

Internal and External Heads in Appositive Constructions

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version 2, may 2010

Abstract. This article discusses a number of complex appositive constructions, and compares them to regular non-restrictive relative clauses and appositions in some Romance, Germanic and Slavic languages. Special attention is paid to the existence of so-called additional head NPs, and additional pronouns and determiners in appositive constructions. It is argued that almost all of the constructions under discussion can be derived from the same underlying schema. Structurally, these involve a complete restrictive relative construction that is coordinated to the antecedent. The argument provides evidence for both the raising analysis of relative clauses and the coordination approach to appositive constructions.

Keywords: appositions, (non-restrictive) relative clauses, internal head, external head, raising analysis, specifying coordination

1 Introduction

This article discusses appositive (non-restrictive) relative clauses, appositions, and types that seem to be somewhere in between.* We argue that the various appositive constructions can be analyzed as different realizations of the same structural components. Indirectly, our view supports both the raising analysis of restrictive relative clauses (Kayne 1994) and the coordination approach to appositive relative clauses (De Vries 2006a). Examples are taken from Old and Modern Portuguese, Spanish, Latin, Italian, Dutch, English, Czech, Russian, Romanian, and German.

A coordination analysis of appositive constructions implicates that the appositive material is conjoined to the anchor/antecedent. For instance, in the phrase *my friend, John*, the apposition *John* would be structurally coordinated to the anchor *my friend*. This idea has also been expressed in Quirk et al. (1985), Sturm (1986), Koster (2000), and goes back to Kraak and Klooster (1968), as far as we know. However, recent work by O'Connor (2008) and Heringa (2007, 2010) shows that at least attributive appositions as in *John, a nice guy* cannot be directly coordinated to the anchor, but must be embedded in a clausal structure. Details apart, the structure then becomes as in (1), where CoP and DP represent a Coordination Phrase and a Determiner Phrase, respectively:

- (1) [CoP [DP anchor] [Co [DP D [CP ... apposition]]]]

Readers familiar with Kayne's raising analysis will recognize a potential relative construction within the second conjunct in (1), where the determiner takes a clausal complement. If these ideas are on the right track, the relationship between appositional constructions and non-restrictive relatives is in fact tighter than proposed in De Vries (2006a). In a sense, we intend to generalize an intuition already expressed in the 1960s, see Smith (1964), for instance, which conveys that certain kinds of appositions are (transformationally) related to appositive relative clauses – albeit with different arguments and with a different linguistic technology.

Our claim will be that a range of appositive constructions can be derived by means of a coordination account, as sketched for appositions in (1). We show that various appositive constructions are structurally similar in essential respects; differences lie primarily in the choice which elements get spelled out, and in their respective positions. The appositive types under discussion are (i) regular appositive relative clauses (our starting point below), (ii) the appositive construction with an additional internal head NP, (iii) the appositive construction with an additional external head NP, (iv) the semi-free appositive relative construction, and (v) regular appositions.

To illustrate, consider the example in (2), in Dutch (adapted from De Vries 2004a: 200). What is remarkable here is that the NP complement of the relative pronoun *welk* 'which' is spelled out, namely *boek van Reve* 'book by Reve'. Thus, next to the external antecedent "*De avonden*" ('the evenings', a book title), there is an internal head NP as well.

- (2) "De avonden", welk *boek van Reve* veel gelezen wordt, is herdrukt.
"De avonden", which book of Reve much read becomes, is reprinted
' "De avonden" [the evenings], which book by Reve is read by many people, has been reprinted.'

We attested this construction type in various Germanic, Romance, and Slavic languages. From the perspective of a coordination account, it can be compared to the variant in (3), where the additional head NP is (superficially)

* This paper is a thoroughly revised and expanded version of an earlier manuscript submitted to XXXX. We thank the anonymous reviewers for their comments and questions. [further acknowledgements to be added]

external with respect to the relative clause. To the best of our knowledge, complex appositions like this have not received any attention in the theoretical literature.

- (3) “De avonden”, een *boek van Reve* dat veel gelezen wordt, is herdrukt.
 “De avonden”, a book of Reve REL.PRON much read becomes, is reprinted
 “De avonden” [the evenings], a book by Reve that is read by many people, has been reprinted.’

Another possibility is that there is just an additional pronoun or determiner (possibly combined with a light noun) heading a relative clause construction next to some external antecedent. In such a case, the second conjunct can be called a semi-free appositive relative construction. An example is (4), also in Dutch, where *Reve* is now used as the external antecedent.

- (4) Ik las een boek van Reve, degene/hij die “De avonden” geschreven heeft.
 I read a book of Reve the.one/he REL.PRON “De avonden” written has
 ‘I read a book by Reve, the one /he who wrote “De avonden” [the evenings].’

Again, the appositive part of the sentence can be considered a complex apposition.

This article is organized as follows. Section 2 introduces the raising analysis of restrictive relative clauses, and the specifying coordination account of appositive relative clauses, which subsumes the first. Section 3 provides a brief but systematic overview of the various appositive construction types, which are then illustrated and discussed in more detail in Section 4. Section 5 considers the semantics of the relevant constructions more carefully, and proposes to distinguish attributive from identifying construal. Section 6 investigates the Case distribution in appositive relative constructions. Section 7 reviews various other properties of appositive constructions, and argues that these are compatible with the present structural proposal. Section 8 is the conclusion.

2 Theoretical background

2.1 The raising analysis of restrictive relative clauses

The raising analysis of (restrictive) relative clauses has originally been proposed by Schachter (1973) and Vergnaud (1974, 1985). It has been revived and moderated by Kayne (1994) within a general antisymmetric framework of syntax, and the approach was worked out in more detail by Bianchi (1999, 2000), Zwart (2000), De Vries (2002), and others, who took into account a number of objections to Kayne’s earlier proposal such as formulated by Borsley (1997). The main idea is that the head NP (the antecedent) of a restrictive relative clause originates at the relativization site inside the subordinate clause, and then raises to the left edge. The relative clause itself is generated as the complement of the so-called external determiner, with which the head NP may associate after raising. A relative pronoun or operator is then to be analyzed as a *relative determiner* originally belonging to the internal head NP. See the representation in (5):

- (5) $[_{DP} D [_{CP} NP_i [D_{rel} t_i]_k C [_{IP} \dots \dots t_k]]]$
 e.g. the book (which) (that) I read

Normally, there are two movement steps: movement of the operator phrase DP_{rel} to the CP domain, and subsequent movement of the head NP to the left of D_{rel} .¹

There are different types of evidence that favor the raising analysis of restrictive relative clauses over a right-adjunction analysis as in Ross (1967), Chomsky (1977), Jackendoff (1977), and others: theoretical, cross-linguistic, and empirical. Theoretically, right-adjunction has always been a structural *ad hoc* solution. More specifically, it is incompatible with a strict antisymmetric phrase structure (Kayne 1994), contrary to the raising analysis sketched in (5). Cross-linguistically, the existence of so-called internally headed relative clauses can be considered as a strong argument for the raising analysis (Bianchi 1999: 61ff., De Vries 2002). Such constructions can be found in Quechua, Latin, Lakota, and Tibetan, for example; see Lehmann 1984, Cole 1987, and Culy 1990,

¹ The exact landing position and trigger for the NP movement is subject to discussion. Minimally, NP is moved to the left edge of DP_{rel} (Kayne 1994, De Vries 2002); however, there are also indications that it acquires a position outside of DP_{rel} in a higher layer of CP (Bianchi 1999, Zwart 2000). In Section 6, we will see that at least the head N has to escape DP_{rel} for Case reasons. As for the trigger, Bianchi suggested that the external D bears a strong selectional N-feature that needs to be checked by a [+N] category, and since the CP complement of D itself has no such feature, the head NP inside CP must be moved to a position governed by the external D. Zwart, on the other hand, argued that the trigger for NP-movement is semantic: after raising the head NP to the highest position within the embedded CP, the rest of the relative clause can act as a restrictor; thus, the meaning composition can be obtained straightforwardly by means of set intersection. We will assume that something along these lines is correct. Notice, however, that the internally headed constructions to be discussed below require covert movement or feature percolation in order to rescue the semantics. Since the overt/covert distinction is a general and much-discussed issue beyond the scope of this article (and we have no new position to offer), we will refrain from going into it.

among others, for illustration. A clear example from Dagbani, a Gur language spoken in Ghana, is given in (6), translated from Lehmann (1984:117):

- (6) A mi [o nə ti saan-so ləgri] la.
 you know he SR give stranger-SPC/LIV money PTL
 ‘You know the stranger whom he gave the money.’

What is interesting is that the head NP *saanso* ‘stranger’ surfaces in an argument position inside the relative clause, which corresponds to the presumed base position of the head NP in regular head-external relative clauses. Hence, the raising analysis enables us to generalize over head-external and head-internal relative clauses, thereby parameterizing over the overtiness of raising. From the perspective of relative clause adjunction, the existence of constructions such as (6) is enigmatic.

Last but not least, the raising analysis naturally accounts for the well-known reconstruction effects between the head NP and the relative gap. For instance, the anaphor *herself* in (7) is bound by the relative clause-internal subject *Anne*. If the head NP is indeed generated in a relative clause-internal position, such a reconstruction effect can be explained straightforwardly. However, in an adjunction account, there is no such internal base position of the head NP, and we would predict a violation of Binding Condition A, contrary to fact.

- (7) The [incredible stories about herself]_k that Anne_i heard t_k yesterday were mere lies.

Additional evidence for the raising analysis can be provided by means of quantifier binding, scope assignment, idiom chunks, and the interpretation of adjectival modifiers. For a more detailed discussion, see Vergnaud (1985), Bianchi (1999), Bhatt (2002), and Salzmann (2006), among others.

2.2 The specifying coordination analysis of appositive relative clauses

There seems to be a growing consensus that appositive relative clauses cannot be analyzed in the same way as restrictive ones, despite the fact that they are superficially very similar.² In fact, a representation like (5) above cannot be used for appositive relatives, since D must not take scope over the relative clause, unlike the situation in restrictive relative constructions. Consider the illustrations in (8).

- (8) a. The teacher praised the two girls that know “Pride and Prejudice” by heart. (restrictive)
 b. The teacher praised the two girls, who know “Pride and Prejudice” by heart. (appositive)

In (8a), *the two* takes scope over both the noun and the restrictive relative clause, which semantically form a complex restriction; this implies that there is also a potential group of girls that do not know “Pride and Prejudice” by heart that the teacher did not praise. In the appositive relative construction in (8b), *the two* takes scope over the noun only; therefore, there are exactly two girls in the domain of discourse, and there is no contrast with other girls. See also Demirdache (1991), Arnold (2007), and various others on the totality interpretation of appositive relative constructions.

Furthermore, appositive relative constructions generally do not exhibit the reconstruction effects observed for restrictive relatives. Consider the pair of sentences in (9):

- (9) a. Let’s collect the pictures of his_i children that [every father]_i likes best. (restrictive)
 b. # Let’s collect the pictures of his_i children, which [every father]_i likes very much. (appositive)

In the appositive construction in (9b) the pronoun *his* cannot covary with a quantified antecedent inside the relative clause, contrary to the situation in (9a). Such contrasts indicate that the raising analysis is not empirically supported for appositives. Furthermore, it has been claimed that (true) internally headed relative clauses as in (6) cannot be appositive (Lehmann 1984, Grosu and Landmann 1998). Though this issue is still subject to debate, we can at least say that clear cross-linguistic evidence for the existence of appositive internally headed relative clauses seems to be lacking (*pace* Culy 1990). Again, this suggests that appositive relative constructions are different from restrictive ones.

Nevertheless, Kayne (1994) and Bianchi (1999) proposed that both restrictive and appositive relatives are derived via the head-raising structure given in (5). In order to account for the scope-related contrasts mentioned

² In addition, Cinque (2008) argues that non-restrictive relative clauses are not a unitary type of relative clauses, syntactically and semantically opposed to restrictive relative clauses. He claims that there are two distinct types of non-restrictive relative constructions: one that is in some respects similar to the ordinary restrictive construction, the ‘integrated construction’, and the more familiar ‘non-integrated construction’. According to Cinque, English only has the latter, Chinese only has the former, and Italian has both types. In this article, we will be focusing on the parallels between regular and complex appositive constructions, which does not directly interfere with the issue brought up by Cinque, so we will leave it open for future research.

above, they hypothesized that appositive relative clauses involve covert remnant movement (at LF) of the relative IP to the specifier position of the external determiner D, where it is no longer in the scope of either D or the head NP. However, even apart from the stipulative nature of this movement itself,³ it leaves unexplained several differences between appositive and restrictive relative constructions. For instance, it remains unclear why appositive constructions with a non-nominal antecedent are allowed, unlike restrictive ones (see below for illustrations). Furthermore, one wonders why appositives always follow restrictives, when combined. Most relevantly, at least for our purposes, why is it that appositive constructions with an additional internal head NP exist, contrary to restrictive ones? Needless to say, the same questions arise for a traditional right-adjunction analysis of relative clauses.

De Vries (2006a) provides an alternative analysis of appositive relative clauses, relating them to appositional constructions. The appositive relative clause is treated as a complex apposition that is coordinated to the antecedent:

- (10) [CoP [DP antecedent] [Co [DP D [CP appositive relative clause]]]]

The abstract coordinator involved is semantically specialized: it constitutes an asymmetric relationship of specification between the two DP conjuncts (see also Koster 2000).⁴ Within the second conjunct, the relative clause is the complement of D; this corresponds to a raising-style configuration of a full relative construction (a DP containing a relative clause). The surprising aspect of this analysis is therefore that an *appositive* relative clause is in fact a *restrictive* relative construction *in apposition to* the overt antecedent. Since the second conjunct normally does not contain an overt antecedent itself, the restrictive relative construction comprises a semi-free relative construction. Thus, (11a) is analyzed roughly as in (11b):

- (11) a. Jack, who lives in Paris
 b. Jack: person who lives in Paris

In more detail, the structure of examples like (11) is as in (12), where we simply combine (10) with the familiar analysis of restrictive relative constructions in (5):

- (12) [CoP DP Co [DP D [CP NP_i [D_{rel} t_i]_k C [IP t_k]]]]
 e.g. Jack , ∅ ∅ who ∅ lives in Paris

The determiner heading the second conjunct together with the raised abstract head NP can be considered a pronoun. The German morphological complex *derjenige* ‘the one’, frequently used in regular semi-free relatives, shows exactly this.

What is nice about this analysis, we think, is that it generalizes over relativization, which is structurally always the same (a D–CP configuration involving raising of the head NP), whilst factoring out an independent facet: non-restrictive construal, which of course exists outside of relativization contexts proper (see also De Vries 2007). In Section 3 and below, we will discuss the spelling out of the various structural components of appositive configurations in more detail. But first, let us see how the specifying coordination account explains some fundamental properties of (appositive) relative constructions.

I: scope. We noticed above (cf. 8) that in restrictive relative constructions the determiner/quantifier belonging to the antecedent takes scope over both the head NP and the relative CP; by contrast, it does not take scope over an appositive relative CP. This is why appositive constructions are non-restrictive. Now compare the representations in (13a) and (13b), where D and NP constitute the overt antecedent:

- (13) a. [DP D [CP NP ... relative IP]] (restrictive)
 b. [CoP [DP D NP] [Co [DP ... relative IP]]] (appositive)

Clearly, the relevant D in the restrictive configuration (13a) c-commands the head NP and the relative clause, but the antecedent D and also N in the appositive configuration (13b) do not c-command the relative clause because of the coordination structure: both are embedded inside the first conjunct. Following the standard assumption that scope is dependent on c-command, the scopal difference between restrictives and appositives follows.

³ Kayne (1994: 111) originally suggested that the LF-movement of IP may be due to some feature present in the overt syntax that is also related to the comma intonation at PF. But this cannot be correct (as Kayne noted himself, curiously): the intonational break in head-initial relative constructions does not coincide with the IP boundary, since it precedes relative pronouns and complementizers in the CP domain, if present.

⁴ Koster symbolically represents this relator by a colon; De Vries employs an ampersand plus a colon ‘&:’. Here, let us simply make use of the more general denotation Co for coordinative head. Furthermore, notice that a coordination phrase always has the distribution of the conjuncts (here, DP), despite the fact that the coordinator projects. We assume that this is because CoP is inherently underspecified and inherits properties from its ‘arguments’. See also Johannessen (1998) and Progovac (1998) for discussion and references.

II: reconstruction effects. As already illustrated in (9), restrictive relative constructions show certain reconstruction effects, but appositive ones do not. The head raising analysis was designed to explain the former, so let us check if reconstruction is prevented in the latter case by the coordination analysis. This is indeed so, trivially in fact. In (12), for instance, we see that although there is raising of the (abstract, pronominal) head NP within the second conjunct, the visible antecedent is base-generated in the first conjunct. There is no movement chain between the antecedent and the position of the gap inside the relative CP; thus, there cannot be reconstruction.⁵

III: non-nominal antecedents. Appositive relative clauses, unlike restrictive ones, can have non-nominal antecedents. Some examples are given in (14), where we print the antecedent in italics:

- (14) a. Jack was *very rich*, which John never was. (adjectival phrase)
 b. *Jack is very rich*, which annoys John. (clause)
 c. Jack put the gold *under the table*, which John regarded a silly hiding place. (prepositional phrase)

Borsley (1997) convincingly showed that the raising analysis cannot derive such examples in any plausible way. Essentially, the antecedent has to be selected by the relative determiner D_{rel} within the relative clause; consequently, it has to be a nominal projection. We take this restraint as an advantage, since it explains why examples of *restrictive* relative constructions with non-nominal antecedents are impossible. For appositive relative constructions, matters are different. On the specifying coordination account, the second conjunct containing the relative clause may be attached at different levels (including AP, VP, IP, CP, PP), simply because coordination at any structural level is independently allowed. Consider the schematic structure in (15), where XP stands for any category:

- (15) [_{CoP} XP [Co [_{DP} D CP]]]

Citko (2008) objects, not unreasonably at first sight, that this predicts a cross-linguistic correlation between the possibility of (categorially) unbalanced coordination and the existence of appositive relative clauses with a non-nominal antecedent. According to her, this is unwarranted. In the absence of a typological study showing it, we do not know whether such a claim is generally correct. We did notice, however, that the evidence Citko provides is completely misguided, unfortunately. In Dutch, an unbalanced coordination such as in (16) is very marginal at best, whereas appositive relative clauses with a non-nominal antecedent, comparable to (14), are fine (Citko 2008: 637-638).

- (16) ?? Je kunt vertrouwen op [_{DP} mijn assistent] en [_{CP} dat hij op tijd zal zijn].
 you can rely on my assistant and that he on time will be
 ‘You can depend on my assistant and that he will be on time.’

However, there is an independent reason why (16) is not good: the verbal collocation *vertrouwen op* ‘rely on’ cannot straightforwardly be combined with a CP, so in the absence of a first conjunct the sentence is also degraded; see (17a). The way to repair it is to add the pronominal particle *er* ‘there’ (which combines with the preposition to yield *erop* ‘thereon’), as is shown in (17b). But notice that this solution is incompatible with the first, nominal conjunct in (16); see (17c). Consequently, in this particular context DP and CP cannot be coordinated.⁶

- (17) a. ?* Je kunt vertrouwen op [dat hij op tijd zal zijn].
 b. Je kunt *erop* vertrouwen [dat hij op tijd zal zijn].
 c. * Je kunt *erop* vertrouwen [mijn assistent].

Apart from this, it seems to us that the configuration in (15), unlike the situation in simple cases of unbalanced coordination, is semantically facilitated because the head of the second conjunct has a pronominal function. And pronouns generally can be used to refer to all sorts of semantic and syntactic categories. In this respect, notice that it is perfectly acceptable to coordinate a stressed pronoun and, say, a CP or a PP in Dutch. (The stress may have to do with phonological balancing.) Moreover, a free relative, i.e., a DP, and a CP can easily be combined. See (18a-c):

- (18) a. Ja, gisteren zei hij [dat] en [dat hij wegging].
 Yes, yesterday said he that and that he away.went
 ‘Yes, yesterday he said that and that he would leave.’
 b. [Daar] en [onder de tafel] heb ik nog niet gekeken.
 there and under the table have I yet not looked

⁵ Just to be complete, notice that for reconstruction purposes, a pronoun or operator is no sufficient substitute for a complex NP. In (9b), for instance, the abstract pronoun or *which* is coreferent with the complex DP denoting the relevant pictures, not with the embedded *his* that needs to be bound.

⁶ The same objection applies to Citko’s (2008: 637) example (10b).

- 'I haven't looked there and under the table, yet.'
- c. Niet [waar Jack het over had] maar [dat Anna ons gaat verlaten], *dat* is het probleem.
 not where Jack it about had but that Anna us goes leave that is the problem
 'Not what Jack was talking about, but that Anna is going to leave us is the problem.'

Finally, it is worth noting the existence of clausal appositions with a pronominal antecedent (19a), as well as the possibility of pronouns resuming clauses, which is more or less the reverse; see (19b), and also (18c):

- (19) a. Ik betreur *het*, d.w.z. [dat hij weggaat].
 I regret it, i.e. that he away.goes
 'I regret it, i.e. that he is going to leave.'
- b. Dat hij ziek was, dat hij zijn sleutels vergeten is, dat zijn auto stuk is... *dat alles* kan
 that he ill was that he his keys forgotten is that his car broken is that all can
 geen geldig excuus zijn voor zijn afwezigheid.
 no valid excuse be for his absence
 'That he was ill, that he forgot his keys, that his car is broken... all that will not be considered a valid
 excuse for his absence.'

In short, all the evidence is actually in *favor* of the structural hypothesis in (15).

IV: order. Appositive relative clauses, like appositions, follow other (restrictive) modifiers related to the antecedent (including restrictive relative clauses); see (20), for instance, where the PP is to be interpreted restrictively:

- (20) a. the girl with the silver necklace, who is very rich
 b. * the girl, who is very rich, with the silver necklace

This is explained straightforwardly by the coordination analysis, since other modifiers are necessarily included in the antecedent DP inside the first conjunct, which as a whole precedes the second conjunct containing the appositive relative clause; see (21):

- (21) [_{CoP} [_{DP} D N modifier(s)] Co [_{DP} D [_{CP} appositive relative clause]]]

If the modifier is a restrictive relative clause, then the first DP is configured according to the raising analysis depicted in (5): [_{DP} D [_{CP} NP (D_{rel}) (C) IP]].

V: Additional internal heads. Appositive but not restrictive relative clauses can contain an additional internal head NP. The examples in (22a-b) are cited from Smits (1988: 287), to which we add c-d in order to show that the sentence is fine in either interpretation if there is no additional internal head. A pair similar to (22a/b) can also be found in Fabb (1990:72); see Section 4 for more examples.

- (22) a. My dog, which *faithful animal* has guarded me for years, died last week. (appositive)
 b. * The dog which *animal* has guarded me for years died last week. (restrictive)
 c. The dog, which has guarded me for years, died last week. (appositive)
 d. The dog which/that has guarded me for years died last week. (restrictive)

Such contrasts can be explained straightforwardly. According to the raising analysis of restrictive relative clauses, the head NP (which surfaces as the external antecedent) originates as the complement of the relative determiner D_{rel}; see the structure in (23a). Thus, only one NP position is available, and there is simply no room for an additional NP *animal*. This explains why (22b) is impossible. By contrast, there are two NP positions in the appositive construction: the external antecedent in the first conjunct and the NP position within the second conjunct. This is shown in (23b).

- (23) a. [_{DP} the [_{CP} [_{NP} dog]_i [_{DPrel} which t_i]_k C [_{IP} ... t_k ...]]]
 b. [_{CoP} [_{DP} the [_{NP} dog]] Co [_{DP} D [_{CP} [_{DPrel} which [_{NP} animal]]_k C [_{IP} ... t_k ...]]]]

We take this as clear evidence for the raising and coordination approach, and against the more traditional right-adjunction analysis of relative clauses, which does not distinguish between restrictive and appositive constructions (apart from a possibly different point of attachment).⁷

⁷ Citko (2008: 635) is right to point out that there is an internal NP position available in the adjunction analysis as well. Why then is an additional internal NP impossible in restrictive constructions? It is only in a footnote that Citko acknowledges that restrictives behave differently from appositives. Accordingly, she suggests that they are to be analyzed differently, namely by means of head raising. But this of

In conclusion, the coordination analysis explains various basic properties of appositive relative clauses, as well as the differences with restrictives. In the next sections we show that it can also be generalized to related construction types. Section 7 returns to several of the topics mentioned here from this broadened perspective.

3 Predictions and overview of construction types

Since Chomsky's (1977) seminal work on *wh*-constructions, it is widely assumed that relative clauses contain an operator, which may or may not be spelled out. Translated into the present account, the relative determiner D_{rel} is either a relative pronoun or lexically empty. Similarly, it is uncontroversial (at least within transformational approaches to grammar) to assume that there is a complementizer position C that can be overt or silent, depending on minor parametrical choices. In English relative clauses, there are three possibilities, illustrated in (24):

(24) the man {who, that, \emptyset } Jane admires

The fourth logical possibility, a so-called doubly filled COMP (\sim 'who that'), exists as well, for instance in Canadian French or Aarschot Dutch, but it is not very common, and we will leave it aside in this article.

Further sources of variation in restrictive relative constructions are the presence or absence of the head noun and the external determiner, and the position of the head NP. This yields the difference between fully headed, semi-free, free, and internally headed free relative clauses; see the English examples in (25), for instance:

- | | | | |
|------|----|---|-----------------------------------|
| (25) | a. | the pirate who Jane admires | (headed relative) |
| | b. | he/those/someone/the one who Jane admires | (semi-free relative) |
| | c. | who Jane admires; what Jane did | (free relative) |
| | d. | whichever man Jane admires | (internally headed free relative) |

According to the coordination analysis of appositive relative clauses, the second conjunct (the apposition to the antecedent) constitutes a complete restrictive relative construction. Therefore, if this analysis is on the right track, we predict the existence of the same types of variation in appositive constructions. To sum up, there may be variation in:

- the presence/absence of an overt relative pronoun D_{rel} ;
- the presence/absence of an overt complementizer C ;
- the presence/absence of an overt (additional) external D ;
- the presence/absence of an overt (additional) head NP;
- the position of the additional head NP, if present.

It is not likely that all logical possibilities can be found in one language (and register), but we will show that these predictions are indeed correct from a cross-linguistic and diachronic perspective.

The attested patterns are summarized in (26), and, for ease of exposition, illustrated by means of English words. Only overt elements are indicated. Notice that appositive relatives can be introduced by a complementizer instead of a relative pronoun in many languages (Danish or Portuguese, for instance), unlike the situation in English.

- | | | | |
|------|----|------------------------|---|
| (26) | a. | DP, C ... | Jack, <i>that</i> is my best friend |
| | b. | DP, D_{rel} ... | Jack, <i>who</i> is my best friend |
| | c. | DP, D C ... | Jack, <i>the that</i> is my best friend |
| | d. | DP, D D_{rel} ... | Jack, <i>he who</i> is my best friend |
| | e. | DP, NP D_{rel} ... | Jack, <i>man who</i> is my best friend |
| | f. | DP, D NP C ... | Jack, <i>the man that</i> is my best friend |
| | g. | DP, D NP D_{rel} ... | Jack, <i>the man who</i> is my best friend |
| | h. | DP, D_{rel} NP ... | Jack, <i>which man</i> is my best friend |
| | i. | DP, ... | Jack, my best friend |

Let us define five appositive construction types:

- (i) The regular appositive relative construction. Here, the potential additional D and NP remain silent, but D_{rel} or C can be spelled out; see (26a/b).

course begs the question why raising *must* be applied to restrictives, if there are two different relativization strategies. By contrast, in the raising and coordination approach, there is just one relativization strategy for all relative clauses, whilst the opposition restriction/nonrestriction is attributed to an independent factor (involving specifying coordination), as explained above.

- (ii) The semi-free appositive construction. Here, there is an additional D element (possibly combined with a light noun) that can be spelled out as an article or pronoun; see (26c/d).
- (iii) The appositive construction with an additional external head NP. Here, there is an additional full NP that is left-peripheral within the embedded clause (possibly preceded by an external D, and/or followed by an internal D_{rel} and/or C); see (26e/f/g).
- (iv) The appositive construction with an additional internal head NP. Here, there is an additional full NP c-commanded by a dependent relative pronoun D_{rel} such as *which* in English; see (26h).
- (v) The regular appositional construction. Here, not only the CP domain is silent, but also the verbal part of the predicate; see (26i). We will also show that there is a crucial difference between attributive and identificational appositions.

We illustrate constructions (iv), (ii), (iii), and (v) in the next section (in this order), and discuss their properties in some more detail.

4 Various appositive constructions

4.1 The appositive construction with an additional internal head NP

Let us begin with the appositive construction with an additional internal head NP, which was the starting point of this whole project. Some more examples are provided in (27), taken from Fabb (1990:72), and (28) in Dutch (from De Vries 2004a:199). The additional internal head NP is italicized.

- (27) The LAGB, which *organization* meets tomorrow, is based here.
- (28) Ze zwaaid naar Joop, welke *stakkerd* zijn been had gebroken bij het skieën.
 she waved at Joop, which wretch his leg had broken at the skiing
 ‘She waved at Joop, which wretch had broken his leg during skiing.’

As is the case with regular appositive relative clauses, the antecedent can be non-nominal – compare (14). This is shown in (29), from Smits (1988: 287), and (30) in Dutch, from De Vries (2006a: 262). In these examples the antecedent is clausal. See also Section 7.8.

- (29) They are said to have taught a baboon to write, which claim has immediately been ridiculed by most scholars.
- (30) Hond en kat zijn als water en vuur, welk feit reeds lang bekend is.
 dog and cat are like water and fire, which fact already long known is
 ‘Dogs and cats are like water and fire, which fact has been well-known for ages.’

Also, there can be pied piping of a preposition inside the relative clause in both English and Dutch; see (31a-b), (slightly adapted) from Smits (1988: 288 and 65).

- (31) a. It might be a bit crowded at the airport, *in which case* we had better be there early.
 b. John kreeg van ons een iPod, *met welk cadeau* hij erg gelukkig was.
 John got of us an iPod with which gift he very happy was
 ‘John got an iPod from us, with which gift he was very happy.’

As Smits (1988: 65) points out, the appositive construction with an additional head NP is found primarily in formal contexts, especially in bureaucratic and similar styles. Its use can sometimes be explained as a strategy to avoid ambiguity when the relative and the antecedent are non-adjacent, as a way of conferring more precision to the utterance; see also Ernout and Thomas (1972: 332) and Dias (1918/1970: §93). The corpus-based investigation in Old Portuguese by Cardoso (2008) points in the same direction: appositive constructions with an additional internal head NP are more frequent than ordinary appositive relative clauses in contexts of extraposition, as in (32), and when the relative clause is preceded by stacked or multiple embedded relative clauses, as in (33).

- (32) E o dicto Juiz per sentença defenetiva asy o Julgou da qual *sentença*
 and the mentioned judge by sentence definitive this.way him judged of.the which sentence
 o dicto Reeo nō apellou
 the mentioned defendant not appeal

‘And the mentioned judge by a definite sentence judged this way (=passed this sentence), against which sentence the mentioned defendant did not appeal.’ (Martins 2000, year 1422, our translation)

- (33) Sabhã todos que [...] ã hũa vjnha que chamã o cõchouso que e A par da de
 know:3PL all that in a vineyard that call:3PL the Cõchouso that is next of.the of
 Pero. caramos termho de Santarẽ A qual vjnha deziam que Era do Moesteyro dachellas
 Pero Caramos environs of Santarẽ the which vineyard said:3PL that was of.the monastery of.Chellas
 ‘(I want you) all to know that in a vineyard that people call the Cõchouso, that is next to the (vineyard) of
 Pero Caramos, environs of Santarẽ, which vineyard people said that belonged to the Monastery of Chellas’
 (Martins 2000, year 1377, our translation)

However, as the examples in (27) through (31) show, none of this is a necessary condition.

There seems to be no restriction on the semantic class of nouns that can appear in the internal position. For instance, the additional head can be a proper name (34), a count noun (35), and a non-count noun (36). Again, the examples are in Old Portuguese.

- (34) o dito Johã viçente disse que a dita vjnha trouxera ã outro tempo
 the mentioned Johã Viçente said that the mentioned vineyard brought in other time
 Luzia domingujz [...] A qual Luzía domingujz Era ffinada deste mondo
 Luzia Domingujz the which Luzía Domingujz was deceased from.this world
 ‘The mentioned Johã Viçente said that Luzia Domingujz once had the mentioned vineyard, which Luzía
 Domingujz was dead’ (Martins 2000, year 1377, our translation)
- (35) cõfesamos que nos Recebemos de uos Martjn saluadorez Cjncoeõta libras de
 confess:1PL that we received of you Martjn Saluadorez fifty pounds of
 dinheiros portugéeses as quaes #Lta libras a nos erõ Julgadas per Sentẽca
 currency Portuguese the which fifty pounds to us were attributed by sentence
 ‘We confess that we received from you Martjn Saluadorez fifty pounds of Portuguese currency, which fifty
 pounds were attributed to us by sentence’ (Martins 2000, year 1365, our translation)
- (36) E que dem e paguem de foro e pensom da dicta qujntãa
 and that give:3PL and pay:3PL of tenancy and rent of.the mentioned farm
 en cada hũu ãno hũu tonell de vinho, puro do que deus der nas vjnhas [...]
 in each a year one vat of wine pure of.the that god give in.the vineyards
 o quall vinho sera vermelho
 the which wine will.be red
 ‘And (I order) that they give and pay as tenancy and rent for the mentioned farm in each year one vat of
 wine, pure, the one that god will give in vineyards, which wine will be red’ (Martins 2000, year 1510, our
 translation)

Furthermore, the internal head NP can be a conjoined phrase, as is shown in (37). Structurally, this means that a CoP containing nominal conjuncts is inserted as the complement of D_{rel} .

- (37) ffazemos prazo a ty Domĩgas dominguiz e ao Primeyro marido que
 do:1PL rent to you Domĩgas Domingujz and to.the first husband that
 oueres. dũu Casal que auemos en Cũpustelá e dũu meío. Barco
 will.have:2SG of.an hamlet that have:1PL in Cũpustelá and of.a half boat
 en verdugo O qual casal e meío Barco ora trage Maria
 in Verdugo the:SG which:SG hamlet and half boat now brings Maria
 ‘We rent to you, Domĩgas Domingujz, and to your first husband an hamlet in Cũpustelá and half of a boat in
 Verdugo, which hamlet and half of a boat now belong to Maria.’ (Martins 2000, year 1308, our translation)

Note, by the way, that this example shows first conjunct agreement for ϕ -features between the relative pronoun *o qual* and the noun *casal* ‘hamlet’ (the first conjunct), which is masculine and singular.⁸

⁸ First conjunct agreement in such contexts appears to be the norm in Old Portugues (Cardoso 2008, forthcoming). This may lead to a number mismatch between the relative pronoun and second NP: *o qual casal e bẽes* (lit. ‘the:SG which:SG hamlet:SG and belongings:PL’). The same holds for gender: *a qual Renda e foro* (lit. ‘the:FEM which rent:FEM and tenancy:MASC’).

As far as the relationship between the antecedent and the additional head is concerned, we assume that the additional internal head NP acquires referential force because of its association with the higher DP, and behaves like an E-type pronoun. See further Del Gobbo (2008) for a recent discussion of the E-type character of the referential link between (regular) appositive relative clauses and the antecedent. Interestingly, since nothing in the analysis forces phonological or semantic identity between the antecedent and the internal head, we predict that they need not be coreferential in the strict sense. In fact, it turns out that there are a number of possibilities. When the antecedent is nominal, the additional head NP can express a defining property of the antecedent, as in (2) above, or capture it under a more general cover term, as in (22a) or (27): this gives the impression of hyperonymy. It can also express a more specific or subjective property, as in (28). Another possibility, attested in Old Portuguese, is that the antecedent NP is simply repeated, or that a true synonym is used; see the illustrations in (38) and (39), respectively:

- (38) Juiz deu *sentenças* antes das ditas partes sobre lo dito herdamêto
 judge gave sentences before the mentioned parts about the mentioned land
 das quaes *sentenças* os ditos caualeyros agrauarõ.
 of.the which sentences the mentioned knights complained
 ‘The judge pronounced sentence, about the mentioned land, before the parts involved, which sentence the mentioned knights complained of.’ (Martins 2000, year 1308, our translation)
- (39) mostrarõ logo ã Jujzo húu *testamêto* feito per máoo de Giralde steuez
 showed:3PL immediately in judgment a testament done by hand of Giralde Steuez
 tabaliõ de Gujmarães e do seu signal Assjnada na qual *mãda* fazia mêmcom
 notary of Gujmarães and of.the his sign signed in.the which will made mention
 Antre as outras coussas que A mãdara fazer Sancha gíl.
 among the other things that it ordered do Sancha Gil
 ‘They immediately showed in trial a testament written by Giralde Steuez, notary of Gujmarães, and signed with his own sign, in which will it was mentioned, among other things, that Sancha Gil ordered (him) to make it.’ (Martins 2000, year 1328, our translation)

When the antecedent of the appositive construction is clausal, the additional internal head is typically a general abstract noun such as *feit* ‘fact’ in (30) or *case* in (31a). But it can also be a more specific verbal noun, morphologically related to a verb introduced in the preceding context; see (40), from Old Portuguese, where the noun *pitiçon* ‘request’ is morphologically related to the verb *pedir* ‘to request’ in the first conjunct.⁹

- (40) E como Eu dito priol lhe pedise e Mådase pedir A dita
 and as I mentioned prior him:CL requested and ordered to.request the mentioned
 palha [...] e nõ mha quis dar A qual *pitiçon* o dito
 straw and not me.it.CL wanted:3SG to give the which request the mentioned
 francisco martjnz cõtestou dela
 Francisco martjnz contested of.it
 ‘And as I, the mentioned prior, asked him and ordered (them) to ask (him) for the mentioned straw (...) and he did not wanted to give it to me, which request the mentioned Francisco Martjnz contested.’ (Martins 2000, year 1370, our translation)

The potential differentiation between the external anchor and the internal head can also be used as evidence for an abstract representation of an internal NP in regular appositive relative clauses. For instance, in the Italian example in (41), taken from Cinque (2008), the apparent number mismatch between *romanziere* (singular) and *dei quali* (plural) suggests that the relative pronoun actually agrees with a silent noun corresponding to the plural *romanzieri* ‘novelists’. Instances of non-identity in number can also be found in English (at least for some speakers); witness (42), from Cantrall (1972), cited from Cinque (2008: 114):

⁹ There is a resumptive pronoun in the PP *dela* ‘of it’; see also *ende* ‘of it’ in (45) below, for instance. This is of no concern to the discussion here.

- (41) Giorgio non era certo un romanziere, la prima virtù dei quali è quella
 Giorgio not was certainly a:SG novelist:SG the first virtue of.the:PL whom:PL is that
 di catturare l'interesse del lettore.
 of catch the.interest of.the reader
 'Giorgio was no novelist, the first virtue of whom is that of catching the reader's interest.'

- (42) Since John is a lexicalist, all of whom are badly confused, I never listen to him.

Similarly, an abstract internal NP could account for the (apparent) gender mismatch in the Italian example in (43), from Cinque (2008: 106, fn. 11):

- (43) Il Cairo, la (/ *il) quale è la capitale dell'Egitto,...
 the:MASC Cairo, the:FEM (the:MASC) which is the capital of-Egypt
 'Cairo, which is the capital of Egypt'

Here, the relative pronoun probably agrees with a silent noun corresponding to *città* ('city'), which is feminine – compare *la città del Cairo* 'the city of Cairo'.

Another property that we would like to mention is the possible expansion of the internal head NP, which shows that it is a full XP, not just a head in the X-bar theoretical sense. We observe that it can be modified by different categories, such as PPs (*van Reve* in (2), for instance), APs (*faithful* in (22a)), or even relative clauses; see (44), from Old Portuguese:

- (44) m̃jll e duzentos Reaes brancos ora correntes os quaaes dinheiros
 one.thousand and two.hundred Reaes Brancos now used the which moneys
que uos eu assy hey de dar e pagar uos auya de pagar Joham uelho
 that you I so will.give and pay to.you would.pay Joham Uelho
 '[I will pay you] one thousand and two hundred Reais Brancos [the currency], used nowadays, which money, which I will give and pay you, would be given to you by Joham Uelho.' (Martins 2000, year 1436, our translation)

The internal head can also be extended by a numeral, as in (35) above, or an adjectival possessive pronoun (45a), at least in Old Portuguese. Both are construed prenominaly. The occurrence of universal quantifiers is also attested, in a postnominal position; see (45b):

- (45) a. [...] aos quaaes *meus procuradores* dou cõprido poder
 to.the which my proxies give:1SG full power
 lit. 'to which my proxies I give full power' (Martins 2000, year 1341, our translation)
 b. [...] das quaaes *coussas todas* o dito Priol por ssj e pelo Conuêto de sseu
 of.the which things all the.mentioned prior by him and by.the convent of his
 Mostejro pedeu ende A m̃j dito tabaliõ este strumento
 monastery asked of.it to me mentioned notary this deed
 'of (all) which things the mentioned prior in his name and in the name of the convent of his monastery asked me, the mentioned notary, this deed.' (Martins 2000, year 1328, our translation)

To sum up,

- In appositive constructions, there can be an additional internal head NP next to the external antecedent.
- The internal head NP is not just a nominal head, but a phrase that can be enriched by adjectives, PPs, etc.
- A non-nominal antecedent is allowed, as in regular appositive constructions.
- The internal head NP is often not identical to the external antecedent, and can be of various semantic classes.
- Relative pronouns agree with the internal NP.
- DP_{rel} containing the internal head NP is A-bar moved to the left periphery of the relative clause. Thereby, pied piping is allowed.

Let us briefly return to the structural analysis of relative constructions. In Section 2.1, we reviewed the raising analysis, according to which there are (at least) two movement steps in regular relative clauses:

- (46) (i) A-bar movement of DP_{rel} containing the head NP to the CP domain;
 (ii) extraction of the head NP out of the complement position of D_{rel} to an even higher position.

In addition, we assumed that appositive constructions involve coordination of a (structurally) complete relative construction to an antecedent DP. As a result, there are four relevant NP positions for the semantic head NP in (appositive) relative constructions:

- (47) $\underline{[(D\ NP)](Co)}$ [D $_{CP}$ (NP) D_{rel} (NP) C $_{IP}$... (NP) ...]]
 a b1 b2 b3

Here, the underlined part is only present in appositive constructions. In such cases, position a is for the external antecedent/anchor; it is always realized, and it is not part of the chain link b. In this movement chain b, the position b3 is the base position of the head NP in all relative clauses. (If position a is realized, b is either null, or an additional head NP.) Next to the reconstruction data mentioned in Section 2.1, there is overt evidence for position b3, namely in the form of so-called internally headed relative clauses as in (6), where the NP is left *in situ* (or at least IP-internally, considering that noun phrases can scramble). Positions b2 and b3 are used when the head NP is dragged along with the relative pronoun to the CP domain. Overt evidence for position b2 can be found in the appositive construction with an additional internal head NP discussed in this section. As we noticed before in (25d), position b2 can also be visibly realized in free relatives; see De Vries (2004a) for discussion. Finally, position b1 is the overt position of the head NP in regular restrictive relative constructions in English and many other languages. The next subsection discusses with further detail the overt realization of position b1 in appositive constructions, where it constitutes an additional external head NP.

From a cross-linguistic and cross-constructional point of view, we now have clear evidence for both movement steps in (46). Thus, various appositive relative constructions corroborate the necessary hypotheses in the raising analysis proposed for regular (restrictive) relative clauses.

4.2 The appositive construction with an additional external head NP

In Section 3, we defined the appositive construction with an additional external head NP (26e/f/g), a concrete example of which is (3) in the Introduction. Here, we will provide some more illustrations and discussion. Recall that the expected order of elements in the appositive part following the external anchor is [(D) NP (D_{rel}) (C) ...]. In (48) and (49) we show examples from Modern Portuguese and English, with an overt C, an overt D_{rel} , and a zero relative, respectively. The additional external head NP is italicized:

- (48) O Paulo ofereceu à namorada um exemplar de “Uma abelha na chuva”, *romance*
 the Paulo gave to.the girlfriend a copy of “Uma abelha na chuva”, novel
 que muito aprecia.
 that very he.appreciates
 ‘Paulo gave to his girlfriend a copy of “Uma abelha na chuva” [a bee in the rain], a novel that he really appreciates.’ (Peres and Mória 1995: 271, our translation)
- (49) a. I met Hloupý Honza, *a man* who lives his life as a comic book hero.
 b. It required an appeal to ideas of case transmission via chains, *ideas* the MP was trying to eliminate.
 (<www.math.neu.edu/ling/pdf/files/agrisfs.pdf>, page 32)

In (48), for instance, the additional head NP *romance* ‘novel’ is spelled out in the raised position, and we obtain a regular restrictive relative construction *romance que muito aprecia* ‘novel that he really appreciates’ in apposition to another noun phrase, the title “*Uma abelha na chuva*” (‘a bee in the rain’). The structural representation of the three examples is sketched in (50):

- (50) $[_{CoP}$ DP Co $[_{DP}$ D $[_{CP}$ NP_i [D_{rel} t_i]_k C $[_{IP}$ t_k]]]
- | | | | | | | |
|-------------------------|---|---|---------|-----|-----|-------------------------------------|
| “Uma abelha na chuva” | , | – | romance | – | que | muito aprecia |
| Hloupý Honza | , | a | man | who | – | lives his life as a comic book hero |
| ideas of ... via chains | , | – | ideas | – | – | the MP was trying to eliminate |

Thus, the appositive construction with an additional external or internal head NP and the regular appositive relative construction can be analyzed as involving the same structural elements. In the first two constructions, the additional NP position b1 or b2 is spelled out, respectively, whereas these remains silent in regular appositive relative clauses.

Let us consider some more data from Modern Portuguese. As is the case for constructions with an internal head NP in Old Portuguese (37), the additional external head NP can be a conjoined phrase; see (51) and (52).

- (51) A participação portuguesa é constituída por peças de António Mira, *pintor e escultor*
 the participation Portuguese is constituted by pieces of António Mira painter and sculptor
 que fez uma investida no design .

that made an attempt at the design

'The Portuguese participation is constituted by pieces of António Mira, a painter and sculptor who made an attempt at design.' (Corpus CETEMPúblico v. 1.7)

- (52) Quanto à equipa de navegação do BES-Portugal, para além do «skipper» José
Regarding to the team of navigation of the BES-Portugal besides of the skipper José
Inácio, será constituída por mais três elementos: o biólogo Miguel Lacerda (...);
Inácio will be constituted by more three members the biologist Miguel Lacerda
Ovídio Silva e Martinho Martins, professor e aluno que desenvolverão
Ovídio Silva and Martinho Martins *teacher and student* that will develop
juntos um projecto do Ministério da Educação
together a project of the Department of the Education

'Regarding the Bes-Portugal's navigation team, besides the skipper José Inácio, it will be constituted by three more members: the biologist Miguel Lacerda (...); Ovídio Silva and Martinho Martins, (a) teacher and (a) student who will develop together a project of the Department of Education.' (Corpus CETEMPúblico v. 1.7)

Notice that the coordinated phrase can express either a joint or split reading (cf. Heycock and Zamparelli 2003): in (51), it refers to a single individual, who has the property of being both a painter and a sculptor, whereas in (52) each property is associated with a distinct individual: *professor* 'teacher' is related to *Ovídio Silva*, and *aluno* 'student' to *Martinho Martins*. See also Section 7.7 on split antecedents.

Furthermore, an additional external head NP establishes the same range of semantic and lexical relationships with the antecedent as the additional internal head NP described in the previous subsection. When the antecedent is nominal, the additional external head can simply repeat the antecedent NP (53), it can represent a defining property (54), or it can introduce a subjective property (55). The examples here are in Modern Portuguese.

- (53) Vínhamos de viagem, *viagem* que acabava na Avenida da Liberdade.
we returned of trip trip that would finish in the Avenida da Liberdade
'We were returning from a trip, a trip that would finish in the Avenida da Liberdade.'
- (54) Teve 19 a todas as cadeiras, *nota* que ela não teve em nenhuma delas.
he had 19 in all the subjects grade that she not had in none of them
'He got 19 for all the subjects, a grade that she never got in any of them.'
- (55) O João, *um patife* que partilha o gabinete comigo, teve um acidente.
the John a wretch that shares the office with me had an accident
'John, a wretch that shares the office with me, had an accident.'

When the antecedent is clausal, the additional external head is typically a general abstract noun such as *facto* 'fact' in (56). But it can also be a more specific verbal noun, morphologically related to a verb introduced in the preceding context, such as *pedido* 'request' in (57).

- (56) O João passou no exame, *facto* que muito me surpreendeu.
the John passed in the exam fact that a lot me surprised
'John passed the exam, a fact that surprised me a lot.'
- (57) O presidente pediu que todos colaborassem na reconstrução da cidade,
the president requested that all collaborated in the reconstruction of the city
pedido que foi muito bem aceite pela comunidade.
request that was very well accepted by the community

'The president requested that all collaborated in the city's reconstruction, a request that was very well accepted by the community.'

According to Gratacós (1999: 538), the spelling out of what we call an additional external head NP is a stylistic and rhetorical device to provide more information about the antecedent, without cramming it with modifiers directly. It is also considered a strategy to reintroduce a previously mentioned entity into the discourse, which is typical of specific styles (in TV and radio speech, for instance; see Brito 1991: 132). For this reason, the appositive constructions under discussion are frequent in contexts of extraposition, as in (54), and when the antecedent occurs with piled-up modifiers, as in (58) – still in Modern Portuguese.

- (58) Este livro resulta de um trabalho exaustivo sobre os direitos humanos
 this book results from a work exhaustive on the rights human
 em África, *trabalho* que envolveu dezenas de pessoas.
 in Africa work that involved tens of people

‘This book results from an exhaustive work on human rights in Africa, a work that involved tens of people.’

In addition, it is worth noting that the appositive construction with an additional external head NP is generally regarded a less formal variant of the construction with an internal head NP. For instance, Quirk et al. (1985: 1118-9) write that the formal sentence in (59a) is more commonly replaced by (59b) in English:

- (59) a. They are said to have taught chimpanzees to use human language, which *claim* has been disputed by some scholars.
 b. They are said to have taught chimpanzees to use human language, a *claim* which has been disputed by some scholars.

This confirms the idea that the two constructions are closely related.

4.3 The semi-free appositive construction

Semi-free relatives (also called light-headed or false free relatives) are a variant of regular restrictive relative constructions. The main difference concerns the nature of the head NP. Regular restrictives have an overt, full nominal head. In semi-free relative constructions, the external determiner is spelled out in the form of a pronoun or article, and the nominal head remains abstract, or can be considered to be part of the pronoun or pronominal complex. The result is a semantically (and often morphologically) light antecedent. This is different from true free relatives, where there is no external element whatsoever. Some illustrations from different languages are provided in (60); here the light elements are italicized:

- (60) a. Jean lit *ce* qu’il aime (French)
 Jean reads this that-he likes
 ‘Jean reads this (one) that he likes.’
 b. He visto a *la* que me presentaste. (Spanish)
 have:1SG seen to the that to.me introduced:2SG
 ‘I have seen the (one) that you have introduced to me.’
 c. Comprei *aquela* que tu sugeriste. (Modern Portuguese)
 bought:1SG DEM that you suggested
 ‘I bought that (one) which you suggested.’
 d. This is *something* that/which will interest you. (English)
 e. *Al(les)* wat hij zegt is gelogen. (Dutch)
 everything what he says is lied
 ‘Everything he says is a lie.’
 f. Du bist *derjenige* der es weiss. (German)
 you are the-one who it knows
 ‘You are the one who knows it.’

Examples (60a-b) are taken from Citko (2004: 97).¹⁰ Of course, there is some cross-linguistic variation with respect to the light elements that can introduce a semi-free relative construction (see also Lehmann 1984, Smits 1988, Rebuschi 2001). What is important is that not only definite, but also universal and indefinite material is possible. Also, personal pronouns can be used; see (61), for instance:

- (61) a. By this stage, *he* who sold the client his warrants would probably have left the firm.
 (BYU-BNC: The British National Corpus - 29 EUU W_commerce)
 b. As they say at Wimbledon, Stan, *he* who bares wins.
 (BYU-BNC: The British National Corpus - 21 CBG W_newsp_other_sports)

See also Rebuschi (2001), who recalls Postal’s (1966) analysis of pronouns as intransitive determiners.

¹⁰ To be fair, Citko (2004) argues against assimilating ‘light-headed’ relative clauses to regular headed relative clauses on the basis of a difference in the choice of relative pronouns in Polish. As far as we know, there is no such differentiation in Romance or Germanic languages. Also, we are not convinced that superficial differences of this type provide a sufficient argument for assuming a different structure. Notice that the pronominal antecedents in (60d/f) contain a morphologically visible nominal part (*-thing*, and *-jenige*) – and there are many more such examples, in various languages. Presumably then, these cannot be considered light-headed in Citko’s system (which deliberately lacks an N-position for semi-free relatives), even though they serve exactly the same function as the Polish counterparts.

Let us now turn to appositive constructions. Since, by hypothesis, these involve a complete restrictive relative construction in apposition to the external antecedent, we should not be surprised to find what we called the semi-free appositive construction – recall (26c/d). Namely, just like semi-free relatives are a variant of regular headed relatives, semi-free appositives are a light variant of the appositive construction with an additional external head NP. An example is (62), from Modern Portuguese:¹¹

- (62) A Ana e a Maria, *as* que ganharam uma bolsa de estudo, acabaram de entrar na sala.
 the Ana and the Maria the:FEM.PL that won a grant of study have.just.entered in.the room
 ‘Ana and Maria, the (ones) that won the grant have just entered the room.’ (Alexandre 2000: 30, our translation)

Essential for this construction is that the additional external D is spelled out, and that the associated nominal position is silent or incorporated/light. In (62), the relevant determiner surfaces as an article. It can also be a personal pronoun or a demonstrative, as is shown in (63) and (64):

- (63) Ficámos a conhecer o que pensam estes jovens sobre si próprios, *elas* que
 became.1PL to know the that think these young about themselves they that
 estão permanente no fio da navalha.
 are permanently on.the edge of.the razor
 ‘We became to know what these young (people) think about themselves, they who are permanently on razor’s edge.’ (www.freipedro.pt/tb/240497/opin5.htm)
- (64) a. And here is the other Frederick, the Hohenstaufen emperor, *he* who wrote The Book of the Falcon.
 (BYU-BNC: The British National Corpus – 22 A1B W_ac_humanities_arts)
 b. High-achieving men, *those* who earn salaries in the top 10 percent for their age [...]
 (www.news-releases.uiowa.edu/2008/may/050508marry_mothers.html)

The Dutch example in (65) shows some more variants predicted from (60):

- (65) Ik vroeg het aan professor Vos, *degene/zij/iemand* die alles van kwantumfysica weet.
 I asked it to Prof. Vos the.one/she/someone who everything of quantum.physics knows
 ‘I asked it Prof. Vos, the one /she/someone who knows everything about quantum physics.’

The structure of the semi-free appositive construction must equal (50), which is repeated in (66), supplemented with some of the relevant examples. Especially if there is an overt nominal part, it seems likely to us that there is incorporation of N into D as well.

- (66) [_{CoP} DP Co [_{DP} D [_{CP} NP_i [_{DPrel} D_{rel} t_i]_k C [_{IP} t_k]]]]
 a Ana e a Maria , as – – que ganharam uma bolsa de estudo
 high-achieving men , those – who – earn salaries [...]
 professor Vos , de- gene die – alles van kwantummechanica weet

Notice again that Portuguese uses a complementizer, and English and Dutch a relative pronoun.

4.4 Appositional constructions

So far, we have discussed a number of appositive constructions involving relative clauses, and analyzed these as complex appositions. But what about regular (non-restrictive) appositions as in *John, a nice guy*? An apposition could be a simple DP that is linked to the ‘antecedent’ DP, the anchor, by means of specifying coordination.

¹¹ According to Brito and Duarte (2003), constructions with a bare article involve noun ellipsis, which is compatible with our analysis of appositive constructions. The evidence in favor of such a hypothesis comes from the inflection for number and gender, and from the possibility of having a preposition between the determiner and the complementizer *que* ‘that’. Both are shown in (i):

- (i) Já tenho o / a / os / as de que me falaste.
 Already I.have the:MASC.SG the:FEM.SG the:MASC.PL the:FEM.PL of that me you.told
 ‘I already have the one(s) that you told me about.’ (Brito and Duarte 2003: 682, our translation)

Additionally, it is worth pointing out that the null noun in Portuguese can be modified by APs and PPs; see (ii) and (iii), respectively. These examples are due to Raposo (1999: 69):

- (ii) eu não comprei o azul, comprei o vermelho
 I not bought the blue I.bought the red
 ‘I did not buy the blue one, I bought the red one.’
- (iii) eu não comprei o das riscas amarelas
 I not bought the of.the stripes yellow
 ‘I did not buy the one with yellow stripes.’

However, as we mentioned in the Introduction, there are indications that there is an (implicit) clausal structure in appositional constructions as well. Thus, we can try to push our analysis of appositive constructions to the limit, and generalize it to regular appositions. The idea is sketched in (67), where BE represents an abstract copula:

(67) [_{CoP} [_{DP1} anchor] [_{Co} [_{DP2} D [_{CP} NP_i [D_{rel} t_i]_k C [_{IP} t_k BE apposition]]]]]

The example *John, a nice guy* can be now be compared to the appositive relative construction *John, who is a nice guy*. Of course, we are not the first to suggest a relationship between appositions and appositive relative clauses; for earlier ideas, see Smith (1964), Delorme and Dougherty (1972), Burton-Roberts (1975), and others. We will come back to the interpretation of the silent elements in (67). But first, let us see why appositional constructions are complex to begin with. Here we focus on attributive appositions, and come back to the difference with identifying ones later.

It has been argued in the literature that appositions, like parentheticals, imply what might be called a secondary proposition (see Del Gobbo 2003, Corazza 2005, Potts 2005, Nouwen 2007, and others). For example, the sentence *I met John, a nice guy* consists of two messages, *I met John* and *John is a nice guy*. We will assume that the secondary proposition is syntactically represented, in line with O'Connor (2008) and Heringa (2010). This hypothesis is corroborated by a number of facts. For instance, all sorts of adverbs, including sentential and even speech act adverbs, can be used in appositions; see (68), from English, and (69), from Modern Portuguese.

- (68) a. Norman Jones, *then* a student, wrote several bestsellers. (Quirk et al. 1985: 1314)
 b. Keith, *once* a drug addict, now leads a rehabilitation centre. (Heringa 2010: 6)
 c. Racial profiling, *unfortunately* a frequent occurrence in American society, must be stopped. (O'Connor 2008: 97)
 d. This book, *frankly* not my favourite, won a prize. (Heringa 2010: 7)

- (69) George W. Bush, *então* o “homem mais poderoso da terra”
 George W. Bush then the man more powerful of.the earth
 ‘George W. Bush, then the most powerful man on the earth’
 (www.fundacao-mario-soares.pt/ms/textos/002/105.pdf)

Furthermore, the tense, modality, and illocutionary force of the secondary proposition may differ from that of the primary one:

- (70) Should Jane, once the best doctor in town, marry John?
 (i) Should Jane marry John?
 (ii) Jane was once the best doctor in town.

In addition, a subordinator may show up in appositions; see (71) in English and (72) in Modern Portuguese:

- (71) a. John, *though* no longer a coward, was still a weakling. (Wulf Sachs, *Black Hamlet* (1937), p. 227)
 b. The victim, *whether* a nice person or not, has to be helped. (Heringa 2010: 10)
- (72) O Belenenses, *embora* vencedor da jornada anterior, não está no melhor da
 the Belenenses although winner of.the round preceding not is in.the best of.the
 sua forma individual e colectiva.
 its form individual and colective
 ‘Belenenses, although winner of the preceding round, is not in its best individual and collective form.’
 (Corpus CETEMPúblico v1.7)

These facts point to the conclusion that regular appositional constructions contain more extensive functional structure than has previously been considered. The fact that appositional constructions have their own tense, possibly modified by adverbs, suggests that at least TP is projected in the structure. Moreover, the eventual presence of a subordinator and the independent illocutionary force indicate that CP is also projected.

A second assumption underlying the intuition expressed formally in (67) is that an appositional construction is clearly predicational. Put more precisely, the secondary proposition involved constitutes an implicit copular clause in which the anchor represents the subject, and the apposition the predicate. See especially Doron (1994) for discussion. Interestingly, the two main types of predication (attribution and specification) are reflected in the appositional construction; see (73):

- (73) a. *attributive predication*
 (i) Ann is a talented violin player. (copular clause)
 (ii) Ann, a talented violin player, ... (appositional construction)
- b. *identificational/specificational/equative predication*
 (i) Ann's teacher is Mr. Vengerov. (copular clause)
 (ii) Ann's teacher, Mr. Vengerov, ... (appositional construction)

In the next section we show that identificational appositions are to be analyzed differently from attributive ones.

Furthermore, some particular facts indicate that appositions behave on a par with predicates. For instance, a nominal predicate allows for a particular *i*-within-*i* configuration that is unacceptable in an argument position:

- (74) a. John is [his_i own cook]_i.
 b. John, (still) [his_i own cook]_i, produced a delicious meal last night.
 c. # [His_i/John_i's own cook]_i produced a delicious meal last night.

Thus, there are clear indications that an appositional construction involves a predicational clause. This suggests that there might be an abstract copula. The covertness of such an element is not particularly surprising, since it has been observed in many languages that copulas can be omitted (for a cross-linguistic overview, see Stassen 2008). What is more, an apposition is a *secondary* predicate, and secondary predicates are normally constructed without an overt copula even in Romance and Germanic, as in *John came home drunk*, for example.

The next question is how the anchor is represented in the copular sentence. Since it is already spelled out in the matrix, it is usually a *pro* subject in the embedded clause. This silent pronoun is the additional external D in (67) (possibly with an incorporated N, the additional head noun of the relative construction). Recall that D and NP are not spelled out either in ordinary appositive relative clauses. By contrast, in the appositive construction with an additional external head (and in the semi-free appositive construction), D and NP can be overtly realized. Given the similarities between regular appositions and the complex appositional constructions analyzed so far, it seems that the same structure can be realized in a number of ways; see (75). Evidently, in overt relative clauses the verb need not be a copula, which greatly increases the number of possible propositions it can express.

- (75) [_{CoP} [_{DP1} anchor] [_{Co} [_{DP2} D [_{CP} NP_i [D_{rel} t_i]_k C [_{IP} BE t_k predicate]]]]]
- | | | | | | |
|-------------|---|-----------------|------------|-----------|-------------------|
| <i>John</i> | , | | | | <i>a nice guy</i> |
| <i>John</i> | , | | <i>who</i> | <i>is</i> | <i>a nice guy</i> |
| <i>John</i> | , | <i>he</i> | <i>who</i> | <i>is</i> | <i>a nice guy</i> |
| <i>John</i> | , | <i>the one</i> | <i>who</i> | <i>is</i> | <i>a nice guy</i> |
| <i>John</i> | , | <i>some one</i> | <i>who</i> | <i>is</i> | <i>a nice guy</i> |

To conclude, we argued that (attributive) appositions are non-restrictive secondary predicates in an implicit relative copular clause. Thus, the coordination approach can be maximally generalized. This does not imply that all appositive constructions have the exact same meaning and use. The next section discusses some subtle semantic differences, and clarifies the distinction between attributive and identificational construal, which has consequences for the syntactic proposal as well.

5 Fine-tuning the proposal: on the semantics of appositive constructions, and the difference between attribution and identification

Apart from cases of modal subordination,¹² the antecedent of an appositive relative clause must be specific or generic, as is well-known:

- (76) a. * Please, have a cookie [out of many], which is tasteful. (non-specific)
 b. I ate a [certain] cookie, which was tasteful. (specific indefinite)
 c. The cookie was lying on the table. (definite)
 d. I love [all] cookies, which are tasteful. (generic)

This can be attributed to the E-type character of the pronominal representative of the antecedent within the secondary proposition. Often, this property is thought to reside in the relative pronoun. However, notice that in languages such as Portuguese or Danish, no overt relative pronoun is required in appositive relative clauses. More importantly, no such requirement is associated with (the exact same) relative pronouns in restrictive relative constructions in English and other languages; for instance, *a cookie which is tasteful* (restrictive) can be used non-

¹² A famous example from Sells (1985) is "Every rice-grower in Korea owns a wooden cart, which he uses when he harvests the crop". For a general discussion of modal subordination, see Roberts (1996).

specifically. In Dutch and German, relative *d*-pronouns are standardly used in both restrictives and appositives. In our analysis, relative pronouns or operators always have the same function. The anaphoric link in appositive constructions resides in the abstract D (+N) that heads the second conjunct. Thus, the possibility of E-type reference in appositive constructions perfectly coincides with the general fact that ordinary pronominal reference can be E-type.

We proposed that the following phrases have the same structure. In each case, the property of being a nice guy is indirectly attributed to John:

- (77) a. John, a nice guy
 b. John, who is a nice guy
 c. John, someone who is a nice guy
 d. John, he who is a nice guy
 e. John, the one who is a nice guy

This does not imply that all have the exact same meaning, and indeed, there are subtle differences. Especially the difference between (77d/e) and the rest is important. This is due to the definite semantics of *he* and *the* in combination with a relative clause, which implies uniqueness within a certain context. That is, John is not only one out of potentially many who is a nice guy, he is the one and only person who has this property. In (77a-c) there is no such connotation. For this reason, the abstract pronoun in (77a/b) must correspond to a specific indefinite (contrary to what De Vries 2006a suggested): specific because of the E-type anaphoric link; indefinite because there is no uniqueness involved. Thus, consider to which extent the phrases in (78a/b) express the same:

- (78) a. John, who is a nice guy
 b. John, someone who is a nice guy (someone = a certain person)

In both cases, there is a secondary proposition in which a property is attributed to a pronominal representative of John, namely being a nice guy. Thus, the semantics of (78a/b) is equal. Nevertheless, there is a second use of the complex apposition-like construction (78b) that seems to be absent for the regular appositive relative construction (78a): this is a context in which the antecedent *John* may be unknown to the hearer, and the speaker properly introduces the referent into the discourse by means of an alternative description, namely the indefinite appositive DP. By accommodation, this referent can then be assigned the label *John*. Pragmatically, it makes sense that in such a case the indefinite heading the alternative description is realized overtly, in order to provide a clue for the hearer. We do not think that this is a reason to assume a different syntactic structure; after all, there is only a difference in use, not in meaning.

Attributive appositions are synonymous with the corresponding appositive relative clauses. However, in the previous section we saw that there are also identificational appositions. Remarkably, relative clauses cannot have this interpretation. Compare the following examples:

- (79) a. (i) Ann's teacher is Mr. Vengerov
 (ii) Ann's teacher – he is Mr. Vengerov
 (iii) Ann's teacher, Mr. Vengerov
 (iv) * Ann's teacher, who is Mr. Vengerov
 (v) * the teacher that is Mr. Vengerov
 b. (i) My favorite number is six
 (ii) my favorite number – it/that is six
 (iii) my favorite number, six
 (iv) * my favorite number, which is six
 (v) * the number that is six

Whatever explains the fact that restrictive subject relativization is incompatible with identifying/specifying predication will also explain why it is impossible in appositive relative clauses.¹³ Since the appositions in (79) are fine, this raises doubt concerning the idea that identifying appositions involve a relative structure. In fact, there are more arguments for separating identifying from attributive appositions. First, notice that all the arguments for assuming the presence of functional projections, as presented in the previous section, concern attributive appositions. It seems to us that these arguments do not apply to identificational appositions. For instance, temporal adverbs, modal adverbs, or subordinators are normally incompatible with the relevant examples from (79):

- (80) a. * Ann's teacher, *unfortunately* Mr. Vengerov
 b. * my favorite number, *then* six
 c. * my favorite number, *though* no longer six

Similarly, the following minimal pair from Portuguese shows that complementizers and adverbs are compatible with attributive appositions only. Note that in (81b), the definite article *o* 'the' makes the apposition unique.

¹³ Heycock and Kroch (1999) show that more generally, movement from the subject position in a specificational copular clause is unacceptable.

- (81) a. Pedro, (embora/então) advogado da família, afirmou que... (attributive)
 b. Pedro, (*embora/*então) o advogado da família, afirmou que... (identificational)
 Pedro (although/then) the lawyer of the family said that...

Therefore, let us assume that (simple) identifying appositions are directly coordinated to the anchor, but do not involve a relative structure. Put differently, relativization can be generalized to attributive appositions, but not to identifying ones. We argue that this is not only necessary in the light of the differences between the two types of appositions just reviewed, it is also advantageous for the coordination theory of appositive structures, and in the end, it prevents a potential problem of infinite regress, as will become clear in a moment.

First, recall that overt relative clauses of whatever type are always attributive (that is, predicational). This includes non-copular relatives, for which there is no appositional equivalent. For instance, in *the present (which/that) John bought* the relative clause is interpreted as a predicate. It is intersected with the head NP, also a property. Subsequently, the combination with an external determiner may turn the complete phrase into an argument. The same is true for (additionally) internally headed relative clauses, and for free and semi-free relatives, where a semantically contentful head NP is lacking.

Now consider the relationship of the appositive DP with the (overt) antecedent. We analyzed both *John, a nice guy* and *John, who is a nice guy* roughly according to the paraphrase *John, someone who is a nice guy*. The first conjunct is the antecedent/anchor *John*, the second conjunct is the appositive part headed by the indefinite specific determiner. Thus, DP-internally in the second conjunct, there is predication (attribution): the property of being a nice guy is attributed to a certain person. DP-externally, there is identification of this certain person with the antecedent (normally also a DP), here *John*. Such identification is equivalent to E-type pronominal coreference. The difference with an ordinary pronoun is that the coreferent DP contains relevant (new) information in the form of an embedded predicate. Moreover, the predication involved is construed as a secondary proposition due to the specifying coordinator that invokes a parenthetical specification – in a way comparable with Potts’ (2005) ‘comma operator’.

Thus, appositive attribution implicates an identificational link as well: the predication is at the parenthetical level, and the link with the antecedent is identifying. The reverse does not hold. For simple pronouns this is obvious: a pronoun *he* that is coreferent with *John* does not contain a predicate. We can now say the same for identifying appositions. In *my favorite number, six*, the number is identified as six. *Six* is perceived as a (parenthetical) alternative description of *my favorite number* due to specifying coordination; semantically, the two descriptions are simply coreferent in the relevant context. For the hearer, this may be new information. Crucially, no copular clause needs to be established syntactically in order to obtain a coreference relationship.

We can now turn to the potential problem alluded to. A regular attributive appositional construction is a DP₁–DP₂ combination. We argued that the visible apposition DP₂ is a predicate embedded in an abstract copular relative construction. The result is (82), where the DP headed by the abstract external determiner D₃ is coreferent with the anchor DP₁, as explained. The same structural frame applies to regular appositive relative constructions.

- (82) [_{CoP} DP₁ Co [_{DP3} D₃ [_{CPrel} ... DP₂]]]

A paraphrase of a concrete example is *John, someone who is a nice guy*. The problem would be this: the combination DP₁–(Co)–DP₃ can also be considered appositional. Therefore, how do we know that this combination in turn is not to be analyzed as [_{CoP} DP₁ Co [_{DP4} D₄ [_{CPrel} ... [DP₃ ...]]]], *ad infinitum*? In words, *John, someone who is someone who is (...) a nice guy*? Although semantically, the meaning would probably stay the same, this is clearly absurd. The solution for this hypothetical objection is already provided above: we need to distinguish between attributive and identifying appositions. We saw that DP₃, *someone*, needs to be interpreted specifically. Therefore, the relationship between DP₁ and DP₃ is identification, not attribution. And identification is not expressed by means of a relative clause, so there cannot be infinite regress.

The situation appears to be similar for the appositive construction with an additional external head NP. An example is *John, a man who likes to travel*. There is an embedded predicate, *likes to travel*, which is only indirectly attributed to *John*. The presence of the embedded relative clause makes it likely that the DP *a man (who ...)* is interpreted specifically (‘a particular man’). Therefore, the relationship between this DP and the anchor is identificational, and no further structure is necessary. The template in (83) fits this example as well. (Note that IP could accidentally be a copular clause, as in *John, a man who is nice/a carpenter*):

- (83) [_{CoP} DP Co [_{DP} D [_{CPrel} NP ... IP]]]

Compared to the previous examples in (78), a difference is that the implicit pronoun corresponding to *someone* is now realized as a potentially more contentful nominal phrase, *a man*. However, for certain complex DPs we cannot exclude an attributive interpretation. An example could be (55), where the relevant part is translated as *John, a wretch that shared the office with me*. If indeed *a wretch (that...)* can be understood as a complex predicate, then the complete structure must be one layer deeper:

(84) [CoP DP Co [DP D [CPrel ... [DP D [CPrel NP C IP]]]]]

This can be paraphrased as *John, someone who is a wretch that shared the office with me*.

For some complex appositions an attributive interpretation of the additional external head NP is unavailable. This is the case if the second conjunct as a whole is clearly more specific than the anchor, as in (53), with the relevant appositive construction translated as *a trip, a trip that would finish in the Avenida da Liberdade*. For others, two potential interpretations might be available, one leading to the structure in (83) and the other to (84). Such potential ambiguities are even more frequent in simple appositional constructions. Consider the phrase *John, my neighbor*. Here, the first possible interpretation involves identification, where *my neighbor* is unique in the context, and hence fully referential (in this case, there is no relativization). The second possible interpretation involves attribution, such that (*being*) *my neighbor* is a property attributed indirectly to John (in this case, there is relativization). Notice, in this respect, that many definite descriptions can be used as predicates; these are sometimes called *individual concepts* (see Heringa & De Vries 2008 for discussion). Another example is *the mayor of New York*. Clearly, this DP can be used referentially, but it can also function as a predicate, because in principle, throughout time, various individuals may fulfill this position. It is also worth noting that proper names can be used as predicates. Therefore, the example *my neighbor, John* (like the reverse) is ambiguous, too. If *John* is used referentially, the construction is identifying; if *John* is used as a predicate (just providing a name tag for the neighbor), it is attributive.

The analysis outlined in this section is corroborated by the general observation that only coordination of semantic likes is felicitous. In identifying appositional constructions, both conjuncts are of the same type, usually <e>. In attributive constructions – appositions and relative clauses alike –, the appositive material is a predicate <e,t>. Therefore, direct coordination would be infelicitous. However, if the present proposal is on the right track, attributive material is always embedded in a larger phrase that *is* of the right type.

To conclude, all appositive constructions involve specifying coordination, such that the second conjunct is construed as parenthetical, secondary information, which is referentially related to the first conjunct in the way an E-type pronoun is. All attributive appositive constructions involve an explicit or implicit relative construction. For appositions, it is necessarily copular.

6 Case distribution in appositive constructions

In the preceding sections, we proposed a syntactic analysis for several appositive constructions. Here, we will examine the Case distribution in some detail. Of particular interest, in this respect, is the potential presence of additional head NPs and determiners.

6.1 Theoretical introduction and predictions

First, consider the issue of Case in restrictive relative constructions. In many languages, the Case of the head NP may differ from the Case of the relative pronoun, which corresponds to the fact that the internal and external representation of the relativized phrase can fulfill different syntactic and semantic roles.¹⁴ An example from Polish is (85), combined from Borsley (1997: 638) and Citko (2001):

(85) Widziałem tego pana/*pan który zbił ci szybę.
 saw:1SG this:ACC man:ACC/*NOM which:NOM broke you glass:ACC
 'I saw the man who broke your glass.'

Since, according to the raising analysis, the head NP (*pana* 'man') is base-generated as the complement of D_{rel} (*który* 'which'), it needs to be explained why these two elements end up with different Cases. The general pattern can be sketched as follows:

(86) matrix clause Case → [DP \underline{D} [CP \underline{NP}_i [$D_{rel} t_i$]_k ... t_k ...]] ← subordinate clause Case

The external determiner and the head NP acquire the Case determined by the position of DP (the construction as a whole) in the matrix clause, whereas the relative pronoun D_{rel} is assigned Case according to the internal position of DP_{rel} .

Following ideas along the lines of Matushansky (2008) and Zwart (2006), thereby abandoning an early Minimalist checking mechanism, we assume that morphological Case is the result of some dependency marking in syntax. Thus, every DP is assigned Case (for instance, [acc] by V), and at the syntax-morphology interface, this feature 'spreads' through the DP and can be realized on the relevant terminals, depending on inflectional

¹⁴ Here, we will not be concerned with the phenomenon of Case attraction or the inverse. For relevant discussion, see Bianchi (2000).

paradigms.¹⁵ Evidently, locality considerations play a role here. Thus, not every terminal dominated by DP spells out the Case feature, but only those in the local domain. For instance, in the configuration V [_{DP₁} D₁ NP₁ [_{CP} ... [P DP₂]]] the second DP spells out [case] by P, not by V. What is also relevant for our purposes is that SpecCP generally serves as an escape hatch for locality. In other words, a phrase in the highest SpecCP (the ‘edge of the phase’, in current terminology) is part of the higher domain/cycle for all practical purposes. Therefore, syntactic movement can have an effect on inflectional morphology.

Given these general considerations, it simply follows that the raised head NP in (86), which is in the highest specifier position, is under the influence of the Case feature of the external DP. Furthermore, the internal DP_{rel} has already been assigned a Case feature of its own inside the relative clause, and therefore can be considered an independent Case domain for morphology (and of course a full DP is a known locality domain more generally). Therefore, the fact that the relative pronoun – the head of DP_{rel} – is also displaced is irrelevant.

Next, let us turn to appositive constructions. Not very surprisingly, the Case of a relative pronoun in an appositive relative clause is independent of the Case of the external antecedent, as is illustrated in (87), from Latin, where *qui* ‘who’ is nominative and the antecedent genitive.

- (87) Cottae et Titurii calamitatem, qui in eodem occiderint castello
 Cotta:GEN and Titurius:GEN catastrophe who:NOM in the.same had.fallen fort
 ‘the catastrophe of Cotta and Titurius, who had fallen in the same fort’ (Caesar, *De Bello Gallico*, 6, *apud* Ernout and Thomas 1972: 136, our translation)

As discussed above, the coordination analysis of appositive constructions subsumes the raising analysis, in the sense that there is a restrictive relative construction in the second conjunct. Therefore, the explanation of Case independence in restrictive relative constructions essentially carries over to appositive constructions. If the relative pronoun behaves independently of the head NP with respect to Case in restrictive relative constructions, then it will certainly do so with respect to the antecedent in appositive constructions, which is detached from the relative clause.¹⁶ But the issue is in fact more interesting than this, considering that there are construction types with additional material.

Generally, Case is distributed over all the conjuncts in a coordinate structure.¹⁷ Hence, if we assimilate appositive constructions to coordinate structures, we expect both conjuncts to get the same Case. Combining this with (86), we obtain the following prediction for (complex) appositive constructions:

- (88) matrix clause Case → [_{CoP} DP Co [_{DP} D [_{CP} (NP_i) [_{D_{rel}} (NP)_k ... t_k ...]]] ← *subordinate clause Case*

The first DP is the anchor/antecedent acquiring Case due to some dependency in the matrix. In regular appositive relative constructions, the additional D and NP are silent. If, however, the additional D is spelled out, as in semi-free appositive constructions and other complex appositions, it will receive matrix clause Case. A relative pronoun will always receive subordinate clause Case. The most interesting is an additional head NP. If it is ‘externalized’ (comparable to the situation in regular restrictive relative clauses), it will receive matrix clause Case; but if it stays within DP_{rel}, as in the appositive construction with an additional internal head NP, it will be assigned subordinate clause Case: namely, if it does not move out of the scope of the relative pronoun, morphology will treat it as a regular part of the embedded domain. In the next subsection, we show that these predictions are borne out.

6.2 The Case of additional internal and external head NPs and determiners

¹⁵ Several authors adopted a comparable solution to account for agreement within the noun phrase; see Giusti (1993), Babby (1987), and Franks (1994), for instance. Moreover, as Bianchi (2000) points out, Russian heterogeneous Case assignment provides empirical evidence to support the idea that Case is primary realized on a determiner. Consider (i) and (ii):

- (i) pjat' bol'gix butylok vina
 five:NOM big:GEN bottles:GEN wine:GEN
 ‘five big bottles of wine’ (Babby 1987: 100)
- (ii) čitat' pjat' interesnyx knig
 to read five:ACC interesting:GEN.PL books:GEN.PL
 ‘read five interesting books’ (Franks 1994: 602)

In (i) and (ii), nominative/accusative is assigned to the quantified noun phrase, but the noun bears genitive Case assigned by the numeral. Therefore, Babby (1987) suggests that the head noun does in fact control the number and gender agreement, but not the Case marking.

¹⁶ Citko (2008) tries to argue that the coordination approach is problematic for Case. The argument, however, is rather circumstantial – it is based on extraposition of free relatives in German –, and she even mentions a possible solution in a footnote herself. In the main text we show why we still think coordination is on the right track, considering more general and cross-linguistic patterns.

¹⁷ For presentational clarity, we will ignore instances of syntactically unbalanced coordination (e.g., *he and me*), as reported in Johannessen (1998), among others. It is however to be expected that examples of default or emphatic Case in appositive environments will show up. In fact, an English illustration of this is *The best athlete, her, should win* (Schütze 2001: 210); here, the deictic pronoun *her* is in apposition to the subject, but it is morphologically equal to the regular object form. Again, this pattern is consistent with a coordination analysis of appositive constructions.

Let us start with the appositive construction with an additional internal head NP. Looking at languages with overt Case marking, we observe that the internal head NP indeed bears the same Case as the relative pronoun. This is illustrated in (89) and (90), from Latin, and (91), from Czech:

(89) Erant omnino itinera duo, quibus itineribus domo exire possent.
 were:3PL in.all routes:NOM two:NOM which:ABL routes:ABL home leave could:3PL
 ‘There were but two routes, by which routes they could leave home.’ (Caesar, *De Bello Gallico*, 1, *apud* Finch 2006: 36, our translation)

(90) Ego tibi illam Acilianam legem restituo, qua lege multi semel
 I to.you the:ACC Acilian:ACC law:ACC revive which:ABL law:ABL many single
 accusati, semel dicta causa, semel auditis testibus condemnati sunt.
 accused single said case single heard evidences convicted are
 ‘I revive the Acilian law for your benefit, under which law many, after a single prosecution, a single pleading of his case, a single hearing of evidence were convicted.’ (Cicero, *In Verrem* 2, *apud* Greenwood 1966: 148-149)

(91) Doporučil jsem mu “Pána prstenů”, kterážto kniha mě nadchla kdysi.
 I.recommended AUX him “Lord:ACC rings:GEN” which:NOM book:NOM me once amazed
 ‘I recommended him “The Lord of the Rings”, which book amazed me once.’ (Radek Šimík, pers. comm.)

In these examples, the relative pronoun is a ‘dependent’ determiner, which combines with a noun phrase like an article. The local Case situation then reduces to what happens in any regular DP: the noun, being part of DP, will morphologically agree with the determiner. DP_{rel} itself is assigned Case in some Case position within the embedded clause. In the Czech example (91), for instance, DP_{rel} is *kteřážto kniha* ‘which book’. It originates as the subject of the relative clause, and receives nominative Case, which is spelled out on the terminals D_{rel} and N at the syntax-morphology interface. The external antecedent is “*Pána prstenů*” (‘The Lord of the Rings’), the direct object of the matrix clause, which is assigned accusative.

In (89)-(91) there is no additional D, so let us move to appositive constructions with additional external material, starting with semi-free appositive constructions. Recall that we expect the relevant D to be assigned the same Case as the antecedent, as it is the head of the second conjunct. See (92), from Latin, and (93), from German:

(92) Ego Q. Maximum, eum qui Tarentum recepit, senem
 I Q. Maximus:ACC the.one:ACC who:NOM Tarentus recovered old
 adulescens ita dilexi, ut aequalem.
 young though loved as equal
 ‘I was as fond of Q. Maximus, the one who recovered Tarentum, as if he had been of my own age, though he was old and I was young.’ (Cicero, *De Senectute* IV, <www.thelatinlibrary.com/cicero/senectute.shtml>, our translation)

(93) Du kennst doch den Jan, ihn/*er der unser Manager ist?
 you know yet the:ACC Jan, him:ACC/*he:NOM who:NOM our manager is
 ‘You know Jan, (him) who is our manager, don’t you?’ (slightly adapted from De Vries 2006a: 244)

By spelling out the NP possibly associated with the additional D, such sentences can be turned into appositive constructions with a full additional external head NP. Examples are in (94), in Czech, and (95), in German:¹⁸

(94) Znáš Honzu, (toho) muže který žije svůj život coby hrdina komiksů?
 know Honza:ACC (that:ACC) man:ACC who:NOM live his.REFL life as hero comic-books
 ‘Do you know Honza, that/a man who lives his life as a comic book hero?’ (Radek Šimík, pers. comm.)

(95) ... Hans, der Herr den sie später heiraten sollte, begegnete ihr dort mehrfach.
 Hans the:NOM man:NOM who:ACC she later marry must approached her there repeatedly
 ‘Because Hans, the gentleman who she had to marry in due time, approached her there repeatedly.’ (slightly adapted from <http://www.freies-wort.de/_/tools/pdfpage.html?arid=746081>)

Here, we clearly see that the additional external head NP (*muže* ‘man’ / *Herr* ‘gentleman’) takes over the Case associated with the antecedent (*Honzu* / *Hans*).

¹⁸ Czech as well as German have a prescriptive orthographic rule saying that every subordinate clause must be preceded by a comma. We take the liberty of violating this rule in those cases where it confuses the distinction between appositive and restrictive material.

So far, all predictions are clearly confirmed. In Section 6.4 we will come back to simple appositional constructions, but first we would like to mention a slight complication for semi-free appositives.

6.3 *Intermezzo: matching effects in partially Case-marking languages?*

Several languages have Case marking only in the pronominal system, usually even restricted to personal pronouns. This enables us to test part of the Case distribution in the semi-free appositive construction. While a full study is beyond the scope of this article, we would like to highlight some examples from English and Dutch. Recall from (92) and (93), for example, that there is a clear pattern in full Case-marking languages, such that the additional pronominal head copies the Case of the anchor, and the internal relative pronoun behaves independently. Surprisingly, in languages with pronominal Case differences only, the situation is not so straightforward.

First, consider the following examples from Dutch. In (96a/b), the internal and external functions of the relativized constituent are the same (subject/subject in 96a, object/object in 96b). As we would expect, nominative *hij* ‘he’ in (96a) is fine, and accusative *hem* ‘him’ is not. In the reverse configuration in (96b), *hem* ‘him’ is clearly better than *hij* ‘he’ (though still not perfect for everyone).

- (96) a. Jos, *hij*/**hem* die al zo lang voorzitter is, gaat volgend jaar met pensioen.
 Jos, he/him who already so long chairman is, goes next year with retirement
 ‘Jos, he/him who has been chairman for so long, will retire next year.’
 b. We groetten Jos, ?**hij*?/**hem* die we al zo lang kennen.
 we greeted Jos, he/him who we already so long know
 ‘We greeted Jos, he/him who we already know for such a long time.’

However, the illustrations in (97) show that there is uncertainty concerning the choice of the Case of the pronominal head in the semi-free appositive construction if the internal and the external functions differ, and the result is deteriorated either way:¹⁹

- (97) a. We groetten Jos, ??*hij*?/**hem* die al zo lang onze voorzitter is.
 we greeted Jos he/him who already so long our chairman is
 ‘We greeted Jos, he/him who has been our chairman for so long.’
 b. Jos, ?**hij*?/?*hem* die we al zo lang kennen, werd opnieuw voorzitter.
 Jos he/him who we already so long know became again chairman
 ‘Jos, he/him who we already know for such a long time, became chairman again.’

In (97a), the antecedent is the object of the matrix clause, but what is relativized is the subject of the embedded clause; in (97b) the situation is reversed. Thus, the examples seem to display a Case matching effect (see also De Vries 2004b for discussion).²⁰ Frankly, it is not entirely clear to us *why* Case matching would play a role in semi-free appositive constructions. Namely, the two syntactic functions (external and internal) seem to be distributed over two elements, the personal pronoun and the relative pronoun – contrary to the situation in true free relative constructions, which have a relative pronoun only.²¹

In English, the situation is somewhat different. Our impression is that most people generally prefer the nominative form (*s*)*he who*, regardless of the context. Still, there is a subtle additional matching effect, witness the examples in (98):

- (98) a. Sally, *she*/**her* who’d won the prize, greeted him.
 b. He greeted Sally, ??*she*^{/6*}/*^{7*}*her* who(m) he liked best.
 c. He greeted Sally, (?)*she*/**her* who’d won the prize.
 d. Sally, ?(?)*she*/**her* who(m) he liked best, greeted him.

¹⁹ According to our informants, they would rather avoid this construction. This is easy in practice: the pronoun can be replaced by the Case-neutral *degene* ‘the one’, or else an equivalent appositive relative clause can be used.

²⁰ For an analysis of matching effects in Left-Dislocated semi-free relatives in Basque, see Rebuschi (2001).

²¹ Under De Vries’s (2006a:245-247) account, true free relatives and semi-free relative clauses may involve different structures:

- (i) [DP [[N+D_{rel}]+D] [CP [D_{Pre}rel t<sub>N+D_{rel}] [NP t_N]]_j C [IP ... t_j ...]]] (FR)
 (ii) [DP N+D [CP [D_{Pre}rel [NP t_N]_i D_{rel} t_i]]_j C [IP ... t_j ...]]] (semi-FR)</sub>

Crucially, the semi-free relative construction is structured like (externally) headed relative constructions (ignoring the potentially overt N head movement, which accounts for complex pronominal heads such as *degene* ‘the one’). Thus, D(+N) and D_{rel} are separate words. In true free relatives, there is additional head movement of D_{rel}(+N) to D, which corresponds to the intuition that the antecedent is included in the relative pronoun (note that from a derivational point of view, it is rather the other way around). This is substantiated by the use of different pronouns in many languages. The analysis straightforwardly accounts for Case-matching effects found in true free relatives: when the complex [[N+D_{rel}]+D] is spelled out, its components cannot contain morphologically contradictory demands. In semi-free relatives there is no such problem, since D and D_{rel} are unconnected.

It seems that *he who...* in English has become a kind of fixed expression (it can even be used in regular hypotactic non-nominative contexts). This is not a recent development. In his prescriptive grammar from the mid-nineteenth century, Samuel Kirkham warns against the “false syntax” of sentences like *We ought to love God, he who created and sustains all things*, where the appositive pronoun *he* should be *him* according to Rule VII (see Kirkham 1829: 178), which states, in our words, that appositive nouns or pronouns agree in Case with the anchor. We take it that if this needed to be learnt by means of explicit exercise, then for many speakers there was (and is) no intuitive need for Case marking and/or agreement, unlike the situation in Slavic or German. For a more general discussion of pronoun Case forms in English, see Quinn (2002).

6.4 Case in appositional constructions

Finally, let us briefly look into the Case distribution in appositional constructions. As discussed in Section 5, identificational appositions behave like second conjuncts; thus, they are normally expected to take over the Case of the antecedent. This can be illustrated in Russian:

- (99) V 1973, Skylab vzjal v kosmos dvux životnyx, paukov Arabellu i Anitu.
 in 1973 Skylab took in space two:ACC animals:ACC spiders:ACC Arabella:ACC and Anita:ACC
 ‘In 1973, Skylab took two animals, the spiders Arabella and Anita, into space.’ (Heringa 2010: 19)

In attributive constructions, we often see the same pattern; see (100), from Latin, and (101), from Czech, for instance:

- (100) uoluptates, blandissimae dominae, maiores partes animi a uirtute detorquent
 pleasures:NOM most.alluring:NOM mistresses:NOM bigger parts minds from virtue divert
 ‘pleasures, most alluring mistresses, divert the majority from virtue’ (Cicero, *De Officiis* 2, 37, *apud* Touratier 1994: 441, our translation)

- (101) Pan Novák nakreslil tuto místnost tužkou, svým oblíbeným nástrojem.
 Mr Novak drew this room pencil:INSTR his favorite instrument:INSTR
 ‘Mr Novak drew this room with a pencil, his favorite instrument.’ (Radek Šimík, pers. comm.)

We can understand this if a predicate has the possibility of taking over the Case of its subject; compare, in this respect, Latin *verae_{nom} amicitiae_{nom} sempiternae_{nom} sunt* ‘true friendships are abiding’ (Cicero, *De Amicitia* 9,32). Independent evidence can also be obtained from small clause constructions, as in German *Ich finde [ihn_{acc} einen_{acc} hervorragenden_{acc} Schauspieler]* ‘I find him a marvelous actor’. In appositional constructions, as we discussed, the subject of an appositional predicate nominal is not the anchor itself, but an abstract pronoun that is indirectly related to the anchor through specifying coordination. Nevertheless, the end result is the same.

However, in some languages there is a specialized or fixed Case for predicates. In Romanian, primary nominal predicates get nominative Case, and so do attributive appositions:

- (102) Astronautii au dat Arabelei, un păianjen de grădină, apă și carne.
 astronauts:DEF PAST:3PL gave Arabella:DAT a:NOM spider of garden water and meat
 ‘The astronauts gave Arabella, a garden spider, water and meat.’ (adapted from Heringa 2010: 20)

Interestingly, if the apposition is identificational, it takes over the Case of the anchor:

- (103) Au dat-o și Anitei, celuilalt păianjen.
 PAST:3PL gave-it too Anita:DAT other:DAT spider
 ‘They gave it Anita, the other spider, as well.’ (Heringa 2010: 20)

This follows directly from our analysis in Section 5, which distinguishes between identificational appositions (just coordination), and attributive appositions (predication in an implied clausal structure). For more discussion on Case in appositional constructions, we refer to Heringa (2010, forthcoming).

6.5 Conclusion

The Case distribution in various appositive constructions is clearly consistent with the coordination analysis, and with the hypothesis that different types are derived from the same underlying schema. It can be summarized as follows: an external D, whether it is additional or not, bears external Case as the consequence of some dependency in the matrix clause – directly in restrictive configurations, and mediated by coordination in appositive

configurations. By contrast, a relative pronoun D_{rel} always bears internal Case, assigned within the relative clause. An additional head NP in appositive constructions can be structurally related either to the additional external D or to D_{rel} (namely, if it is not raised to a peripheral position, and remains within the dependency domain of D_{rel}). Consequently, it receives its Case specification via one of these determiners.

7 Further issues concerning appositional constructions

So far, we have examined a number of basic characteristics of appositive constructions, and we proposed a detailed analysis. Here, we will highlight some further properties of appositive constructions, and briefly indicate to which extent the different subtypes behave in the same way, and to which extent their behavior can be explained by the present theory. In separate subsections, we consider pied piping, apposition markers, stacking, ordering effects, reversibility of conjuncts, extraposition, split antecedents, and non-nominal antecedents. We will see that the various appositive construction behave similar in many respects. This lends further support to the hypothesis that their underlying syntax is essentially alike.

7.1 Pied piping

We showed that an additional head NP can surface in two positions: ‘internally’, that is, following a relative pronoun, and ‘externally’, which is left-peripherally in the specifying relative construction. The difference can be highlighted by means of pied piping. Consider the minimal pair in (104), in English. Example (104b) is taken from Smits (1988: 288).

- (104) a. He was born in 1956, a year *in which* Britain went through some of its worst moments.
 b. He was born in 1956, *in which year* Britain went through some of its worst moments.

The internal additional head NP *year* in (104b) is in the complement position of D_{rel} . In turn, DP_{rel} as a whole is the complement of the preposition *in*. By contrast, the external head NP *year* in (104a) surfaces in the leftmost position next to the external determiner. According to the raising analysis, it is moved across the relative pronoun and the preposition inside the embedded clause. The same pattern can be shown in Dutch:

- (105) a. Stem voor Jan Modaal, een *man aan wie* het land zo veel te danken heeft!
 vote for John Doe, a man to whom the country so much to thank has
 ‘Vote for John Doe, a man to whom the country owes so much!’
 b. Stem voor Jan Modaal, *aan welke man* het land zo veel te danken heeft!
 vote for John Doe to which man the country so much to thank has
 ‘Vote for John Doe, to which man the country owes so much!’

In both cases, the PP containing the relative pronoun is moved to the CP domain (pied piping). In constructions with an (additional) external head NP, there is a second movement step of the head NP further to the left periphery of the embedded clause, as explained in Sections 2-4 above. In the resulting configuration (104a/105a), the preposition and the relative pronoun form a constituent. In Germanic, there is sometimes an additional morphological association between the pronoun and the preposition (if it concerns a so-called R-pronoun). Examples are *whereby* in English, and *waaraan* ‘whereto’ or *waarmee* ‘wherewith’ in Dutch.

We expect the semi-free appositive construction to behave similarly with respect to pied piping, since the difference with the appositive construction with an additional external head NP is minimal. This is illustrated in (106b) for English, and (107b) for Modern Portuguese:

- (106) a. Do you know John, *the guy with* whom I danced yesterday?
 b. Do you know John, *the one / him with* whom I danced yesterday?
- (107) a. O primo da Rita, *o rapaz de* quem eu te falei no outro dia, está
 the cousin of.the Rita the boy of whom I to.you.CL talked in.the other day is
 muito mal.
 very badly
 ‘Rita’s cousin, the boy about whom I talked to you the other day, is very ill.’
 b. O primo da Rita, *aquele de* quem eu te falei no outro dia...
 the cousin of.the Rita that of whom I to.you.CL talked in.the other day

As we would predict, the preposition surfaces between the external (pronominal) head and the relative pronoun. A sketch of the structure is provided in (108):

| | | | | | | | | | | | | | | | | |
|-------|------------------|-------|--------|-----------------|------|-----------------|----------------------|---|-----------|--------------------|------------------|----------------------|-----------------|---|-----------------|----------------------------|
| (108) | [_{CoP} | DP | Co | [_{DP} | D | [_{CP} | (NP _{ext}) | [| P | [_{DPrel} | D _{rel} | (NP _{int}) |]] _k | C | [_{IP} | ... t _k ...]]] |
| | | 1956, | | - | - | | - | | <u>in</u> | | which | year | | | ... | |
| | | 1956, | | a | year | | <u>in</u> | | | | which | | | | ... | |
| | | John | | the | one | | <u>with</u> | | | | whom | | | | ... | |
| | O primo da Rita | | aquele | - | | | <u>de</u> | | | | quem | | | | ... | |

It is likely that an external NP moves to or via SpecPP (see De Vries 2006b for discussion). Whether it can actually leave the PP is an unsolved issue (compare footnote 1).

7.2 Apposition markers

An additional argument for the idea that appositive material is coordinated to its anchor comes from the fact that coordinators such as *and*, *or* and *but* may occasionally be used as overt apposition markers. This is illustrated in (109), taken from Heringa (2007: 67-82); for further examples, see also Quirk et al. (1985: 1307-8).

- (109) a. the United States of America, *or* America for short
 b. You could cut the atmosphere with a knife, *and* a blunt knife at that.
 c. John is interested in science, *but* especially linguistics.

As De Vries (2006a: 238) notes, if appositions were simply right-hand adjuncts to a noun phrase, the presence of such coordinative heads would be unexpected. By contrast, under the specifying coordination analysis, the possibility of a coordinative head is expected; it then corresponds to the overt realization of the specifying coordinative head. Comparable markers are *namely* and *i.e.* / *that is*. The choice depends on the semantics of the particular example.

We analyze appositive constructions with an additional external head NP as complex appositions. This raises the question if there are examples of overt coordinative connections. This is indeed the case; see (110), for instance, from English, and (111), from Modern Portuguese. In these examples, the specifying connections are spelled out as *or*, *i.e.*, and *isto é* 'that is', respectively.

- (110) a. the men who drafted the Declaration of Independence, *or* the Committee of Five.
 b. the Committee of Five, *i.e.* the men who drafted the Declaration of Independence.
- (111) Actualmente existem muitos *aletrados*, isto é, adultos que sabem ler, mas nunca lêem.
 currently are:3PL many semi.literate that is adults that know read but never read
 'Currently there are many semi-literate people, that is, adults who are able to read, but never do it.'

The same pattern can be found in the semi-free appositive construction. Examples are (112), from English, and (113), from Modern Portuguese.

- (112) the non-believer, *or* / *i.e.* he who believes in man's omnipotence
- (113) a. só passam na ponte veículos pesados no sentido norte-sul, isto é,
 only cross in.the bridge vehicles heavy in.the direction north-south that is
 os que se dirigem de Viana do Castelo para o Porto.
 the that SE.CL go from Viana do Castelo to the Porto
 'Only heavy vehicles can cross the bridge in the direction north-south, that is, the ones that go from Viana do Castelo to Porto.'
- b. Depois do almoço, às 14h30, tem início uma sessão solene onde
 after of.the lunch at 2.30 p.m. has beginning a session solemn where
 será feita a recepção de boas vindas aos novos «antigos alunos», ou seja,
 will.bedone the reception of welcoming to.the new old students that is
 os que saíram do colégio no passado ano lectivo.
 the that left of.the college in.the last year school
 'After lunch, at 2.30 p.m., a solemn session begins, where a welcome reception will be offered to the new «old students», that is, the ones who left the college last school year.' (Corpus CETEMPúblico v. 1.7, our translation)

Normally, a specifying conjunction can only be overt if the appositive material is identificational. If it expresses an attributive predication, the connection is abstract (114a/b) – unless of course the additional external D is overtly realized, as is shown in (114c), which is again a semi-free appositive construction:

- (114) a. John, (*or/*i.e.) a liar
 b. John, (*or/*i.e.) who is a liar
 c. John, (or/i.e.) someone who is a liar

Appositive constructions with an additional internal head NP are attributive. Therefore, they pattern with the attributive appositions and ARCs:

- (115) a. My dog, (*or/*i.e.) which *faithful animal* has guarded me for years, died last week.
 b. Tigers are ferocious, (*or/*i.e.) which fact is well-known.

Sometimes, attributive appositive material can be preceded by an additive or adversative connector, as in *John, a liar, and/but not a thief*, but probably only if there is a multiplication of modifiers, or if a complex modifier consists of several parts. In such cases, the conjunction may well indicate the relationship between the modifiers themselves, and not between the relevant nth modifier and the anchor. This brings us to the next subsection.

7.3 Stacking

So far we have focused on appositional constructions with one unit in apposition, but it is worth noting that stacking/juxtaposition of appositive material is also possible. This is illustrated in (116) in English, and (117) in Spanish (for examples in Dutch, see De Vries 2006a: 241).

- (116) a. And if Mickey, our hero, our God, our star of stars, is dead, then what chance have we?
 (www.blockbuster.co.uk/bbsitecontent/editorial/promotions/october07/dirkblog.aspx)
 b. [...] John, my brother, who took the photograph [...] (http://gaffa.org/reaching/im85_tm.html)
- (117) [...] las Indias, refugio y amparo de los desesperados de España, yglesia de los
 the Indies refuge and shelter of the destitute of Spain church of the
 alçados..., enganõ común de muchos y remedio particular de pocos [...]
 embezzlers delusion collective of many and redemption personal of few
 ‘[...] the Indies, refuge and shelter of the destitute of Spain, church of the embezzlers..., collective delusion
 of many and personal redemption of few [...]’ (Cervantes, *Celoso extr.*, 148, translation ours)

This property is fully compatible with a coordination-style account. Since regular coordination of more than two conjuncts is allowed (e.g., *John, Mary, (...) and Peter*), we expect that specifying coordination of more than one appositive conjunct is allowed as well, at least from a structural perspective.

It has been stated in the literature that appositive relative clauses cannot be stacked, contrary to restrictive ones (see, for instance, Jackendoff (1977:171) and Brito (2004: 406) concerning English and Portuguese, respectively). However, recent studies have shown that this generalization is simply not correct (Grosu and Landman 1998, Grosu 2000, Kempson 2003, De Vries 2006a, Arnold 2007). Some examples are provided in (118)-(120), for English, Dutch, and Modern Portuguese, respectively.²²

- (118) John, who never finished high-school, who can’t in fact even read or write, wants to do a doctorate in astrophysics. (Grosu 2000: 112)
- (119) Joop, die op de derde rij zat, van wie we nu nog niet weten of hij
 Joop, who on the third row sat, of whom we now yet not know if he
 wel een kaartje had, genoot van de voorstelling.
 indeed a ticket had, enjoyed (of) the performance
 ‘Joop, who sat in the third row, regarding whom we still do not know if he had a ticket, enjoyed the performance.’ (De Vries 2006a: 252)

²² As Arnold (2007) notes, and we quite agree, the unacceptability associated with stacking of appositive relatives does not reflect a grammatical constraint. Given the relevant context, stacking is allowed. For instance, (i) is given as ungrammatical in Chomsky (1975), but in a discourse where it is a continuation of (ii), it seems perfectly fine:

- (i) John, who goes to MIT, who likes math, will get a good job.
 (ii) In general, people who go to MIT who like Math will get good jobs. For example, I expect that... (i).

- (120) O João, que não sabe nada acerca do mar, que sempre viveu no campo,
 the João that not knows nothing about of.the sea that always lived in.the country
 é que vai fazer este trabalho sobre pesca submarina?
 is that goes do this work about fishing submarine
 ‘Is it John, who does not know anything about the sea, who have always lived in the country, who is going to do this work about submarine fishing?’

We also found examples of stacked appositive constructions with an additional internal head NP; see (121) and (122), from Old Portuguese:

- (121) Enprazou, a Johã vjçente Almojnheíro que presente estaua, hua Almojnha cõ ssuas
 let:3SG to Johã Vjçente farmer that present was one farm with its
 Casas (...) A qual Almojnha soja de trager Johã dominguiz do Paaço; A qual
 houses the which farm used of bring Johã Dominguez do Paaço the which
 Almojnha lhj Enprazou cõ todas ssuas Entradas e ssajdas e derejtos
 farm to.him:CL let with all its entrances and exits and rights
 ‘He let to Johã Vjçente, farmer, who was present, one farm with its houses (...), which farm Johã Dominguez do Paaço used to have, which farm he let to him with all its entrances and exits, and rights’ (Martins 2000, year 1385, our translation)

- (122) damos e outorgamos A uos Abráám filho de Isáác lôgo e a uossa molher
 give:1PL and concede:1PL to you Abráám son of Isáác Lõgo and to your wife
 dõna Mayor en escambho hũa nossa vĩa poroutra uossa. a qual vĩa nos Avemos
 Dõna Mayor in return a our vineyard by other yours the which vineyard we have
 en termho de Lixbõa en logo que e chamado val das donas. da qual
 in environs of Lixbõa in place that is called Val das Donas of.the which
 vĩa estes sã os termhos.
 vineyard these are the limits
 ‘We give and concede to you, Abráám, Isáác Lõgo’s son, and to your wife, Dõna Mayor, a vineyard of ours in return for a vineyard of yours, which vineyard we have in environs of Lixbõa, in a place that is called Val das Donas, of which vineyard these are the limits: ...’ (Martins 2000, year 1299, our translation)

Appositive constructions with an additional external head NP and semi-free appositive constructions allow for stacking, too. This can be illustrated in Modern Portuguese, as shown in (123)-(125):

- (123) As coisas não correram bem com o Rui, pessoa de quem eu nunca
 the things not went well with the Rui person of whom I never
 gostei, pessoa com quem eu nunca pude contar.
 liked person with whom I never could rely
 ‘Things did not go well with Rui, a person that I have never liked, a person on whom I could never rely.’
- (124) Lembro-me de momentos muito felizes da minha infância, memórias que
 remember:1SG.me.CL of moments very happy of.the my childhood memories that
 nunca se apagam, memórias que sabe bem recordar.
 never SE.cl erase memories that feels good remember
 ‘I remember very happy moments of my childhood, memories which are never erased, memories which it feels good to remember.’
- (125) A Rita e a Maria, as que chegam sempre atrasadas, as que nunca participam
 the Rita and the Maria the that arrive always late the that never take part
 nas reuniões, foram eleitas as melhores vendedoras do ano.
 in.the meetings were designated the best saleswomen of.the year
 ‘Rita and Maria, the ones that always arrive late, the ones that never take part in meetings, were designated the best saleswomen of the year.’

In short, the empirical data provided in this section show that all appositional constructions can be stacked. This falls out naturally from a coordination approach, since coordinate structures may generally consist of multiple conjuncts.

7.4 Ordering effects

Normally, restrictive modifiers precede appositive ones. An example involving relative clauses is given in (126), from Modern Portuguese. The intended reading is such that the clause *that lives in Porto* is restrictive, implying that the addressee has different sisters, living in different places. Under this reading, (126b) is unacceptable:

- (126) a. Encontrei a tua irmã que mora no Porto, que estava com o seu namorado.
 met:1SG the your sister that lives in.the Porto that was with the her boyfriend
 ‘I met your sister that lives in Porto, who was with her boyfriend.’
 b. * Encontrei a tua irmã, que estava com o seu namorado, que mora no Porto.
 met:1SG the your sister that was with the her boyfriend that lives in.the Porto
 ‘I met your sister, who was with her boyfriend, that lives in Porto.’

As discussed in Section 2.2, this follows from a structure in which restrictive material, being part of the antecedent DP, is necessarily embedded in the first conjunct, while appositive material is in the second conjunct:

- (127) [_{CoP} [_{DP} a tua irmã que mora no Porto] Co [_{DP} [que estava com o seu namorado]]]

This pattern is consistent across appositive construction types. We will show this using Portuguese examples. In (128), the restrictive relative clause (RRC) necessarily precedes the apposition. In (129), a RRC precedes an appositive construction with an additional external head NP. In (130), an RRC precedes a semi-free appositive construction.

- (128) a. A namorada que ele tinha na altura, uma professora da escola secundária,
 the girlfriend that he had in.the time a teacher of.the school secondary
 ajudou-o a ultrapassar aquele mau momento.
 helped.him.CL to overcome that bad moment
 ‘The girlfriend that he had at that time, a secondary school teacher, helped him to overcome that bad moment.’
 b. * A namorada, uma professora da escola secundária, que ele tinha na altura, ajudou-o a ultrapassar
 aquele mau momento.
- (129) a. Encontrei o rapaz que te salvou a vida, pessoa que eu já não
 met.1SG the boy that to.you.CL saved the life person that I ≠already not
 via desde o teu casamento.
 saw since the your wedding
 ‘I met the boy that saved your life, (a) person that I have not seen since your wedding (day).’
 b. * Encontrei o rapaz, pessoa que eu já não via desde o teu casamento, que te salvou a vida.
- (130) a. Encontrei a professora que te deu aulas de música, a que tinha um
 met.1SG the teacher that to.you.CL gave lessons of music the that had a
 filho com a mesma idade que tu.
 son with the same age that you
 ‘I met the teacher that taught you music, the (one) that had a son with the same age as you.’
 b. * Encontrei a professora, a que tinha um filho com a mesma idade que tu, que te deu aulas de música.

Finally, it does not come as a surprise that we did not find any example of an appositive relative clause with an additional internal head NP preceding restrictive material in Old Portuguese, whereas the reverse does exist, witness (131):

- (131) damos a elles hũú noso casal que auemos na uilla dallheyra cõ todas sas
 give:1PL to them a our hamlet that have:1PL in.the village Alheyra with all its
 perténcias no qual *casal* ora elles sũ moradores
 belongings in.the which hamlet now they are residents
 ‘We give them a hamlet of ours that we have in the village of Alheyra, with all its belongings, in which hamlet they now live.’ (Martins 2000, year 1279, our translation)

In short, all appositive constructions exhibit the same ordering effect with respect to restrictive modifiers.

7.5 Reversibility of conjuncts?

It is often thought that (regular) conjuncts are reversible. Of course this is only true if the semantic relationship between the conjuncts is symmetrical in every possible respect. See the illustrations in (132):

- (132) a. John likes Mary and Mary likes John. \approx Mary likes John and John likes Mary.
 b. John came in and closed the door behind him. \neq John closed the door behind him and came in.
 c. John stayed home, for he was ill. \neq John was ill, for he stayed at home.

The clauses in (132a) have an equal status and can indeed be reversed. This is not the case in the other examples: a temporal sequence (132b) and a causal relationship (132c) are asymmetrical, so a reversal of conjuncts leads to unacceptability or a different meaning.

Since we propose a coordination analysis of appositive constructions, let us see if the conjuncts are reversible, and why (not). First note that the semantic type of coordination involved in appositional constructions ('specification') is inherently asymmetrical.²³ If A specifies B, in any intuitive sense, this is different from the reverse. Therefore, we do not *a priori* expect that appositive phrases or clauses, which are specifying conjuncts, can be reversed with their anchor. We saw that attributive appositions and relative clauses essentially function as predicates. For these, reversal is normally impossible:

- (133) a. William, who was called Bill
 \neq * who was called Bill, William
 b. my dog, which faithful animal has guarded me for years
 \neq * which faithful animal has guarded me for years, my dog
 c. this house, (which is) an imposing building
 \neq * an imposing building, (which is) this house (adapted from Quirk et al. 1985: 1308)

For identifying appositions, which are normally referential, matters are slightly different. The same can be said about appositive constructions with an additional external head NP and semi-free appositive constructions. Consider the simple case in (134), and (135), from Modern Portuguese:

- (134) a. the Netherlands, or Holland
 b. Holland, or the Netherlands
- (135) a. a Maria, a rapariga que divide o gabinete comigo
 the Maria the girl that shares the office with.me
 'Maria, the girl who shares the office with me'
 a.' a rapariga que divide o gabinete comigo, a Maria
 b. o João e a Maria, os que dividem o gabinete comigo
 the João and the Maria the: PL that share the office with.me
 'João and Maria, the ones who share the office with me'
 b.' os que dividem o gabinete comigo, o João e a Maria

In (134a), *Holland* is an alternative description of *the Netherlands*, and reversal is acceptable (134b). However, the two options are not equivalent: there is a clear distinction concerning what serves as a specification of what, and, relatedly, which DP is primary, and which one is parenthetical. Thus, there will also be a difference in use, depending on the intended information structure. The same is true for the more complex constructions in (135). The alternation in (136) is a little more dramatic:

- (136) a. one of my friends, John
 b. John, one of my friends

In (136a), a possible reading is that both DPs are referential, and in fact coreferential, in which case the apposition *John* is identifying (alternatively, it could be an attributive 'label'). In the reversed order, however, the indefinite

²³ We follow a tradition in which coordination is viewed as a syntactic configuration with varying semantics, depending on the particular coordinator. As is well-known, a conjunction can be additive, disjunctive or adversative, and there are also more specialized types. Though conjuncts prototypically count as 'equally ranked' in some sense, it is certainly not the case that they are always in a semantically symmetrical relationship, as we just illustrated; see also Culicover & Jackendoff (1997) for discussion. See De Vries (2009) for an overview of construction types that may involve specifying coordination. In all of these, the second conjunct provides an alternative description, an example, or a property of the first conjunct.

phrase *one of my friends* is interpreted as a predicate, which makes the appositional construction attributive (and this involves a more complex structure, as argued in Section 5).

In short, we can generate different expressions with the same lexical items. There is no transformational relationship between, say, (136a) and (136b). In the first, *John* is base-generated as the apposition; in the second, *one of my friends* is base-generated as the apposition (see also Potts 2005). Generally, stating that conjuncts can sometimes be reversed is no more useful than claiming that subject and object can sometimes be switched in transitive clauses.

There is, however, an issue that we did not explicitly address, so far. Phrases or clauses that are to be interpreted attributively cannot be used as first conjuncts (133), or more generally, in an argument position. This follows if they are simply predicates, in contrast to regular free relatives and overt semi-free relatives, which are inherently referential. But in the previous sections, we analyzed attributive appositional phrases and clauses as predicates *embedded* in a covert relative DP structure that itself is coreferential with the anchor. Then the question raises why such a complex DP cannot be generated independently of an anchor (a first conjunct). Concretely, why are sentences like (137a/b) acceptable, but (137c) not, if the subject has the structure $[_{DP} D [_{CP} \dots]]$?

- (137) a. That what she said yesterday was shocking.
 b. What she said yesterday was shocking.
 c. * Which she said yesterday was shocking. (*cf.* these words, which ...)

The reason, we suggest, is that the external D must receive an interpretation, and hence be licensed. This can be done by direct lexicalization, as in (137a) or any semi-free relative construction, or by associating it with (referential) lexical material. In (137b), the antecedent is intuitively included in the relative pronoun, ‘projected from within’. Formally, we could assume that the relative DP is linked to the external DP by head movement or Agree (see footnote 21). Notice in this respect that free relatives without an overt relative pronoun do not exist in any of the languages discussed in this paper, including those where headed relatives can be introduced by just a complementizer or nothing at all. In (137c), the situation is different. *Which* is necessarily attributive; therefore, it cannot license the external D to be identified. In attributive appositional constructions, there is not even a lexical D_{rel} . So the phonologically null D in these constructions must find an external licenser (compare also Lust et al. 1994). In the context of specifying coordination, there is one in the guise of the immediately preceding antecedent/anchor; in (137c), there is none.

Recall once more that identifying appositions do not involve a relative structure, so they do not face the problem of licensing some external D: they are referential themselves. This is why such phrases can always be used independently of an anchor as well; see (138a/a’). Unlike *which*-clauses, most (simple) attributive appositions can be reanalyzed as referential phrases if they are used independently. Thus, the apposition *a nice guy* is a nominal predicate in (138a), but in (138b’) it is not attributive/predicative at all: here, it can only be interpreted as a specific – hence referential – phrase.

- (138) a. I met one of my friends, i.e. John. a.’ I met John.
 b. I met John, a nice guy. b.’ I met a nice guy.

We take this as a confirmation of our analysis in Section 5, where we argue that the structure of identifying appositions is different from the structure of attributive ones.

7.6 Extraposition

An apposition is typically adjacent to its anchor. The word *appositio*, derived from the Latin verb *apponere* ‘place near’, reflects this property. However, optional right-extraposition is a general phenomenon that can create discontinuity, and this is no different for appositional constructions.²⁴ Some English examples are given in (139), taken from Quirk et al. (1985: 1302, 1311), and a Modern Portuguese one in (140), taken from Brito (2003: 369):

- (139) a. *An unusual present* was given to him for his birthday, *a book on ethics*.
 b. *Anna* was there last night, *my best friend*.
 c. Have some *Harveys* with your Christmas, *the most distinguished sherries you can buy*.
- (140) *O guarda* atirou dois tiros, *aquele* *cretino!*
 the guard fired two shots that bastard
 ‘The guard fired two shots, that bastard!’

As far as regular appositional relatives are concerned, it has often been claimed that extraposition is impossible, based on examples like (141), from Modern Portuguese, or (142) in English (which is only slightly marked, in fact):

²⁴ See Cardoso (forthcoming) for an in-depth discussion. Here, we will limit ourselves to a number of descriptive observations.

(141) * *A Rita gostou do filme, que nunca gosta de nada.*
 theRita liked of.the movie that never likes of nothing
 ‘Rita liked the movie, who never likes anything.’

(142) ? *John came, who Mary hated.*

Again, if this were generally true, it would weaken the hypothesis that all appositive constructions have a similar external syntax. However, there is plenty of evidence to the contrary. Some examples of extraposed appositive relative clauses are cited in (143-145), from English (Arnold 2007: 288), Modern Portuguese (adapted from Peres and Mória 1995: 367), and Dutch (De Vries 2006a: 254):

(143) *I saw my mother yesterday, who I hadn’t seen for years.*

(144) *O carro despistou-se, projectando um passageiro pelo ar, o qual foi embater*
 the car skidded.SE.CL throwing a passenger by.the air the which was crash
contra um poste.
 against a lamppost
 ‘The car skidded, throwing a passenger into the air, who crashed into a lamppost.’

(145) *Ik heb Joop gezien, die twee zusters heeft.*
 I have Joop seen, who two sisters has
 ‘I saw Joop, who has two sisters.’

Clearly, extraposition of appositive relative clauses is syntactically possible. This does not imply that it is always acceptable, since independent factors can play a role, such as prosody, recoverability, and information structure. For instance, Arnold (2007: 289) notes that examples like (142) can be made fully acceptable if the appositive relative clause is made heavier:

(146) *Even John came, who everyone had expected would be too scared of potential publicity.*

Interestingly, extraposition is even required in some cases (see also De Vries 2006a: 255). For example, (144) is much better than (147) with a non-extraposed order. The reason is that the discourse expresses a sequence of events that must be reflected in the linear order.

(147) * *O carro despistou-se, projectando um passageiro, o qual foi embater*
 the car skidded.SE-CL throwing a passenger the which was crash
contra um poste, pelo ar.
 against a lamppost by.the air
 ‘The car skidded, throwing a passenger, who crashed into a lamppost, into the air.’

Here, the crash into a lamppost occurs after the throwing of the passenger into the air.

Can the other appositive construction types also be discontinuous by means of extraposition? This is indeed the case, which we illustrate in (148) through (152). Example (148) involves an additional internal head NP, (149) an additional external head NP. They are from Old and Modern Portuguese, respectively.

(148) *aqueste prazo fizi. é én testemoyo destas cousas meu sinal pusi en*
 this rent did.1SG and in testimony of.these things my sign put.1SG in
elle o qual sinal tal este.
 it the which sign this is

‘I did this rent and, as testimony of these things, I put my sign on it, which sign is this...’ (Martins 2000, year 1279, our translation)

(149) *Pelo menos era isto o que a mosca estava a ruminar no sonho de Mr.*
 At least was this the that the fly was A muse.INF in.the dream of Mr.
Bones, mosca que, na verdade, era o próprio Mr. Bones.
 Bones, fly that, in.the truth was the himself Mr. Bones
 ‘At least, it was this that the fly was musing in Mr. Bones’ dream, (a) fly which was in fact Mr. Bones himself.’ (Paul Auster, *Tibunktu*. Porto: Asa, p. 66, our translation)

Examples (150) and (151) illustrate extraposition of semi-free appositive relative clauses in Modern Portuguese; and the same can be shown in English (152):

- (150) *Os teus primos chegam hoje, os que vivem na Califórnia.*
 the your cousins arrive today the that live in.the Califórnia
 ‘Your cousins arrive today, the (ones) who live in California.’ (Brito 2003: 369, translation ours)
- (151) *Os meus pais compraram uma viagem para o Rio de Janeiro, eles que diziam que nunca iriam ao Brasil!*
 the my parents bought a trip to the Rio de Janeiro they that
 said that never would.go to.the Brasil
 ‘My parents bought a trip to Rio de Janeiro, they who (used to) say that would never go to Brazil.’
- (152) “What would *your heroic ancestor* say, *he who revenged the rape of Lucretia and brought down the last king, Tarquinius*, if he could see this sorry sight?” (Steven Saylor, *Roma*, London: Robinson, p. 469)

Thus, all appositive construction types are eligible for extraposition.

7.7 Split antecedents

In some cases, the antecedent of an appositive relative clause can be a discontinuous noun phrase, a ‘split’ antecedent. This is illustrated in Dutch in (153):

- (153) *Ik zwaaide naar Anna_i, en Jan zwaaide naar Marie_k, die_{i+k} overigens dezelfde jurk aanhadden.*
 I waved at Anna and Jan waved at Marie, who by.the.way the.same dress wore:PL
 ‘I waved at Anna, and Jan waved at Marie, who were wearing the same dress, by the way.’

The relative pronoun is capable of cumulative reference. This is similar to the behavior of a personal pronoun a sequence of sentences like *I waved at Anna_i, and John waved at Mary_k. They_{i+k} were wearing the same dress*. That is, anaphora across discourse may involve split antecedents as well.

Theoretically, (153) raises the question where and at which level the relative clause is attached. We will assume that in such cases the appositive relative clause is not conjoined to the second antecedent noun phrase at the constituent level, but rather at the clausal level (or at least somewhere in the spine of the structure). This configuration is similar to extraposition, which presumably also involves coordination on a higher level (cf. Kluck & De Vries, to appear). Very schematically, we have (154):

- (154) (...) [CoP [XP ... DP_i ... DP_k ...] [Co [ARC rel_{i+k} ...]]]

where the complex XP could represent two conjoined clauses containing the two relevant noun phrases, and ARC is the appositive relative clause (or rather, a complex D–CP combination, as discussed in previous sections) containing the relative pronoun that is interpretatively linked to the split antecedent.

Thus, the coordination approach seems to provide a way to handle split antecedents for the constructions at hand. We now predict that an appositive relative clause containing a split antecedent cannot be in the middle field, since having a split antecedent depends on an extraposition configuration. The unacceptability of example (155) suggests that this is correct.

- (155) **Ik heb naar Anna_i gezwaaid en Jan heeft naar Marie_k, die_{i+k} overigens dezelfde jurk aanhadden, gezwaaid.*
 I have to Anna waved and Jan has to Marie who by.the.way the.same dress
 wore:PL waved
 ‘I waved at Anna, and Jan waved at Marie, who were wearing the same dress, by the way.’

Notice that (155) is only minimally different from (153). If the appositive relative clause were positioned *after* the participle *gezwaaid* ‘waved’, the sentence would be perfect again.

Turning to the other appositive constructions, we show that each is capable of relating to a discontinuous antecedent. The Dutch example in (156) illustrates an appositive relative construction with a plural additional internal head NP that takes a split, clausal antecedent, as is indicated by the subscripts:

- (156) Jan zei [dat Amsterdam in Nederland ligt]_i en Anna zei [dat Lissabon in Portugal ligt]_k, [welke feiten]_{i+k} we natuurlijk allang kennen.
 Portugal lies which facts we obviously already know
 ‘Jan said that Amsterdam is in the Netherlands and Anna said that Lisbon is in Portugal, which facts we already know, obviously.’

A more complex example from Old Portuguese is (157). Here, the internal head is a conjoined noun phrase *a quall carta E clausulla Em Ella conthyuda* ‘which letter and clause contained in it’, which refers to the relevant letter and passage mentioned separately from each other earlier in the sentence.

- (157) *per a dicta soprioresa ffuj logo apresentada hũa carta dEl Rey [...]*
 by the mentioned vice-prioress was immediately shown a letter from.the king
na quall ffazyza mençõ antre as outras cousas que Em Ella Era conthyudo hũa
 in.the which made mention among the other things that in it was contained a
clausulla [...] a quall *carta E clausulla Em Ella conthyuda* asy amostrada [...]
 clause the which letter and clause in it contained this.way shown
 ‘A letter from the king was immediately shown by the mentioned vice-prioress, in which it was mentioned, among other things, that a clause was contained in it [...], (after) showing which letter and clause contained in it [the mentioned vice-prioress said that...].’ (Martins 2000, year 1429, our translation)

When an additional *external* head is involved, there is also a choice between a plural and a conjoined phrase (depending on the lexical content, of course). We illustrate this in Modern Portuguese:

- (158) O João comprou [o *Ensaio sobre a Lucidez*]_i e a Rita comprou [o *Ensaio sobre a Cegueira*]_k, livros_{i+k} que leram em menos de uma semana.
 the João bought the *Ensaio sobre a Lucidez* and the Rita bought the *Ensaio sobre a Cegueira*, books that read:3PL in less of a week
 ‘João bought *Ensaio sobre a Cegueira* [Blindness] and Rita bought *Ensaio sobre a Lucidez* [Seeing], books which they read in less than a week.’

- (159) mas em compensação tinha *uma fé viva e fervorosa em Deus*, e era
 but in compensation had:3SG a faith intense and deep in God and was:3SG
 de *costumes irrepreensíveis, fé e costumes* que desgraçadamente faltam a muitos
 of customs irreproachable faith and customs that unfortunately lack to many
 dos que têm hoje aquela primeira crença.
 of.the that have today that former belief
 ‘but in compensation she had an intense and deep faith in God, and was (a person) of irreproachable customs, faith and customs that, unfortunately, many of the (ones) who have that former belief lack.’
 (*Corpus do Português* - 1 18:Távora:Cabeleira)

Similar observations hold for semi-free appositive constructions. Although there are some constraints on the light heads that can refer to split antecedents, this construction is syntactically possible, as shown in (160), also from Modern Portuguese. Here the light head *eles* ‘they’ refers to the discontinuous noun phrases *Edmilson ... Domingos*.

- (160) Haverá alguma injustiça quando se fala de *Edmilson*, pelo menos a avaliar
 will.have some injustice when SE.CL talk of *Edmilson* by.the least A evaluating
 pelos números, que jogam a seu favor: disputou até hoje 71 jogos na I,
 by.the numbers that play in his favor disputed:3SG until today 71 matches in.the first
 Divisão, tendo já marcado 31 golos, à média de 0,43 por partida,
 League having already scored 31 goals to.the average of 0,43 per match
 precisamente a mesma de *Domingos*, *eles* que devem ser os jogadores em actividade
 precisely the same of *Domingos* they that should be the players in activity
 com melhor média.
 with better average
 ‘There can be some injustice when people talk about *Edmilson*, at least evaluating by the numbers, which play in his favor: he disputed until now 71 matches in the Premier League, having already scored 31 goals,

on an average of 0, 43 per match, precisely the same (average) of Domingos, they who should be the players in activity (= still playing) with better average.’ (Corpus CETEMPúblico v1.7)

Finally, it is to be noted that a simple apposition may take a discontinuous antecedent, too; see the Modern Portuguese examples in (161) and (162):

- (161) Ontei almocei com o Rui e jantei com o Pedro, dois amigos
 yesterday had.lunch.1SG with the Rui and had.dinner. 1SG with the Pedro two friends
 do peito.
 of.the chest
 ‘Yesterday I had lunch with Rui and I had dinner with Pedro, two bosom friends.’

- (162) Victor Mendes era do PC e agora candidata-se pelo BE, ambos partidos da
 Victor Mendes was of.the PC and now run.SE.CL on.the BE both parties of.the
 oposição.
 opposition
 ‘Victor Mendes belonged to the PC [a political party] and now runs on the BE [a political party], both opposition parties.’

In sum, all appositive constructions exhibit the possibility of taking a split antecedent. If they do, they are in an extraposed position.

7.8 *Categorial freedom of the antecedent*

Now let us have a look at the syntactic category of the antecedent. As already mentioned in Section 2.2, the antecedent of an appositive relative clause need not be nominal. This can be confirmed for Modern Portuguese; see (163), for instance:

- (163) a. Ele esconde o dinheiro *debaixo do colchão*, que é um sítio pouco seguro.
 he hides the money under of.the mattress that is a place little safe
 ‘He hides the money under the mattress, which is not a very safe place.’ [PP]
 b. O João *faltou à reunião*, que era o que eu devia ter feito.
 the João missed.to.the meeting that was the that I should have done
 ‘João missed the meeting, which was what I should have done.’ [VP]

What we will do in this section is to show that the other appositive constructions exhibit the same flexibility. Again, this is expected if they have the same external syntax.

As for appositive constructions with an additional internal head, we already encountered the possibility of a clausal antecedent in (28), (29) and (40), in English, Dutch, and Old Portuguese, respectively. An example from Dutch with an adjectival antecedent is (164):

- (164) Zij noemde hem *zo gek als een deur*, welke kwalificatie hij haar niet in dank afnam.
 she called him so crazy as a door which designation he her not in thanks accepted
 ‘She called him as mad as a hatter, for which designation he did not thank her.’

Non-nominal antecedents are also possible in appositive constructions with an additional external head. Examples from Modern Portuguese are (165) and (166):

- (165) Os moradores ficam cá fora desde o nascer do dia até à *noite*, altura
 the occupants stay here outside since the dawn of.the day until at.the night time
 em que por fim se recolhem às suas cavernas.
 in that by end SE.CL retire:3PL to.the their caves [PP]
 ‘The occupants stay outside from early morning until (late) at night, in which time they retire into their caves.’ (Goethe, *Viagem a Itália*, Lisboa: Relógio d’Água, p. 240, translation ours)

- (166) O João não respondeu, atitude que surpreendeu todos os presentes.
 the João not answered attitude that surprised all the present [IP]
 ‘João did not answer, (an) attitude that surprised all the (people) present.’

A relevant semi-free appositive construction is (167):

- (167) Consegui *plantar uma árvore, escrever um livro e ter um filho*, aquilo com
 managed.1SG plant a tree write a book and have a son, that with
 que todos os homens sonham.
 that all the men dream [VP]
 ‘I managed to plant a tree, write a book and have a son, the things about which all men dream.’

In Modern Portuguese, there are restrictions with respect to the light head in such constructions. Only invariable demonstratives like *aquilo* can be used (contrary to the situation in semi-appositive constructions with *nominal* antecedents). For clausal antecedents, it appears that we can also use the definite article *o*:

- (168) *O meu patrão propôs-me um aumento, o que me deixou muito animada.*
 the my boss proposed.to.me.CL a rise the that me.CL left very excited
 ‘My boss proposed me a rise, which got me very excited.’

However, there is evidence suggesting that in this particular configuration the sequence *o que* ‘the that’ has been reanalyzed as a relative pronoun (cf. Brito and Duarte 2003: 675). If so, (168) does not involve a semi-free appositive construction, but an ‘ordinary’ appositive relative construction with a clausal antecedent. Proof can be obtained from pied piping; see (169), adapted from Mória (1992: 14):

- (169) *O director propôs que a empresa encetasse uma nova campanha publicitária,*
 the director proposed that the company started a new campaign advertising
 {com o que, *o com que} todos concordaram.
 with the that the with that all agreed
 ‘The director proposed that the company (should) start a new advertising campaign, with which all agreed.’

The preposition *com* ‘with’ obligatorily precedes the complex *o que*; therefore, *o* cannot be an external determiner.

Finally, let us turn to appositional constructions. These, too, typically involve a nominal antecedent, but that does not exhaust the possibilities. Quirk et al. (1985: 1303) speak of *weak appositions* in case the antecedent and the apposition belong to different syntactic categories. Some examples from Modern Portuguese and English are provided in (170) and (171):

- (170) a. *Escondi o dinheiro debaixo do colchão, um sítio muito pouco seguro.*
 hid.1SG the money under of.the mattress a place very little safe
 ‘I hid the money under the mattress, not a very safe place.’
 b. *Em Angola já se calaram as armas, sinal de paz.*
 In Angola already SE.CL shut the weapons sign of peace
 ‘In Angola the guns have already been shut laid down, a signal of peace.’
- (171) a. [...] and the union will be not only irrelevant but “contradictory” if α , β differ in value for some feature, the normal case.
 b. This simple and natural reinterpretation of Move α [...] allows us to eliminate the complexities of interpretation (20c) of Last Resort entirely, a welcome outcome.
 (Chomsky, Noam. 1995. The Minimalist Program. Cambridge, MA: MIT Press, 244, 266-7)

In short, all five appositive construction types can have non-nominal antecedents. This generalization is consistent with our formal analysis.

8 Conclusion

On the basis of data from a number of Romance, Germanic, and Slavic languages, with some emphasis on Portuguese, we argued that a wide range of appositive constructions can be derived from a similar combination of structural ingredients. Differences are due to the particular choice of which elements remain implicit and which ones are actually spelled out, and where. We discussed in some detail the appositive construction with an additional internal head NP, the appositive construction with an additional external head NP, the semi-free relative appositive construction, regular appositional constructions, and of course the ordinary appositive relative clause. The properties of these construction types provide evidence for both the raising analysis of relative clauses and the coordination approach to appositive constructions. Specifically, our proposal consists of two related main parts, one concerning the ‘external’ syntax of appositive constructions, and one concerning the ‘internal’ syntax. As for the

external part, we argued that all appositive constructions involve structural coordination of the appositive material to the antecedent or anchor. The relationship between the two conjuncts encodes parenthetical specification. In this sense, all appositive constructions are (complex) specificational appositions. As for the internal part, we argued that almost all appositive types (including attributive appositions, but excluding simple specificational appositions) involve a full restrictive relative clause construction, hence a DP including a CP, in which raising takes place. In this way, we can maintain that relativization is always the same; only the context in which it applies may be different – particularly, this context can be appositive by means of specifying coordination.

The appositive construction with an *additional internal head* and the appositive construction with an *additional external head* involve the same elements, but in different structural positions: in the former the head NP is spelled out in the complement position of the relative determiner D_{rel} , whereas in the latter the head NP is spelled out in a higher position, not c-commanded by D_{rel} . This is corroborated by the distribution of internal and external Case over the elements involved, which we studied in some detail, and by pied piping facts. It is also interesting that the existence of the head internal and the head external construction provides additional evidence for two essential movement steps independently proposed for the raising analysis of restrictive relative clauses: (i) the A-bar movement of DP_{rel} (containing the operator and the head NP) to the CP domain, and (ii) the extraction of the head NP out of the complement position of D_{rel} . The *semi-free* appositive construction can be regarded as a particular instance of the appositive construction with an additional external head, in which the additional material is a light element such as a demonstrative, an article, or a personal pronoun. Regular *appositional* constructions must be divided into two types, the attributive and the identificational/specificational one. The former is a more complex form of the latter: like an appositive relative clause, it involves a full restrictive relative construction in coordination to the anchor, where now the clausal structure is implicit and inherently predicational.

In some detail, we compared several empirical properties of the various appositive constructions, including pied piping, stacking, ordering effects, extraposition, split antecedents, and non-nominal antecedents. It is no coincidence, we think, that in the large majority of cases all appositive construction types behave similarly. Such generalizations are expected under an overarching coordination approach that accounts for the external syntax, leaving more subtle differences to choices concerning the internal syntax.

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