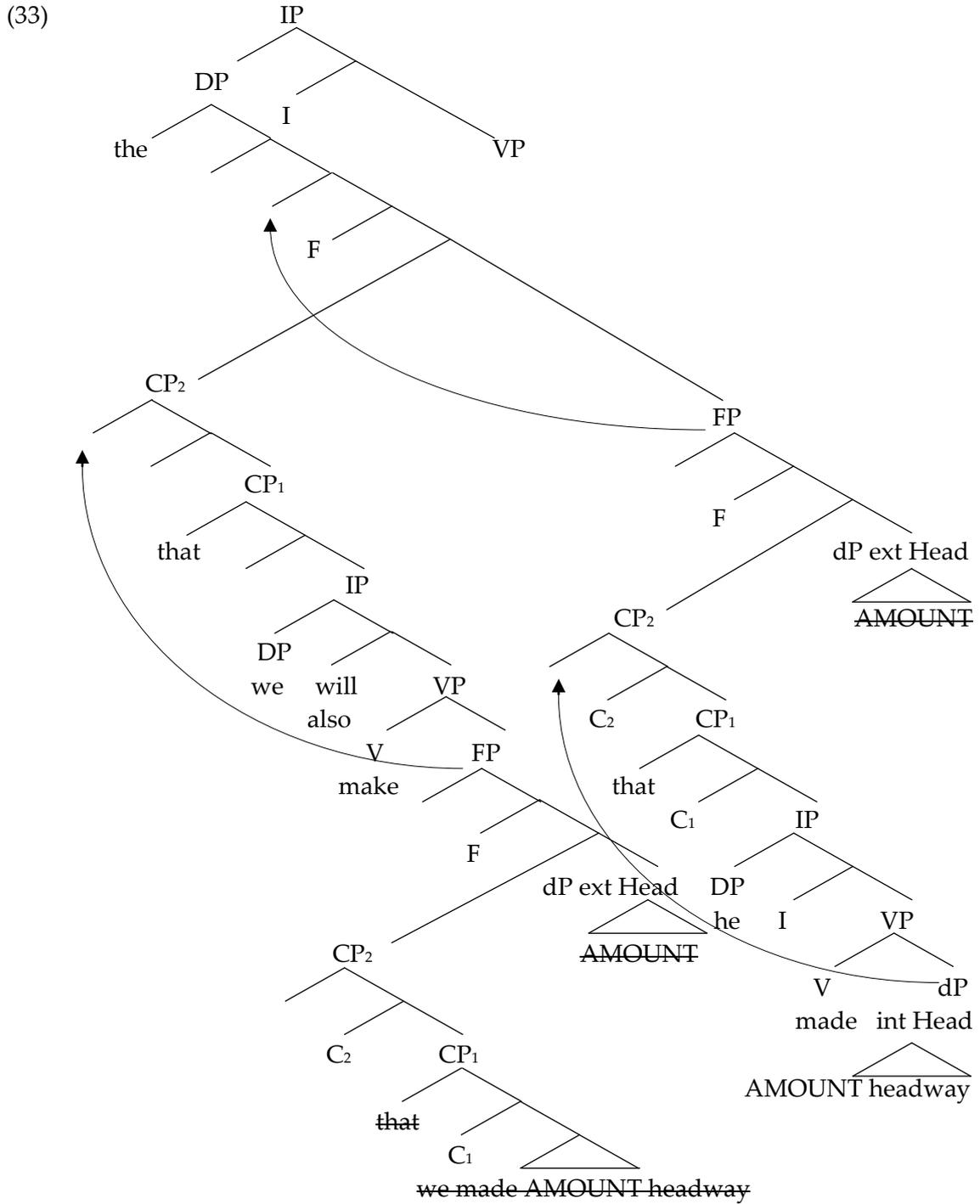
(31) a. The (only) article that I wrote that I don’t like is this.



Should the Head be an idiom chunk as in a sentence like (32), there is no way in which the overt Head can be reconstructed in both relatives, as can be gathered from (33) (the verb *made* in the higher relative clause will also fail to satisfy the requirement that it needs to select *headway* as its object to yield the proper idiomatic interpretation).

This can be seen as a syntactic implementation of Grosu and Landman’s (1998: §2.7.1) observation that “the head noun of a degree relative cannot have this internal interpretation relation to more than one relative clause.”

(32) *The headway that he made that we will also make.



3.3. Weak Island Sensitivity

Finally, for the case of weak island sensitivity, it appears that all of the “raising” cases of relative clauses, as opposed to the “matching” cases, involve either a degree or a kind variable, that is known to be sensitive to islands, rather than an individual variable, which isn’t. For different implementations of this idea, see Rizzi (1990, 2013), Frampton (1991), Grosu and Landman (1998), Szabolcsi (2002), among others.

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