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RESEARCH

More appositives in heaven and earth than are dreamt of in your Linguistics

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In this paper I lay out a proposal for a typology of appositive relative clauses. By studying the characteristics of appositive relative clauses in five languages (Mandarin Chinese, Japanese, French, Italian and English), I identify three types of appositive relative clauses: non-integrated, semi-integrated and (fully)-integrated. The empirical investigation leads to the following findings:

1. Mandarin Chinese and Japanese appositive relative clauses belong to the class of fully integrated appositives;
2. English appositive relative clauses are diametrically different from the fully integrated ones. I classify them as non-integrated appositives;
3. Italian and French have two types of appositives: semi-integrated and non-integrated;
4. Reduced relative clauses can also be appositive: if pre-nominal, they are fully integrated; if post nominal, they are semi-integrated.

The empirical data is accounted for by a proposal that is based on the following elements:

1. the syntax of non-integrated and semi-integrated appositive relative clauses involves a CommaP projection and/or a ForceP projection; fully integrated appositives lack both of these projections;
2. the non-integrated appositives' relative pronoun is E-type;
3. the syntax of prenominal appositive relative clauses prevents them from licensing an overt relative pronoun, and therefore an E-type pronoun;
4. the CommaP triggers the intonational break at PF and, following Koev (2013) in spirit, it introduces a variable for the content of the constituents in its scope, thereby preventing such constituents from being bound from operators and quantifiers in the host clause.

The empirical data analyzed and the account proposed leave us with an interesting fine-grained typology of appositives, thereby confirming a trend in the research on appositives pointing to the conclusion that we are dealing with a more variegated set of constructions than previously thought.

Keywords: appositive relative clauses; reduced relative clauses; E-type pronoun; typology; syntax; semantics

1 Introduction

A well-known distinction in the literature on relative clauses is the one between restrictive and appositive (or nonrestrictive) relative clauses (see De Vries 2002; 2006 for an overview). These two types of relative clauses are characterized by specific syntactic and semantics features, the most important of which states that while a restrictive relative

clause further "restricts" the reference of the nominal it modifies, an appositive relative clause does not, as it simply adds information about that nominal:[1]

(1) the man that I like (restrictive)
(2) Jeff, who I like (appositive)

In (1) above, the relative clause *that I like* further restricts the reference of the nominal *the man*; in (2), the appositive relative clause specifies that I like Jeff, but the content of the relative is not necessary in order to identify the individual referred to by the proper name, hence the appositive provides additional information. In this paper, I use the term appositive relative clause to refer to those relative clauses that do not semantically restrict the reference of the head that they modify, or in other words, to those relative clauses that can modify proper names.

A recent focus on these constructions has brought to light the fact that we are not facing a homogeneous set. For example, Potts (2002) distinguishes between what he calls *as*-parentheticals and *which*-appositives:

(3) Adapted from Potts (2002)
  a. Americans should get cheap oil, as the whole world knows.
  b. Americans should get cheap oil, which the whole world knows.

Potts (2005) brings those two types of appositives under the same umbrella when he claims that, together with other constructions, they trigger conventional implicatures. Specifically, he studies both supplements and expressives. And among the supplemental expressions, he includes *as*-parentheticals, appositive relative clauses, appositive nominals as well as parenthetical adverbs:

(4)
  a. Ames was, as the press reported, a successful spy.
  b. Ames, who stole from the FBI, is now behind bars.
  c. Ames, the former spy, is now behind bars.
  d. Cleverly, Beck started his descent.
  e. Luckily, Beck survived the descent.

Stowell (2005) brings to our attention the following construction, which he calls a parenthetical restrictive relative:

(5) Stowell (2005)
The guy next door (that I sold my car to) was arrested today.

Finally, Cinque (2006; 2008), on the basis of evidence from Italian, distinguishes between "integrated" and "non-integrated" appositive relative clauses.

Against this background, my goal in this paper is to lay out a proposal for a typology of appositive relative clauses, or ARCs. I identify three types of appositive relative clauses: non-integrated, semi-integrated and (fully)-integrated and account for their behavior by introducing two parameters (one linked to the presence or absence of the intonational break and one linked to the relative pronoun).

The paper is structured as follows: in Section 2 I lay out the empirical domain that I will use for my investigation. In Sections 2.1, 2.2, 2.3 and 2.4, I analyze how the

[1] All examples for which a source is not identified have been elicited by consulting native speakers, or, in the case of Italian, they have been judged by the author herself.

languages under investigation behave with respect to the following four properties: illocutionary independence, the availability of split antecedents, the categorial nature of the antecedent, and binding. In Section 3 I propose an account to explain the behavior observed in the previous sections. Sections 4 and 5 are dedicated to Japanese and French, respectively. In Section 6 I discuss reduced relative clauses, by investigating whether they can be appositives or not, and what type of appositives they are. Section 7 concludes the paper.

2 The empirical domain

I investigate three sets of languages, whose appositive relative clauses are distinguished by whether they are prenominal or not, whether they are introduced by a relative pronoun or not and whether or not there is an intonational break between the appositive and the phrase it modifies.

In the first set of languages, the appositive relative is prenominal, there is no relative pronoun and the relative clause is not set off intonationally from the matrix sentence that contains it. Two languages where appositive relatives behave this way are Chinese and Japanese, illustrated respectively in (6) and (7):

(6) *Chinese* (adapted from Lin 2003)
[$_{CP}$ Xianglai jiu bu ai du shu de] Xiaoming xianzai ye kaishi du
always then not love study book MOD Xiaoming now also begin study
qi shu lai le.
begin book come ASP
'Xiaoming, who does not love to study, now also has begun to study.'

(7) *Japanese* (adapted from Yuasa 2005)
[$_{CP}$ Shuuron-o kaite i-ru Iwasaki-san]-ga sono
master's.thesis-ACC write be-PRES Iwasaki-HON-NOM the
gakkai-de happyo shi-ta.
conference-at presentation do-PAST
'Mr. Iwasaki, who is writing a master's thesis, presented a paper at the conference.'

The second set of languages is characterized by appositive relative clauses that are set off intonationally from the matrix. Within this set, it is possible to further distinguish those relative clauses that are introduced by the complementizer (what Cinque 2006; 2008 calls the "integrated" appositive relative clauses), from the ones that are introduced by a relative pronoun (these are called by Cinque 2006; 2008 the "non-integrated" appositive relative clauses). Among the languages that are characterized by these types of appositive relatives, we find Italian and French (Cinque 1982; 2008). The following two examples illustrate appositive relative clauses introduced by the complementizer *che* in Italian (example (8)) and by the complementizer *que* in French (example (9)):

(8) *Italian* (adapted from Cinque 2008)
Inviterò anche Giorgio, [$_{CP}$ che abita qui vicino].
(I) will.invite also Giorgio that lives here close
'I will invite also Giorgio, who lives nearby.'

(9) *French* (adapted from Cinque 1982)
Ma soeur, [$_{CP}$ que le magistrat avait convoquée pour le lendemain], …
my sister that the magistrate had summoned for the next.day
'My sister, who the magistrate had summoned for the next day, …'

The example in (10) shows an appositive relative clause introduced by the relative pronoun *il quale* in Italian, and the example in (11) shows an appositive relative clause introduced by the relative pronoun *laquelle* in French:[2]

(10) *Italian* (adapted from Cinque 2008)
Inviterò anche Giorgio, [$_{CP}$ il quale abita qui vicino].
(I) will.invite also Giorgio, the which lives here close
'I will invite also Giorgio, who lives nearby.'

(11) *French* (adapted from Cinque 1982)
Ma soeur, [$_{CP}$ laquelle le magistrat avait convoquée pour le lendemain], …
my sister the.which the magistrate had summoned for the next.day
'My sister, who the magistrate had summoned for the next day, …'

The third set of languages is represented by English and Romanian (Cinque 2008). In these languages, appositive relatives need to be introduced by a relative pronoun (*modulo* the different type discussed by Stowell 2005) and to be set off intonationally from the matrix:

(12) *Romanian* (Grosu 2013)
Ion, [$_{CP}$ care are trei copii], e fratele meu.
Ion who has three children is brother-the my
'Ion, who has three children, is my brother.'

(13) Adapted from Potts (2005)
Ames, [$_{CP}$ who was a successful spy], is now behind bars.

Appositives in these three sets of languages behave in a substantially different way with respect to, among other phenomena: illocutionary independence from the matrix;[3] the ability to take split antecedents; the categorial nature of the antecedent; and binding phenomena.

2.1 Illocutionary independence

English and Romanian allow appositive relative clauses to be illocutionary independent from the matrix:[4]

[2] Notice that I assume here, following Kayne (1976) and Cinque (1982) that *que* in French and *che* in Italian are complementizers, and not (weak) relative pronouns. But this assumption is not crucial for my proposal. For a relevant discussion on this topic, see Sportiche (2011).

[3] A reviewer suggests that it would be useful to also test whether appositives show any other root phenomena of the type identified in Heycock (2005). To a certain extent, this has been done already by De Vries (2012). According to his investigation, ARCs show semantic root phenomena, like speaker orientation, illocutionary force, the possibility of certain adverbs and interjections to indicate the speaker's attitude, as well as scopal independence. But ARCs do not show typical structural root phenomena, such as verb second, topicalization, and dislocation. In my opinion, this issue is worth investigating along the lines of Haegeman (2012). In other words, given the detailed structure of the Left Periphery we now assume since Rizzi (1997), the following questions deserve investigation:

(i) How much of the full-fledged Left Periphery structure is instantiated in ARCs?
(ii) Are there any Left Periphery differences among the types of ARCs proposed in this paper?
(iii) Are there any cross-linguistic differences? Or in other words, can the results of De Vries (2012) be extended to other languages?

I will answer questions (i) and (ii) in Section 3 of the paper.

[4] A reviewer points out that example (15) – and later in the paper examples (88a-b) – are illustrations of a different type of appositive relative clauses, precisely of a continuative relative clause. According to Loock (2007), on the basis of their discourse function, we can distinguish three types of ARCs: continuative ARCs, relevance ARCs, and subjectivity ARCs. Upon investigating their properties, as depicted in Loock (2007), it is clear that these three types of ARCs are all non-integrated ARCs, in a sense that I will make clear later in the paper. In other words, their classification as continuative vs. relevance vs. subjectivity ARCs has no consequence for my proposal. Such classification is nevertheless a useful taxonomy based on pragmatic factors, and additional evidence of the rich variety of ARCs.

(14) Cinque (2006)
There is then our father, by whom will we ever be forgiven for what we have done?

(15) Huddleston and Pullum (2002)
It may clear up, in which case would you mind hanging the washing out?

(16) Andrews (1975)
I want to talk to that man, who who the hell is he anyway?

(17) *Romanian* (adapted from Cinque 2008)
Ion, [$_{CP}$ pe care nu uita să-l inviti la nunta!],
Ion ACC which not forget.IMP SUBJ-him invite.2SG at wedding
te-a cautat ieri.
you-has sought yesterday
'Ion, who do not forget to invite to the wedding!, looked for you yesterday.'

In Chinese, this is not allowed; the appositive relative clause cannot be an interrogative clause:

(18) *Chinese*
a. *[Hui bu hui yuanliang women de] Zhangsan juedui bu hui zheme zuo.
able not able forgive us MOD Zhangsan absolute not able this.way do
b. *[Hui yuanliang women ma de] Zhangsan juedui bu hui zheme zuo.
able forgive us Q MOD Zhangsan absolute not able this.way do
Int. 'Zhangsan, who will he ever forgive us?, would have never behaved this way.'

In the previous example, two different strategies for question-formation have been used. In (18a), the auxiliary is followed by its negated copy, and in (18b), the question particle *ma* is added. None of the examples result in grammaticality. Notice though that it may be misleading to take the examples in (18) to show that a relative clause cannot be interrogative in Mandarin Chinese. This is because final particles such as *ma* (in example (18b)) are a root phenomenon, and are never allowed in embedded clauses: in other words yes-no questions with *ma* in Mandarin Chinese are restricted to matrix clauses. As for A-not-A questions (the form used in (18a)), we know that they appear both in direct and indirect questions, as shown in the following examples from Huang, Li and Li (2009):

(19) *Chinese*
Zhangsan bu xiaode ni lai bu lai.
Zhangsan not know you come not come
'Zhangsan does not know whether you will come or not.'

(20) *Chinese*
Ni juede ta hui bu hui lai ne?
you think he can not can come Q
'Do you think he will come or not?'

But Huang, Li and Li (2009) report that if the A-not-A is embedded in an island such as a relative clause, the direct question reading is unavailable:

(21) *Chinese*

*Ni bijiao xihuan lai bu lai de na-yi ge ren (ne)?
you more like come not come MOD that-one CL person (Q)
Int.: 'Do you prefer the person that will come or the one who will not?'

The sentence in (21) is ungrammatical because in order to get the wide scope reading, the A-not-A form should undergo movement at LF, and in (21) this is blocked by the ECP. In order to embed the A-not-A form inside an island, Huang, Li and Li (2009) claim that an indirect-question interpretation is required, as when the island clauses are selected by appropriate verbs or nouns:

(22) *Chinese*

[Ta lai bu lai] yidiar dou mei guanxi (*ne?).
he come not come at.all all no matter Q
'Whether s/he comes or not does not matter at all.'

(23) *Chinese*

Wo xiang taolun [ta lai bu lai de wenti] (*ne?).
I want discuss he come not come MOD question Q
'I would like to discuss the question of whether he will come or not.'

The problem with our example in (18a), repeated below, is that the A-not-A form cannot take wide scope, and that it is not selected by an appropriate verb or noun:

(18) *Chinese*

a. *[Hui bu hui yuanliang women de] Zhangsan juedui bu hui
able not able forgive us MOD Zhangsan absolute not able
zheme zuo.
this.way do

If instead we generate a wh-question by embedding a wh-word inside appositive relative clauses in Chinese, we either get an indefinite reading or the sentence results in ungrammaticality. Here is an example where the wh-word is inside the relative clause and it can only have the interpretation of an indefinite:[5]

(24) *Chinese*

Ni na-ge [shenme shihou zou-diu] de baba juedui bu hui zheme zuo.
you that-CL what time walk-lost MOD father absolute not able this.way do
'That father of yours, who got lost sometime ago, would never do something like this.'

In the following two examples, the addition of the wh-word inside the relative clause renders the sentence ungrammatical:

(25) *Chinese*

*Wo xuan le dedao le duoshao piao de Zhangsan.
I choose ASP obtain ASP how.many tickets MOD Zhangsan
Int.: 'I chose Zhangsan, who received how many votes?'

[5] Dylan Tsai (p.c.) observes that it is unlikely that the wh-expression involved in (24) is an indefinite, since there is no intentional context to license polarity interpretations. Rather, the construction in (24) may be related to the so-called "*wh*-placeholder" construal in Chinese, which typically appears within the scope of a definite determiner such as *nage* in (i):

(i) Na-ge shei dique lai guo zheli.
that-CL who indeed come ASP here
'That whatshisname indeed came here before.'

(26) *Chinese*
*Wo xihuan qu nali de Zhangsan.
I like go where MOD Zhangsan
Int.: 'I like Zhangsan, who went where?'

The examples that more strongly show that an appositive relative clause in Mandarin Chinese cannot be interrogative are the ones in (24) through (26). We know that wh-words can have scope over the matrix clause or only over the embedded clause, as the following examples from Huang, Li and Li (2009) illustrate:

(27) *Chinese*
Zhangsan yiwei Lisi mai le shenme?
Zhangsan thinks Lisi buy ASP what
'What does Zhangsan think Lisi bought?'

(28) *Chinese*
Zhangsan xiang-zhidao Lisi mai le shenme.
Zhangsan wonder Lisi buy ASP what
'Zhangsan wonders what Lisi bought.'

If an appositive relative clause in Mandarin Chinese could be interpreted as interrogative, then in the sentences (24) through (26) the wh-word should be able to take scope over the relative clause, but we saw that this is not possible. I therefore conclude that the evidence here provided shows that appositive relative clauses in Mandarin Chinese cannot be interrogatives, differing therefore in a crucial way from appositives in Romanian and English (Cinque 2008).[6]

Italian behaves differently depending on whether the appositive is introduced by the complementizer or by a relative pronoun. If introduced by the complementizer, Italian appositive relatives behave like the Chinese ones in not allowing an illocution that is different from the one of the matrix. If introduced by the relative pronoun, they behave like appositive relatives in English and Romanian, allowing the appositive to have an illocution that is different from the one of the matrix clause:

(29) *Italian* (Cinque 2006)
*Tuo padre, [che potrà mai perdonarci per quello che abbiamo fatto?],
your father that will-be-able ever forgive-us for that that have done
non si sarebbe mai comportato così.
not himself would-be ever behaved this.way

(30) *Italian* (Cinque 2006)
Tuo padre, [il quale potrà mai perdonarci per quello che abbiamo
your father the which will-be-able ever forgive-us for that that have
fatto?], non si sarebbe mai comportato così.
done not himself would-be ever behaved this.way
'Your father, by whom will we ever be forgiven for what we have done?, would have never behaved like that.'

2.2 Split antecedents

In English and Romanian, appositive relatives allow split antecedents:

[6] A reviewer wonders whether the prenominal position of the relative clause may play a role in the ungrammaticality of interrogative relative clauses in Mandarin Chinese. I exclude that to be the case, given the example in (23), where the indirect question is grammatical, and it precedes the noun it modifies, *wenti* 'question'.

(31) Arnold (2004)
Kim bought Sandy a book$_i$, and Sam bought her a pen$_j$, [which$_{i+j}$ they gave her for Christmas.]

(32) Arnold (2005)
The Queen serves muffins$_i$, and Prince Charles serves scones$_j$, [which$_{i+j}$/*that they buy at Harrods.]

(33) *Romanian* (Cinque 2008)
?Dacă Ion$_i$ n-o mai iubeşte pe Maria$_j$, [care copii$_{i+j}$ de altfel nu
if Ion not-her longer love ACC Maria which kids moreover not
s-au iubit niciodată cu adevărat],…
REC-have loved never with truth
'If Ion is no longer in love with Maria, which young people in any event never really loved each other,…'

In Chinese, this is not possible:

(34) *Chinese*
*[Op$_{i+j}$ dou bu xihuan Xiaoyu de] Zhangsan$_i$ jinlai le, Lisi$_j$ zou le.
all not like Xiaoyu MOD Zhangsan enter ASP Lisi exit ASP
Int. 'Zhangsan$_i$ entered, Lisi$_j$ left, neither of whom$_{i+j}$ like Xiaoyu.'

Notice that in Chinese it is perfectly fine to allow split antecedents when the clause containing the pronoun is not a relative clause, as in the following example:

(35) *Chinese*
Zhangsan$_i$ jinlai le, Lisi$_j$ zou le. Tamen$_{i+j}$ dou bu xihuan Xiaoyu.
Zhangsan enter ASP Lisi left ASP they both not like Xiaoyu
'Zhangsan entered, Lisi left. Neither of them like Xiaoyu.'

It is simply impossible to allow split antecedents with relative clauses, even if they are appositive. So, in (34), the operator inside the relative clause can only refer to the individual denoted by the "head" of the relative, that is, Zhangsan, and it cannot in addition refer to the individual denoted by the subject of the second sentence, that is, Lisi.

It is important to observe that there can be different types of split antecedent constructions. Take the following Italian example from Cinque (2008). In this example, the two antecedents have different theta roles:

(36) *Italian*
Se Carlo$_i$ non amava più Anna$_j$, i quali$_{i+j}$ d'altra parte non si
if Carlo not love.PAST any-longer Anna the which of other side not REC
erano mai voluti veramente bene, una ragione c'era.
were ever wanted really well a reason there was
'If Carlo was no longer in love with Anna, who at any rate never really loved each other, there was a reason.'

Relative clauses with split antecedents were first noticed by Ross and Perlmutter (1970). The following examples are from Zhang (2007):

(37) a. Mary met a man$_i$ and John met a woman$_j$ who$_{i+j}$ knew each other$_{i+j}$ well.
b. A man$_i$ came in and a woman$_j$ left who$_{i+j}$ knew each other well.
c. The house has a room$_i$ and the shop has a cellar$_j$ which$_{i+j}$ are joined by a small underground passageway.

Zhang (2007) claims that the two antecedents of relative clauses with split antecedents are originally two conjuncts of a coordinate nominal. She proposes that each has undergone a sideward movement, involving a move from the original working site to a new one. The two nominals take part in the construction of a coordinate clausal complex. In the old working site, a complex nominal is constructed, in which the relative clause takes the remnant coordinate nominal as its antecedent. Finally, the complex nominal adjoins to the coordinate clausal complex. Crucially, the construction that Zhang (2007) studies has a number of restrictions, the most important of which is that the two antecedents need to share the same theta-role. More in general, in order for sentences with split antecedents to be grammatical, they have to be parallel, in a sense that I will not make precise here (for details, see Zhang 2007; Section 5). Del Gobbo (2010) cites the following as a potential example of split antecedents with an appositive relative clause in Mandarin Chinese:

(38) *Chinese*
Fenbie dou ai guo Xiaoyu de Zhangsan jiagei le Wangwu, Lisi
separately all love ASP Xiaoyu MOD Zhangsan marry ASP Wangwu Lisi
jiagei le Houliu.
marry ASP Houliu.
'Zhangsan$_i$ married Wangwu and Lisi$_j$ married Houliu who$_{i+j}$ both had loved Xiaoyu.'

Zhang's (2007) account could be applied to such sentences, but what is relevant for us here is that it is the other type of split antecedent relative that is not allowed in Mandarin Chinese. We have seen that in Italian it is grammatical for an appositive relative clause to have two split antecedents, even when they do not share the same theta-role (see example (36)). Under these conditions, similar examples in Mandarin Chinese turn out to be ungrammatical. Let me start with two sentences in a piece of discourse:

(39) *Chinese*
a. Ruguo Zhangsan bu ai Mali le, jiu yinggai you yi-ge liyou.
if Zhangsan not love Mary ASP then must have one-CL reason
'If Zhangsan doesn't love Mary any longer, there must have been a reason.'
b. Shishi-shang tamen conglai mei-you zhenzheng de ai guo duifang.
reality-on they ever not-have really MOD love ASP the.other
'At any rate, they never really loved each other.'

If we try to convey what is expressed by the two sentences in (39) using a single matrix sentence and a relative clause – as we did with the Italian example in (36) – the outcome is ungrammatical:

(40) *Chinese*
*Ruguo [conglai mei-you zhenzheng de ai guo duifang de] Zhangsan
if even not-have really MOD love ASP the.other MOD Zhangsan
bu ai Mali le, jiu yinggai you yi-ge liyou.
not love Mali ASP then must have one-CL reason

(41) *Chinese*
*Ruguo Zhangsan bu ai [conglai mei-you zhenzheng de ai guo
if Zhangsan not love ever not-have really MOD love ASP
duifang de] Mali le, jiu yinggai you yi-ge liyou.
the.other MOD Mary ASP then must have one-CL reason

The sentences in (40) and (41) above are ungrammatical, in the intended reading of 'If Zhangsan doesn't any longer love Mary, who at any rate never really loved each other, there must be a reason'. The ungrammaticality of the sentences in (40) and (41) shows that appositive relative clauses in Mandarin Chinese are not able to take split antecedents, when these do not share the same theta-role.

Italian again shows a split. Appositives introduced by the complementizer behave like the Chinese ones in not allowing split antecedents, while those introduced by the relative pronoun behave like the English and Romanian ones in allowing the pronoun inside the relative to pick up its reference from two antecedents:

(42) *Italian* (adapted from Cinque 2008)
*Se Carlo$_i$ non amava più Anna$_j$, [che$_{i+j}$ d'altra parte non si
if Carlo not loved any.longer Anna that of other side not each.other
erano mai voluti veramente bene], una ragione c'era.
were ever wanted really well a reason there was
'If Carlo was no longer in love with Anna, who at any rate never really loved each other, there was a reason.'

(43) *Italian* (adapted from Cinque 2008)
Se Carlo$_i$ non amava più Anna$_j$, [i quali$_{i+j}$ d'altra parte non
if Carlo not loved any.longer Anna the which of other side not
si erano mai voluti veramente bene], una ragione c'era.
each.other were ever wanted really well a reason there was
'If Carlo was no longer in love with Anna, who at any rate never really loved each other, there was a reason.'

2.3 The categorial nature of the antecedent

In English, appositives can modify a wide array of antecedents (CPs, APs, VPs, etc.).

(44) a. Demirdache (1991)
Mary was [$_{AP}$ intelligent], [$_{CP}$ which John never was].

b. Thompson (1971)
Joe [$_{VP}$ debated in high school], [$_{CP}$ which Chuck did too].

c. De Vries (2002)
They talked [$_{PP}$ from twelve to one o'clock], [$_{CP}$ which is a long time].

d. Adapted from Sells (1985a)
[$_{IP}$ Fairly hasn't arrived yet], [$_{CP}$ which bothers Green].

The same is true for Romanian, as illustrated by the following examples taken from Cinque (2007):

(45) a. *Romanian* (Nilsson 1969: 48)
In patruzeci şi nouă de lupte crâncene nu-şi pierduse niciodată
in forty and nine of fights cruel NEG-REFL lost never
sângele rece, salvase situaţia de multe ori, drept care fusese
cold blood saved situation of many times for which was
de atâtea ori lăudat, decorat, îmbrăţişat.
so many times praised decorated embraced
'In forty-nine cruel fights he never lost his cold blood, he had saved the situation many times, in virtue of which he had been praised, decorated, embraced.'

b. *Romanian* (Gheorghe 2004: 149)
Lelu le-a prezentat-o pe Geta, după care au mers în casă.
Lelu to.her-has introduced-her ACC Geta after which have gone in house
'Lelu introduced Geta to her, after which they went into the house.'

In Chinese, appositives can only modify nominals:

(46) *Chinese*
a. Zhangsan hen congming. Lisi conglai jiu bu congming.
Zhangsan very smart Lisi ever just not smart.
'Zhangsan is intelligent. Lisi never has been.'
b. *Zhangsan hen [$_{CP}$ Lisi conglai jiu bu de] [$_{AP}$ congming].
Zhangsan very Lisi ever just not MOD smart
Int.: 'Zhangsan is smart, which Lisi never was.'

(47) *Chinese*
a. Zhangsan zai gaozhong zuo guo bianlun. Lisi conglai meiyou zuo guo.
Zhangsan in high-school do ASP debate. Lisi ever not do ASP
'Zhangsan debated in high school, which Lisi never did.'
b. *Zhangsan [$_{CP}$ Lisi conglai meiyou zuo guo de] [$_{VP}$ zai gaozhong zuo bianlun]
Zhangsan Lisi ever not do ASP MOD in high-school do debate.

(48) *Chinese*
a. Wo [$_{PP}$ cong 1992 dao 1993] zai Beijing Yuyan Xueyuan xuexi Hanyu.
I from 1992 to 1993 in Beijing Language Institute study Chinese
Shijian tai duan le.
period too short ASP
'From 1992 till 1993 I studied Chinese at the Language Institute in Beijing. It was too short (a period of time).'
b. *Wo [$_{CP}$ tai duan le de] [$_{PP}$ cong 1992 dao 1993] zai Beijing Yuyan
I too short ASP MOD from 1992 to 1993 in Beijing Language
Xueyuan xuexi Hanyu.
Institute study Chinese

(49) *Chinese*
a. Zhangsan hai meiyou lai. Zhe-jian shi shi Lisi hen shengqi.
Zhangsan yet not arrived this-CL fact make Lisi very mad
'Zhangsan hasn't arrived yet. This bothers Lisi a lot.'
b. *[$_{CP}$ Shi Lisi hen shengqi de] [$_{CP}$ Zhangsan hai meiyou lai].
make Lisi very mad MOD Zhangsan yet not arrive

Italian again shows a split. The appositive relative clauses introduced by the complementizer behave like the ones in Chinese, that is, they can only modify nominals. On the contrary, those appositive relative clauses introduced by the relative pronoun behave like the ones in English: they can modify a vast array of antecedents:

(50) *Italian* (adapted from Cinque 1988)
a. [$_{IP}$ Carlo lavora troppo poco], [$_{CP}$ la qual cosa verrà certamente notata.]
Carlo works too little the which thing will.be certainly noticed
'Carlo works too little, which will certainly be noticed.'

b. [$_{IP}$ Carlo lavora troppo poco], *[$_{CP}$ che verrà certamente notato.]
Carlo works too little that will.be certainly noticed
'Carlo works too little, *that will certainly be noticed.'

(51) *Italian* (adapted from Cinque 2008)

a. Maria è [$_{AP}$ suscettibile], [$_{CP}$ la qual cosa sua sorella di certo non è.]
Mary is touchy the which thing her sister certainly not be
'Maria is touchy, which her sister certainly is not.'

b. Maria è [$_{AP}$ suscettibile], *[$_{CP}$ che sua sorella di certo non è.]
Mary is touchy that her sister certainly not be
Lit. 'Mary is touchy, that her sister surely is not.'

2.4 Binding

When we consider binding phenomena, the situation we have been delineating so far no longer holds. We would expect the Italian appositive relatives introduced by the complementizer to behave à la par with the Chinese ones, but this surprisingly does not happen. Binding of a pronoun inside the appositive by a quantified nominal in the matrix is not allowed in Italian, regardless of whether the appositive is introduced by the relative pronoun or by the complementizer. In other words, both types of appositives in Italian behave like appositives in English[7] and Romanian:[8,9]

[7] See De Vries (2002: 192–193) and De Vries (2007: 212) for more examples from English and Dutch.

[8] For more examples and additional discussion on appositives and quantification in general, I refer the reader to Del Gobbo (2003a; 2003b). Here I simply would like to add that the observation that binding inside an appositive is not grammatical goes back to Safir (1986), with the following pair of examples:

(i) a. *[Every Christian]$_i$ forgives John, who harms him$_i$. (=(54) in the text)
b. [Every Christian]$_i$ forgives a man who harms him$_i$.

Jackendoff (1977: 176) had also made the same observation:

(ii) a. [Everyone]$_i$ bough a suit that suited him$_i$.
b. *[Everyone]$_i$ bought a suit, which suited him$_i$.

There are exceptions to this pattern, as observed by Safir himself (1986: ft. 9) and Sells (1985b):

(iii) [Every Christian]$_i$ prays to God, who forgives him$_i$.

Sells (1985b) shows that these examples do not involve syntactic binding, but a type of discourse linking called "cospecification". Cospecification is only possible with certain operators in a continuative discourse, and when there is temporal or modal subordination. In the examples in the text where the quantified nominal cannot bind the pronoun inside the relative clause such conditions are not fullfilled.

[9] A reviewer is suggesting the following two as counterexamples to the claim that it is not possible to bind within appositives:

(i) Tutti gli studenti hanno perdonato Anna, che li ha aiutati molto.
all the students have forgiven Anna, that them has helped a lot
'All the students forgave Anna, who helped them a lot.'

(ii) Every student forgave Anna, who helped them a lot.

These two examples fall in the same category as the cospecification ones, i.e. they are examples of discourse anaphora. As a matter of fact, they can be transformed into pair of sentences in a piece of discourse, as follows:

(iii) Tutti gli studenti hanno perdonato Anna. Lei li ha aiutati molto.
all the students have forgiven Anna she them has helped a lot
'All the students forgave Anna. She helped them a lot.'

(iv) Every student forgave Anna. She helped them a lot.

Compare (iv) with the following example, which is ungrammatical with the reading where *him* is bound by *every student*:

(v) *Every student forgave Anna. She helped him a lot.

(52) *[Nessuno studente]$_i$ può dimenticare la professoressa Niu, [che/la quale
no student can forget the professor Niu that/the which
tanto lo$_i$ ha aiutato].
so-much him has helped

(53) *[Ogni studente]$_i$ detesta la professoressa Rossi, [che/la quale
every student hates the professor Rossi that/the which
lo$_i$ rimprovera sempre].
him scolds always

(54) Safir (1986)
*[Every Christian]$_i$ forgives John, who harms him$_i$.

(55) *[Fiecare student]$_i$ şi-a cumpărat un costum,
every student REFL.DAT.3-has bought a suit,
[care îi$_i$ plăcea în mod special].
which Cl.DAT.3SG pleased in way special

In Chinese, instead, binding from the matrix into the appositive is allowed:[10]

(56) *Chinese*
[Mei yi-ge xuesheng]$_i$ dou wang-bu-liao na yi-ge [bangzhu guo ta$_i$
every one-CL student all forget-not-can that one-CL help ASP him
de] Niu laoshi.
MOD Niu prof
*'No student can forget Prof. Niu, who helped him.'

(57) *Chinese*
[Mei yi-ge xuesheng]$_i$ dou yuanliang na yige [cengjing shanghai
every one-CL student all forgives that one-CL formerly insult
guo ta$_i$ de] Lisi.
ASP him MOD Lisi
*'Every student forgives Lisi, who previously insulted him.'

(58) *Chinese*
[Mei yi-ge xuesheng]$_i$ dou xihuan [shi ta$_i$ daoshi de] Huang laoshi.
every one-CL student all like be he advisor MOD Huang professor
*'Every student likes Prof. Huang, who is his advisor.'

To summarize, we find that Chinese appositive relative clauses cannot be illocutionary independent of the matrix clause, they cannot have split antecedents, they can only modify nominals (type NP or DP), and they do allow a quantified nominal in the matrix to bind a pronoun in the appositive. I classify them as "integrated" appositive relative clauses, following the terminology established in Cinque (2006; 2008). In Italian, appositive relative clauses introduced by the complementizer differ minimally from the "integrated" appositives of Chinese, insofar as they do not allow binding. Because in all other respects they do behave like the "integrated" ones, I classify them as "semi-integrated" appositive

The example in (v) is ungrammatical because *every student* cannot bind *him*, since they are in two different sentences. The sentences in (i) and (ii), and their discourse counterparts in (iii) and (iv), are grammatical because the plural pronouns do not need to be bound, they can instead refer back to *tutti gli studenti,* 'all the students' and *every student* via discourse anaphora.

[10] For additional examples from Mandarin Chinese, I refer the reader to Del Gobbo (2001; 2002; 2003a; 2004; 2005).

	illocutionary independence	split antecedents	categorial nature of antecedent	binding
Chinese (integrated)	no	no	nominal	yes
Italian (semi-integrated)	no	no	nominal	no
Italian (non-integrated)	yes	yes	CP, AP, VP, etc.	no
English (non-integrated)	yes	yes	CP, AP, VP, etc.	no

Table 1: Classification of Appositive Relative Clauses.

relative clauses. The other type of appositive relatives in Italian, the one that is introduced by the relative pronoun, behaves diametrically different from the "integrated" type: it does allow illocutionary independence, it can have split antecedents, it can modify "heads" of different categories, and finally, it does not allow binding. Along with the English and Romanian appositive relative clauses, it belongs to the class of the "non-integrated" appositives (Cinque 2006; 2008). The empirical facts are summarized in Table 1:

I conclude that there are more types of appositives than originally thought by Cinque (2006; 2008). More specifically, I emphasize that the binding facts force us to take into consideration establishing a third category of appositives, what I have called the "semi-integrated" one. In the following section, I provide an account to explain the variation just observed.

3 Proposal

My proposal is based on three core elements. First, I assume that the syntax of non-integrated appositive relative clauses (henceforth, ARCs) involves a CommaP projection and a ForceP projection (as in Koev 2013; Griffiths 2015), while semi-integrated ARCs contain only a CommaP. Second, I provide a semantics for ARCs crucially built on the idea that the relative pronoun is E-type (Sells 1985a; b; Demirdache 1991; Del Gobbo 2003a, and following work).[11] Finally, I claim that it is the syntax of prenominal relative clauses that prevents them from licensing overt relative pronouns.

I propose two parameters to account for the variation described in Section 2 of the paper. The first parameter takes the role of the intonational break in ARCs very seriously, and in this I am very close to Potts' (2005) approach:

(59) *Intonational break*
If there is an intonational break, the ARC projects a CommaP.

The second parameter focuses on the presence versus absence of the relative pronoun:

(60) *Presence of the relative pronoun in ARC*
If the pronoun is present, it is an E-type one and the ARC is a non-integrated one. If the pronoun is absent, the ARC is either integrated or semi-integrated.

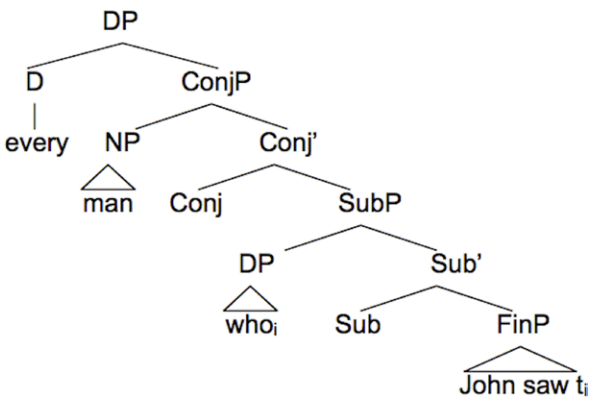
Let's now focus more on the details of the proposal, by spelling out how each component works and how the whole system accounts for the empirical variation we observe.

For the syntax of post-nominal restrictive relative clauses, I follow Rebushi's (2005) proposal. Rebushi (2005) hypothesizes that since nominal modification is property conjunction at the semantic level, maybe it is its counterpart (some type of coordination) at the syntactic level too. He therefore proposes that a functional projection ConjunctionP

[11] Griffiths (2015) claims that appositive relative pronouns are referential. For an explanation as for why appositive relative pronouns need to be E-type and not just referential, see footnotes 14, 15 and references cited there.

mediates between the nominal modified by the restrictive relative clause and the relative clause itself, as illustrated in the following tree diagram:[12]

(61)



For appositive relative clauses, I propose that instead of a Conjunction Phrase (ConjP), there is a Comma Projection that mediates between the "head" of the relative and the relative itself. Notice that the category Comma is also contemplated by Potts (2005) in his system, but here, differently from what he proposes, I claim that the intonational break is a terminal node that projects its own maximal category. This is very much in accordance with de Vries' (2007) notion of Specifying Coordination, that is, &:P. Notice that both in the case of the restrictive relative clauses and in the case of the appositive relative clauses, the "head" of the relative clause and the relative itself are not of the same syntactic type. Following de Vries (2007), we need to assume that we are dealing with an instance of unbalanced coordinate structure, whose existence needs to be assumed for independent empirical reasons:

(62) Progovac (1998)
You can depend on [$_{DP}$ my assistant] and [$_{CP}$ that he will be on time].

Moreover there is the question of the external visibility of the Conjunction Phrase. Given that no lexical head subcategorizes for a sheer ConjP, the complement phrase must also be identified as a DP, an NP, or a PP. We therefore need a mechanism allowing the categorial features of one of the conjuncts to percolate to the Conjunction's maximal projection. Rebushi (2005) observes that the configuration we need is justified by Johannessen's (1998) theory, according to which it is the element that occupies the specifier position in the ConjP that transmits its relevant features to Conj, (under Spec-head Agreement), whence they percolate to ConjP (the maximal projection). Thus, in (61), the resulting fully specified phrase will be a [+Conj, +N]P. This mechanism is assumed for all the appositive relative clause structures with CommaP, but I will abstract away from it in the tree diagrams that follow.

I furthermore propose that a ForceP projection is at play in non-integrated appositives. Koev (2013) and Griffiths (2015) propose to treat ARCs as Force Phrases (in the sense of Rizzi 1997) and adjuncts. According to Koev (2013), a Force head hosts an operator that introduces a propositional variable for its constituents. He assumes that operators and predicates are adorned with propositional variables. Thus, operators can bind predicates while

[12] SubP stands for Subordinate Phrase. I use this label, instead of CP, for the following reasons:

1. I follow Rizzi (1996), and therefore adopt the view that the CP projection is split into multiple projections;
2. Since restrictive relative clauses do not have a Force of their own, they should not project a ForceP.

SubP "serves simply to subordinate a clause" (Haegeman 2003: 335), to "make it available for categorial selection independently of its force" (Rizzi 1997: fn. 6).

higher operators can bind lower operators. Force heads bind into the lexical expressions in their syntactic scope and such lexical expressions are relativized to their respective propositional variables. It follows from this that appositives cannot be bound from outside. Koev (2013) also maintains that the operator in Force hosts features for speech acts. Given the evidence from Italian ARCs, and precisely the different behavior shown by non-integrated ARCs and semi-integrated ones, I propose to allow each operator to be hosted by its own functional projection. Specifically, Comma is the head that introduces a propositional variable for its constituents. Force, instead, hosts the speech act operator.[13]

[13] One of the reviewer raises concerns around my proposal to divorce Koev's (2013) propositional variables (which my account links to CommaP) from illocutionary independence (which my account links instead to ForceP). Notice that Koev's (2013) proposal addresses mainly the following two aspects of ARCs:

(i) Non at-issue status;
(ii) Projection behavior, i.e. the ability to escape scope.

Regarding (i.), for Koev (2013), the fact that appositive proposals are usually introduced before main clause's proposals explains why ARCs are often not at-issue: all proposals associated with a sentence are silently accepted except the one introduced last, which is at-issue. If we assume that the propositional variable is introduced by Comma, and not by Force, we then expect that both semi-integrated and non-integrated ARCs were to behave the same with respect to answerhood capabilities, and this is indeed borne out. The examples in (iii) and (iv) use the Direct Response Test, according to which only at-issue content can be directly targeted in subsequent discourse (see Koev 2013: 15):

(iii) A: Edna, la quale/che è un'abile alpinista, ha iniziato la discesa.
Edna, the which/that is a skilled mountaineer, has started the descent.
'Edna, who is a skilled mountaineer, started the descent.'

B: #No, non lo è.
no not it is
#'No, she is not.'

B': No, non l'ha fatto.
no not it has done
'No, she didn't.'

(iv) A: Jack ha invitato Edna, la quale/che è un'abile alpinista.
Jack has invited Edna, the which/that is a skilled mountaineer
'Jack invited Edna, who is a skilled mountaineer.'

B: No, non lo è.
no not it is
'No, she is not.'

B': No, non l'ha fatto.
no not it has done
'No, he didn't.'

Regardless of whether we use semi-integrated (introduced by *che*) or non-integrated (introduced by *la quale*), we obtain the same result as Koev (2103) did for English: medial ARCs are not at-issue, and final ARCs are at-issue (or at least can be).

As for (ii.), the scopelessness of ARCs is linked by Koev (2013) to the fact that each proposition has its content relativized to a propositional variable. If we allow Comma to introduce such propositional variable, we would expect that both semi-integrated and non-integrated ARCs were able to project, regardless of the fact that only non-integrated ARCs can be illocutionary independent. This is indeed borne out. Below I provide examples to show that both types project:

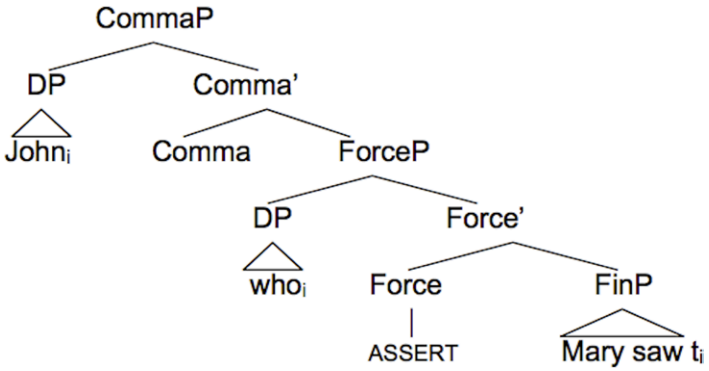
(v) a. Non è vero che Anna, la quale/che viene da Milano, adora gli inverni freddi.
not is true that Anna the which/that comes from Milan, adores the winter cold
'It is not true that Anna, who comes from Milan, adores cold winters.'

b. È possibile che Anna, la quale/che viene da Milano, adori gli inverni freddi.
is possible that Anna the which/that comes from Milan, adores the winter cold
'It is possible that Anna, who comes from Milan, adores cold winters.'

c. Se Anna, la quale/che viene da Milano, adora gli inverni freddi, allora
if Anna, the which/that comes from Milan, adores the winter cold then
qui starà benissimo.
here stay.FUT extremely well
'If Anna, who comes from Milan, adores cold winters, then she'll like it here.'

Non-integrated appositives, that is, English, Romanian and Italian *il quale*-appositives, have therefore the following structure

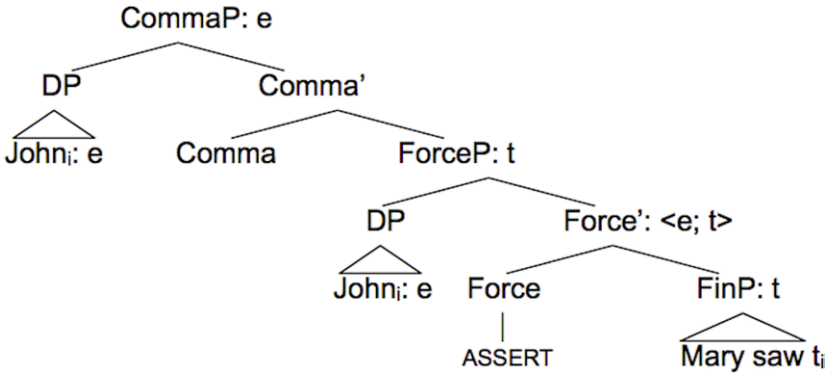
(63)



In (63), the "head" of the relative clause is in the Specifier position of the Comma Phrase projected by the intonational break. The actual appositive relative clause is in the complement position of the Comma Phrase. Following Griffiths (2015: 149) and Koev (2013: 190), I propose that ARCs contain Force phrases, in the sense of Rizzi (1997). Non-integrated ARCs can be illocutionary independent because ForceP allows them to contribute a different illocutionary force than the one of the host clause. I propose that the Comma projection introduces a variable for the content of the constituent in its scope, as it is proposed by Koev (2013) for Force, thereby preventing any operators from the host clause to bind into the appositive clause. Following Del Gobbo (2007), I claim that the relative pronoun in the appositive relative clause, *who* in (63), is an E-type pronoun. It is necessarily coindexed with its antecedent, the "head" of the relative. Following Heim (1990), this means that at LF it is a copy of the antecedent.[14]

For the syntactic structure in (63), I propose the LF in (6):

(64)



d. Anna, la quale/che viene da Milano, adora gli inverni freddi?
Anna the which/that comes from Milan, adores the winter cold
'Does Anna, who comes from Milan, adore cold winters?'

Notice that in each of the examples above the ARC projects, regardless of whether it is introduced by *che* (semi-integrated), or by *la quale* (non-integrated).

[14] Notice that, as pointed out by one of the reviewers, the situation is more complex, and the interpretation of the E-type pronoun varies depending on its antecedent. Del Gobbo (2007) proposes that if the antecedent (or "head" of the relative clause) is definite or generic, at LF the pronoun is an identical copy of its antecedent. If the antecedent is quantificational, at LF the E-type relative pronoun is a definite description, whose NP denotation is obtained from the matrix clause. See Del Gobbo (2007) for additional details. See also Heringa (2011), who, following Del Gobbo (2003a; 2007), proposes that appositions also contain a covert E-type pronoun.

The proper name *John* that occupies the specifier position of ForceP is a copy of the proper name *John* in the spec of CommaP, by virtue of the fact that it is an E-type pronoun.[15] As a relative pronoun, it originates in the object position of the FinP and moves to the Spec of ForceP, by predicate abstraction. In this respect, it behaves like a relative pronoun in a restrictive relative clause, where – taking as an example the tree diagram in (61) above – the FinP *John saw* is of type *t*, the pronoun is not assigned a denotation of its own, but by virtue of its movement, by predicate abstraction, it allows the entire relative SubP to become a predicate, hence to obtain a denotation of type $<e,t>$. Since in (64) the relative pronoun is E-type, it is contentful and not vacuous, and specifically it combines with its sister Force' and yields a ForceP of type t.

This proposal explains why in non-integrated ARCs (i.e., in appositives in English and Romanian, and in Italian *il quale*-appositives) split antecedents are allowed, why non-integrated ARCs can be illocutionary independent of the matrix and why they can modify any syntactic category. I provide an explanation in what follows.

We know that split antecedents are allowed with pronouns, but not with operators. Ross and Perlmutter (1970) first observed that some relative clauses can have split antecedents, as in the following example:

(65) Ross and Perlmutter (1970)
A man entered the room and a woman went out who were quite similar.

Notice that, although not explicitly addressed in the literature, this type of relative clause cannot be introduced by a complementizer (and hence contain an operator):

(66) *A man entered the room and a woman went out that were quite similar.

On the other hand, a relative pronoun can refer to a split antecedent just like a referential pronoun can:

(67) A man entered the room and a woman went out. They were quite similar.

Thus, for reasons that as far as I know are still unclear, it is not possible to have split antecedents if, instead of a relative pronoun, the relative clause is headed by an operator. Therefore it is the presence of the relative (E-type) pronoun that allows non-integrated ARCs to take split antecedents.[16]

The presence of the Force projection allows the ARC to be illocutionary independent of the matrix, since via ForceP it can contribute a different illocutionary force than what specified by the matrix.

We know that E-type pronouns can pick up the reference of any syntactic category (Sells 1985a; b; Potts 2002), while properties and propositions are not relativized in the absence of an E-type relative pronoun that can pick up their denotation. Specifically,

[15] For an explanation as to why we need an E-type vs. a simple referential pronoun, I refer the reader to Del Gobbo (2003a) as well as Sells (1985b) and Demirdache (1991).

[16] A reviewer asks if it is possible for little *pro* to license split antecedents. This seems to indeed be the case:

(i) *Italian*
Un uomo entrò nella stanza, ed una donna uscì. *pro* erano piuttosto eleganti.
a man entered in.the room and a woman left were rather elegant
'A man entered the room, and a woman left. They were rather elegant.'

I will not try to explain here why little *pro* licenses split antecedents, but an empty relative operator does not. I will limit myself to observe that what a regular pronoun, the E-type one and little *pro* have in common is the fact that they are referential, while the relative operator is not.

Sells (1985a) claims that in *which*-relatives, properties and propositions are individuals in the semantic interpretation, and Potts (2000) treats *which*-appositives traces as individual-denoting (i.e., nominalized propositions). We can infer from this that the relative pronouns *which* in English and *il quale* in Italian are able to denote nominalized properties or propositions, but operators (in our raising structures, the raised element denoted by identity with the "head") are not able to function the same way.[17] We therefore conclude that it is the presence of an E-type pronoun, such as *which* or *il quale*, within non-integrated ARCs that allows this type of appositives to be able to modify any kind of syntactic phrase.

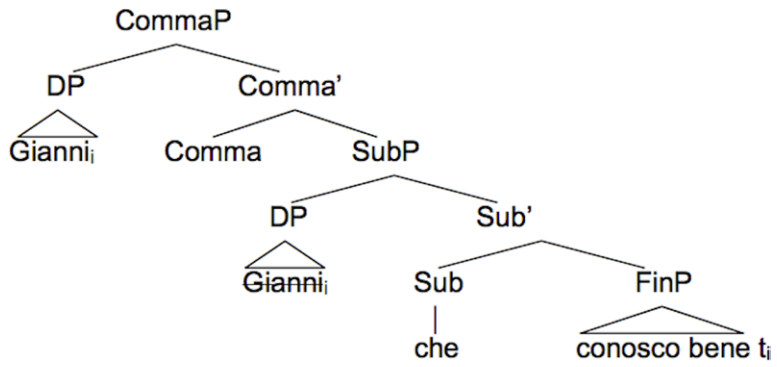
We also explain the binding facts by assuming, following Koev (2013) in spirit, that Comma introduces a variable for the content of the constituents in its scope, thereby blocking binding by any element of the matrix clause into the appositive. In other words, variables in these appositives are not bound by quantifiers in the matrix clause because the two elements are relativized to different propositional variables.[18]

The analysis of semi-integrated ARCs differs minimally from the one proposed for the non-integrated ones, but in a crucial way. For semi-integrated appositives, following Haegeman's (2003) treatment of central adverbials, I propose that the projection ForceP is absent, and CommaP takes as its object a simple SubP (Subordinate Phrase), as illustrated in the tree diagram in (68) below. Such SubP is headed by a category Sub, which "serves simply to subordinate a clause" (Haegeman 2003: 335), to "make it available for categorial selection independently of its force" (Rizzi 1997: fn. 6). Also, the element that raises from within the FinP to Spec of SubP is a DP that is identical and coindexed with the DP "head" of the relative. This allows it to delete both in the LF and in the PF component. As a result of this, that is, because of the absence of a contentful E-type pronoun, the appositive relative clause maintains its status as a property, and it does not switch to a proposition status, as shown in the tree diagram in (69) below. In other words, up to the SubP node, the semantics of the semi-integrated appositive is identical to the semantics of a restrictive relative clause. The Comma node is responsible for preventing binding into the semi-integrated ARC, just as it does in the structure for non-integrated ARCs.

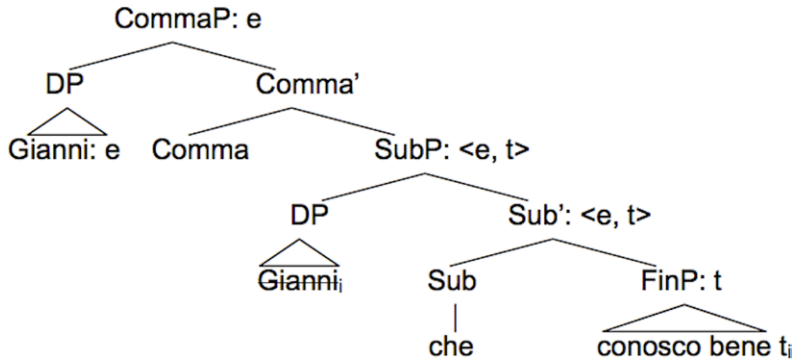
[17] I use the term "operator" here and elsewhere in the paper as an abbreviation for "the raised element denoted by identity with the "head" of the relative clause", and because so much of the traditional literature on relative clauses distinguishes between relative operators and relative pronouns. Strictly speaking, though, there are no operators in my account, as what used to be called an operator is the DP that raises from within the relative FinP to Spec of SubP (see diagram (68) for an example), and deletes by identity with the c-commanding head (see Del Gobbo 2003a and Cinque 2003; 2008 for similar accounts).

[18] One of the reviewers pointed out to me recent work by Simons et al. (2010) on projective meaning and at-issueness. Simons et al. (2010) maintain that projection is a unified phenomena and that diverse expression types (including ARCs) project because they all share the pragmatic property of being not-at-issue. They propose that the common property of projective meanings can be characterized in terms of the notion of at-issueness utilizing the concept of relevance to a QUD (Question Under Discussion). In their proposal, projection is intimately related to the structuring of information in discourse. In their own words, "It is a consequence of the fact that in the totality of information conveyed by an utterance, some is central to the speaker's conversational goals, and some is peripheral. The peripheral projects". (Simons et al. 2010: 325). If I were to follow Simons et al. (2010), I would have to maintain that ARCs project because they are never at-issue, and the projection is the result of operators "ignoring" some of the content triggered in their scope. This alternative proposal would also account for the binding phenomena I describe in the paper, as far as we can make the reasonable assumption that the intonational break is the PF signal that at LF we are dealing with non-at-issue, or projection material. Because the proposal by Simons at al. (2010) is tied to information structure in the discouse, it has the potential of explaining the exceptional cases of "cospecification", as mentioned in footnote 8 and as recently discussed by Amaral, Roberts and Smith (2007).

(68)



(69)



This analysis accounts for all of the properties of semi-integrated appositive relative clauses. Specifically, since no (E-type) pronoun is present, we explain why split antecedents are not allowed. The appositive cannot be illocutionary independent because no ForceP is present. Finally, the absence of the contentful E-type pronoun explains why with this kind of appositive the only modifiable syntactic phrases are DPs. This is because, as we mentioned before, only E-type relative pronouns are able to denote nominalized properties or propositions, which, syntactically, can be any type of phrases, such as VPs, APs, PPs and even IPs. In the semi-integrated appositive relative, the raised element denoted by identity with the "head" is not able to function the same way. This analysis also explains why the semi-integrated ARCs are identical to the non-integrated ones in their blocking of binding from the matrix clause. Comma introduces a variable for the content of the constituents in its scope, and this prevents binding from constituents in the host clause (Koev 2013).

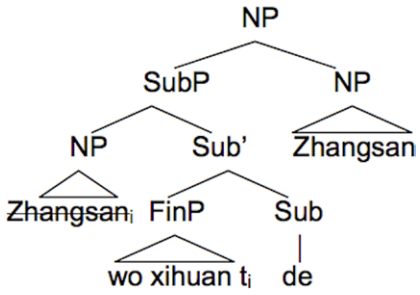
Fully integrated appositives, which are found in Chinese and Japanese, are characterized by completely different syntax and semantics.

The structure for the relative clause in Chinese is exemplified below. Within the relative clause, we have movement of *Zhangsan* from inside FinP to the spec of SubP. I follow Cheng (1986; 1997) and Paul (2009) in considering the modification particle *de* as a non-root complementizer or subordinator. The "internal head" deletes because it is identical and coindexed with the "external head".[19] Since SubP is adjoined to the "external head", this one cannot c-command SubP and anything that SubP dominates. It follows from this that the "internal head" cannot be a relative pronoun, as it would not be c-commanded, as it has to, by the "exernal head".

[19] A reviewer asks what are the exact conditions under which deletion under identity happens. According to Sauerland (2000), c-command is not necessary. He introduces the term *Relative Deletion* to refer to the process that renders the internal head of matching relatives unpronounceable:

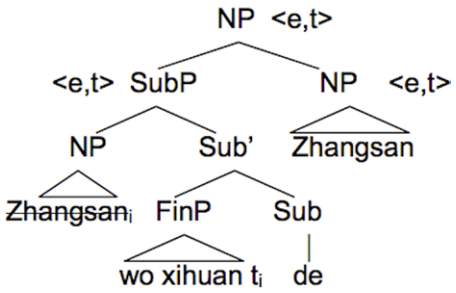
(i) *Relative Deletion*:
In matching relatives, the internal head must not be pronounced. Furthemore, the external head must be the antecedent of the internal head.

(70)



Since it cannot be a relative pronoun, the "internal head" also cannot be an E-type pronoun, forcing the relative SubP to be semantically a property, and not a proposition.

(71)



The "head" of the relative clause, *Zhangsan*, and the relative itself concatenate via predicate modification. I assume here that proper names are assigned the semantic type predicate, i.e. <e,t>, with the understanding that they are predicates true of just one individual (see Quine 1939; Chierchia 1998).

In fully integrated appositives (as in the Chinese ones), the absence of the relative E-type pronoun explains why they cannot have split antecedents, and why they can only modify nominals. The absence of the intonational break explains the binding phenomena: the appositive is always in the scope of the matrix operators, since there is no Comma available to introduce different propositional variables. Finally, since there is no ForceP, the relative cannot be illocutionary independent.

If we compare restrictives with integrated appositives, we find that their behavior is very similar. In restrictives there is no intonational break, hence no CommaP, therefore binding into them is possible. They are predicates, not propositions, their relative pronoun is not E-type, and there is no ForceP, thereby explaining why they can only modify nominals, why they cannot take split antecedents and why they cannot be illocutionary independent from the matrix clause. The crucial difference is that restrictives semantically restrict the reference of the "head" they modify, while appositives do not, and can therefore modify proper names.

4 Appositives in Japanese

Among the languages whose relative clauses behave similarly to Chinese, we find Japanese. In Japanese, as in Chinese, relative clauses are prenominal, they are not separated from the modified "head" by an intonational break, and they are not introduced by a relative pronoun. Given that they share these features with relative clauses in Chinese, it is worthwhile to investigate whether appositive relative clauses in Japanese also show the same behavior with respect to illocutionary independence, the possibility to have split antecedents, binding and the categorial nature of the antecedent.

As we have seen for Chinese, in Japanese as well the appositive relative clause cannot have an illocutionary force that is independent of and different from the matrix

one. Specifically, the appositive modifying Taroo in the following example cannot be interrogative (*ka* is the interrogative typing particle in Japanese):

(72) *[Wareware-o kessite yurusa-nai dearoo ka] Taroo-wa
we-ACC never forgive-NEG may Q Taro-TOP
kono yoo-ni-wa si-nakat-ta daroo.
this way-in-TOP do-NEG-PAST may
Int. 'Taro, who will he ever forgive us, would have never behaved this way.'

The second empirical domain to test involves split antecedents. Recall that in English the following sentences are grammatical:

(73) The Queen serves muffins$_i$, and Prince Charles serves scones$_j$, which$_{i+j}$ they buy at Harrods.

(74) A man$_i$ entered the room and a woman$_j$ went out, who$_{i+j}$ were quite similar.

When native speakers of Japanese are asked to provide sentences similar to the two examples above, they necessarily come up with two independent conjoined sentences:

(75) Erizabesu Zyoo-wa mafin$_i$-o dasi-te, Tyaaruzu kootaisi-wa
Elizabeth queen-TOP muffin-ACC serve-ing Charles prince-TOP
sukoon$_j$-o dasu-ga, (sorera-o) karera-wa Harozzu-de ka-u.
scone-ACC serve-C (they$_{i+j}$-ACC) they-TOP Harrods-at buy-PRES.
'Queen Elizabeth serves muffins and Prince Charles serves scones, they buy them at Harrod's.'

In the previous example, *ga*, glossed as 'C', is a declarative conjunctive marker, simply connecting two sentences without establishing any particular causal relation between the two propositions. Notice that the pronominal object is optional. The following example shows similar results: we can only convey the desired meaning by constructing two independent sentences. The only difference between the example in (75) and the one in (76) is that the pronominal subject is required in (76):

(76) Taroo$_i$-wa heya-ni hair-i, Hanako$_j$-wa heya-o de-ta-ga,
Taro$_i$-TOP room-in enter-ing, Hanako$_j$-TOP room-ACC leave-PAST-C
karera$_{i+j}$-wa totemo ni-te i-ta.
they-TOP quite resemble-ing be-PAST
'Taro entered the room and Hanako left the room, they are quite similar.'

When we attempt to use the relative clause to modify both nominal phrases, that is, when we try to establish the split antecedency, we run into ungrammaticality, or at best, we can allow the relative clause to modify only one of the two potential antecedents:

(77) *[Op$_{i+j}$ Hanako-o kirat-te i-ru] Taroo$_i$-ga hait-te ki-ta
Hanako-ACC hate-ing be-PRES Taroo-NOM enter-ing come-PAST
ga, Ziroo$_j$-wa de-te it-ta.
though Jiro-TOP leave-ing go-PAST

The only interpretation available for example (77) is that the person who hates Hanako is Taro (alone), in other words, the split antecedent interpretation is impossible.

Another trademark feature of an appositive relative clause is the categorial nature of the antecedent. We know that in English, for example, non-integrated relative clauses

can modify a variety of antecedents, including VPs, AdjPs, and entire sentences. In the following example, the appositive relative clause modifies the adjective *smart*:

(78) Mary was smart, which John never was.

In Japanese, once again, a literal translation of the example above is ungrammatical. The only way to convey the same meaning is by using two independent sentences conjoined by a conjunctive particle:

(79) Hanako-wa kasikokat-ta ga, Taroo-wa soo-de nakat-ta.
Hanako-TOP smart-PAST C Taro-TOP SO-P NEG-PAST
'Hanako was smart, which Taro never was.'

Finally, we know that it is not possible for a higher quantified noun phrase to bind inside an appositive relative clause in English:

(80) *Every Christian$_i$ forgives John, who harms him$_i$.

In Japanese, instead, we find that instances of binding of the type described are grammatical, as they are in Chinese. In analyzing the following example, we need to keep in mind that according to Hoji (1991), the referential property of pronominals in Japanese is not quite the same as in English. Hoji (1991) claims that epithets, like 'the bastard', *soitu*, in the following example, should be used as bound pronominals. Fukui (1984) claims instead that *zibun*, 'himself', can be used as a bound pronominal. Therefore, in the following example, both possibilities are tested, and in both cases, the example is grammatical, confirming the availability for appositive relative clauses in Japanese to contain elements bound from the higher portion of the sentence:

(81) Dono gakusei$_i$-mo [{ zibun/soitu}$_i$-o hihansu-ru] Yamada-sensei-ni
which student- all self/bastard/-ACC criticize-PRES Yamada-professor-to
kansyasi-te i-ru.
appreciate-ing be-PRES
Lit.: 'Every student$_i$ is appreciating to Prof. Yamada, who criticizes himself/the bastard$_i$.'

The evidence we have allows us to conclude that, with respect to the availability of appositive relative clauses, Japanese behaves quite similarly to Chinese. [20] There are nevertheless some interesting differences between Japanese and Chinese relative clauses, which force us to propose a slightly different syntax. In particular, it has been observed by various linguists that Japanese relative clauses show no island effects, hence they are not generated through movement (the gap inside the relative is *pro*). Given that Japanese relative clauses are not licensed syntactically, both Fukui and Takano (1999) and Takeda (1999) claim that they are licensed "semantically", through an "aboutness" relationship. Takeda (1999) follows Chierchia (1998) and argues that the availability of

[20] Notice that in this paper I will not discuss the differences or similarities between appositive relative clauses in Japanese, and another Japanese relative clause construction, i.e. the Internally Headed Relative Clause (IHRC). As pointed out to me by Masao Ochi, an IHRC does not need to be restrictive; according to Shimoyama (1999), it involves E-type anaphora; as observed initially by Kuroda (1975/1976), it allows split antecedents; it cannot be illocutionary independent of the matrix; its antecedent is restricted to a nominal element, and binding into it from the matrix is possible (Shimoyama 1999). According to Shimoyama (1999), despite some similarities, ARCs and IHRCs in Japanese cannot be equated completely. I agree with Masao Ochi that it is worthwhile to investigate them against the findings described in this paper, but I will have to leave this task for a future research project, one that hopefully will have a wider comparative scope.

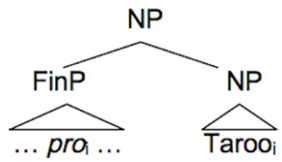
semantic operations such as type-shifting vary from language to language, depending on the morphological/syntactic inventory of the lexicon of a given language. Specifically, Japanese lacks the functional categories – C, T, D – that are present in English (Fukui 1986; 1988; 1995). As a consequence, part of the semantic operations that are originally universal is restricted in English, and less so in Japanese.

The lack of syntactic licensing explains the unavailability of a relative pronoun: given that the relative is adjoined to the "head", the "head" cannot c-command inside of it. Fukui and Takano (1999) also propose that the relative clause in Japanese is TP and not CP. Following Diesing (1990) in spirit, they adopt the following principle:

(82) A functional category is present in the structure only when it is necessary.

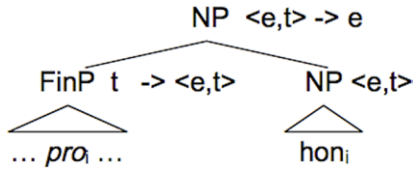
Japanese relative clauses do not need to project up to the CP level, because they are not licensed syntactically, in other words, they are not introduced by a null operator or a relative pronoun (Takeda 1999). In addition, according to Fukui (1986; 1988), Japanese also lacks the functional category D. Takeda (1999) provides evidence for the claim that Japanese lacks null determiners and that bare nominals in Japanese are simple NPs. Taking all of the properties of Japanese relative clauses into consideration, I propose the following synax:

(83)



In the structure illustrated in (83), the relative FinP is adjoined to the "head" of the relative, *Taroo*. There is no movement, the relative is licensed through an "aboutness" relationship and the surface gap in the relative is occupied by a small *pro* (Takeda 1999). As for its semantics, Takeda (1999) acknowledges that in calculating the meaning for the restrictive relative illustrated in the tree diagram in (83), we encounter a type mismatch. The semantic types of the FinP and the NP in question are a proposition and a property, and they cannot be combined by functional application. Takeda (1999) proposes to resort to the lambda abstraction operation, which instead of being triggered by movement, applies over the small *pro*, converting the proposition into a predicate of type $<$e,t$>$. This enables us to combine the FinP and the "head" noun by the predicate modification rule, yielding an additional predicate. Finally, Takeda (1999) allows type-shifting to apply to the obtained predicate, yielding the denotation of an individual, hence type e. Takeda (1999) takes for granted that this type-shifting process is universally available across languages, unless blocked.[21]

(84)



[21] Extending Chierchia's (1998) Blocking Principle, Takeda (1999) proposes the following:

(i) *Generalized Blocking Principle:*
If a language has a certain functional category in its lexicon, the free application of the semantic operation that has the same function as that syntactic category is blocked in that language.

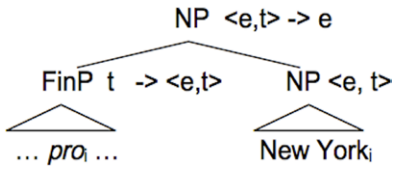
What underlies the preceding principle is the hypothesis, defended by Takeda (1999), that the applicability of semantic operations can vary across languages. Specifically, given that Japanese lacks a functional C within relative clauses, lambda abstraction can occur freely.

We can adopt Takeda's (1999) analysis of restrictive relative clauses and adapt it to appositive ones in Japanese. Take the following example, from Takeda (1999):

(85) John-ga kyonen e otozureta New York, …
John-NOM last year visited New York
'New York, which John visited last year, …'

The main difference is in the fact that the modified noun is a proper name instead of a common noun. According to Takeda (1999), given that the proper name is an NP, it is still a predicate, hence of type <e,t>. This is not an unreasonable assumption, given that we can interpret proper names as predicates true of just one individual (Quine 1939). The semantic calculation then proceeds exactly as outlined above for the case of the common noun, and it is illustrated in the followin example:

(86)



This proposal allows us to explain the characteristics of Japanese appositive relative clauses as described above. More specifically:

1. split antecedents are not allowed because there is no E-type relative pronoun;
2. "heads" of other syntactic categories cannot occur because of the absence of the relative E-type pronoun;
3. binding is allowed because of the absence of the intonational break and of CommaP;
4. the FinP cannot be illocutionary independent, because it is not ForceP.

5 Appositives in French

In this section I investigate more in detail French appositives, with the goal to determine whether indeed French allows both semi-integrated and non-integrated appositive relatives, the same way Italian does.

In French, appositive relative clauses can be introduced by either *qui/que* or by the relative pronoun *lequel*:

(87) a. Ma soeur, la quelle/qui est arrivée justment hier …
my sister, the which/who is arrived only yesterday
'My sister, who has just arrived yesterday, …'

b. Cinque (1982: 277)
Ma soeur, la quelle/que le magistrat avait convoquée pour
my sister the which/that the magistrate has summoned for
le lendemain…
the next-day
'My sister, who the magistrate had summoned for the next day …'

As already pointed out by Cinque (2008), with respect to illocutionary independence, French appositive relative clauses behave like the Italian ones, in the sense that appositive relative clauses can be independent from the matrix ones only if they are introduced by the relative pronoun.

The example in (88) below shows how the appositive relative clause can have either interrogative or imperative illocution:

(88) Muller (2006: 328)

a. Il n' est pas sûr qu' il vienne à l'heure, auquel cas
he NEG is not certain that he comes at the hour in.which case
voulez-vous l'attendre?
want-you him wait
'He is not sure he'll arrive in time, in which case could you wait for him?'

b. Il n' est pas sûr qu'il vienne à l'heure, auquel cas ne
he NEG is not certain that he comes at the hour in.which case NEG
l'attendez pas!
him wait not
'He is not sure he'll arrive in time, in which case do not wait for him!'

The following examples in (89) illustrate the contrast between the appositive that is introduced by the relative pronoun *lequel* and the one that is introduced by the complementizer *qui*:

(89) Bernard Tranel (p.c.)

a. Ton père, qui/lequel nous pardonnera surement, est un grand homme.
your father that/the.which us forgive.FUT surely is a great man
'Your father, who will surely forgive us, is a great man.'

b. Ton père, *qui/lequel nous pardonnera-t-il jamais, est un grand homme.
your father that/the.which us forgive.FUT-T-he ever is a great man
'Your father, who will he ever forgive us?, is a great man.'

Notice that I assume that in (89a/b) *qui* is not a pronoun, but the complementizer *que*, because of the "que-to-qui" rule (Kayne 1976). In alternative, following Sportiche (2011), special *qui* and *que* in relatives could be analyzed as weak relative pronouns, a proposal that could be extended to relatives' *che* in Italian. This would not have any major consequences for my proposal, but it would require the assumption that weak relative pronouns cannot be E-type pronouns.

When it comes to allow split antecedents with a relative pronoun or a gap, French again behaves like Italian:

(90) Bernard Tranel (p.c.)

a. *Si Charles$_i$ n'aimait plus Anne$_j$, [qui$_{i+j}$ d'ailleurs ne s'etaient
if Charles not loved any.longer Anne, who at.any.rate not REC were
jamais vraiment aimés, c'est qu'il y avait une raison.
never really loved it be that it there have a reason
'If Carlo was no longer in love with Anna, who at any rate never really loved each other, there was a reason.'

b. Si Charles$_i$ n'aimait plus Anne$_j$, [lequels$_{i+j}$ d'ailleurs ne s'etaient
if Charles not loved any.longer Anne, who at.any.rate not REC were
jamais vraiment aimés, c'est qu'il y avait une raison.
never really loved it be that it there have a reason
'If Carlo was no longer in love with Anna, who at any rate never really loved each other, there was a reason.'

Notice that in (90a), the complementizer *qui* cannot refer to both Charles and Anne, determining the ungrammaticality of the sentence. In the example in (90b) instead, the pronoun *lequels* can refer to the split antecedents *Charles* and *Anne*.

As we have seen in Section 2.3, in English appositives can modify a wide array of antecedents, like CPs, APs, VPs, etc. In Italian the appositive relative clauses introduced by the complementizer (the integrated ones) can only modify nominals, while the appositive relative clauses introduced by the relative pronoun can modify a vast array of antecedents. French behaves like Italian:

(91) Canac-Marquis and Tremblay (1997: 9)
a. Marcelle est très fatiguée, ce que Marie n'est pas. (AP)
Marcelle is very tired, DEM which Marie NEG is not
'Marcelle is very tired, which Marie is not.'
b. *Marcelle est très fatiguée, que Marie n'est pas. (AP)
Marcelle is very tired, which Marie NEG is not
Int.: 'Marcelle is very tired, which Marie is not.'

(92) Canac-Marquis and Tremblay (1997: 9)
a. Marcelle est arrivée en retard, ce qu'elle ne fait jamais. (VP)
Marcelle has arrived in late DEM which she NEG does never
'Marcelle has arrived late, which she never does.'
b. *Marcelle est arrivée en retard, qu'elle ne fait jamais. (VP)
Marcelle has arrived in late which she NEG does never
Int.: 'Marcelle has arrived late, which she never does.'

Notice that like in Italian, what introduces these appositive relative clauses in French is not a relative pronoun, like *which* in English, but instead a full DP: *ce que*, which literally stands for 'this that'. In Italian, in the examples in Section 2.2, we used another full DP: *la qual cosa*, but a perfectly grammatical alternative is the form *il che*, which also literally stands for 'the that', meaning 'the fact/thing that'.

In French, as in Italian, binding of a pronoun inside the appositive relative clause by a quantified nominal in the matrix clause is not allowed, regardless of whether the appositive is introduced by the relative pronoun or by the complementizer:

(93) *[Aucun étudiant]$_i$ ne peut oublier le professeur Niu, qui/lequel
no student NEG can forget the professor Niu, that/the.which
l$_i$'a tant aidé.
him has so.much helped

We can therefore conclude that like in Italian, French appositive relative clauses can be divided into two categories: the semi-integrated ones (introduced by the complementizer), and the non-integrated ones (introduced by a relative pronoun or a full-fledged DP).

6 On reduced relative clauses

In this section I investigate whether reduced relative clauses can be appositives, and if they can, which category they belong to.

According to Krause (2001), the distinction between full and reduced relatives is based on the amount of internal structure of the relative clause. In particular, while full relative clauses are full clauses, i.e. CPs, reduced relatives do not project up to the CP node (cf. among others Bhatt 1999). Krause (2001) refers to reduced relatives without overt subjects as standard reduced relatives, and uses the term reduced relatives to collectively refer to standard reduced relatives and to reduced relatives with genitive subjects. I will adopt her terminology and limit my investigation here to standard reduced relatives.

Standard reduced relatives can be either prenominal or postnominal:

(94) Krause (2001)
a. I saw the [recently released] movie.
b. We have long been expecting the book [recently released by Cascadilla Press].

They are characterized by the fact that they prohibit the occurrence of relative pronouns and complementizers, and the verbs are participles, i.e., non-finite:

(95) Krause (2001)
a. I saw the [(*which/*that) recently released] movie.
b. Mary loves the [(*who) passionately singing] man over there.

(96) Krause (2001)
a. A man [(*who/*that) working for John] visited us yesterday.
b. We have long been expecting the book [(*which/*that) recently released by Cascadilla Press.]

Moreover, they only allow subject relativization:

(97) Krause (2001)
a. *The dean$_i$ [the teacher visiting t$_i$] listened carefully.
b. *The planet$_i$ [the teacher explaining [that t$_i$ is round]] is ours.

The fact that standard reduced relatives enforce subject relativization has been linked to the fact that in these clauses the subject position does not receive Case (cf. Kayne 1994; Bhatt 1999). Any derivation in which a non-subject constituent is relativized would leave behind a subject that has no Case inside the reduced relative, triggering a violation of the Case Filter and causing the derivation to crash. Relativization of the subject prevents such a violation, because once the subject is relativized, it can get case from the verb of the superordinate clause.

I mentioned before that reduced relatives do not project up to the CP node, the question then becomes: what functional layer in the clausal structure do they project to? Notice that the fact that they are smaller than CP accounts for the fact that they do not allow relative pronouns and complementizers. According to Burzio (1986) and Bhatt (1999), reduced relative clauses project up to the IP level (i.e. in our terms, the FinP level). According to Krause (2001), they are smaller than FinP, but need to be at least vP. Krause (2001) also concedes that there may be crosslinguistic variation in this respect.

It is interesting to investigate if standard reduced relatives can be appositive, and if they can, what type of appositive are they? In other words, would they be fully-integrated, semi-integrated or non-integrated appositives? In what follows I will answer these questions for both types of standard reduced relatives, i.e. for both prenominal and postnominal ones. Let's start with the postnominal reduced relatives.[22] The following example contains a postnominal reduced relative clause, which we can describe as appositive given

[22] A reviewer points out that the left-edge deletion process known as "whiz deletion" (Ross 1967) creates in English post-nominal reduced ARCs that contain participle verbs. Such reduced relatives cannot be used as pre-nominal modifiers:

(i) a. John, (who was) looking secure in his job until recently, will be made redundant.
b. *Looking secure in his job until recently John will be made redundant.

(ii) a. John, (who was) bitten by a million mosquitoes, retreated indoors.
b. *Bitten by a million mosquitoes John retreated indoors.

As there are several arguments in the literature against a "whiz deletion" approach to reduced relatives (see Huddleston 1971; Berman 1973; Hudson 1973; Williams 1975), such approach is not followed in this paper.

the intonational break that separates it from the nominal it modifies and the fact that it provides additional information:

(98) We have long been expecting "The Imitation Game", recently released on Netflix.

(99) a. We have long been expecting "The Imitation Game", which was it recently released on Netflix?
b. "The Imitation Game", which was it recently released on Netflix, is a great movie.

(100) a. *We have long been expecting "The Imitation Game", [recently released on Netflix]?
b. *"The Imitation Game", [recently released on Netflix?], is a great movie.

The sentences in (100) contrast with the ones in (99) and show that postnominal appositive reduced relative clauses cannot be illocutionary independent.

If we look at the cases of relative clauses being able to allow different antecedents as described in Section 2.3, example (44), and try to create similar examples with postnominal reduced relatives, we incur in ungrammaticality across the board:

(101) a. *Mary was [$_{AP}$ intelligent], [$_{IP}$ John not being so].
b. *Joe [$_{VP}$ debated in high school], [$_{IP}$ done by Chuck too].
c. *They talked [$_{PP}$ from twelve to one o'clock], [$_{IP}$ being a long time].
d. *[$_{IP}$ Fairly hasn't arrived yet], [$_{IP}$ bothering Green].

Notice that (101a) is ungrammatical for independent reasons, i.e. because it contains a subject. But the reason for the ungrammaticality of the other sentences needs to be looked for elsewhere.

Let's now consider the binding facts. We need to establish if it is possible to bind a pronoun inside an appositive postnominal reduced relative clause. Let's start with a pair of sentences that show that binding is possible within restrictives but not within appositives:

(102) a. [Every woman]$_i$ loves the man [who supports her$_i$ all the time].
b. *[Every woman]$_i$ loves John, [who supports her$_i$ all the time].

Let's now test the appositive reduced relative:

(103) *[Every woman]$_i$ is lucky to have John, [always supporting her$_i$ when she$_i$ needs it].

Notice that coreference instead is perfectly fine:

(104) Mary$_i$ is lucky to have John, [always supporting her$_i$ when she$_i$ needs it].

(105) Mary$_i$ loves John, [who supports her$_i$ all the time].

As we can tell from the previous examples, binding within a postnominal appositive reduced relative is not possible.[23] Let's now turn to split antedecents:

[23] A reviewer points out that reduced relatives that are ambiguous between a clausal adjunct and an ARC are also ambiguous with respect to binding:

(i) [Every girl]$_i$ looked on as John, painting her$_i$ portrait, tore a hole in the canvas.

Possible underlying sources for (i):

(ii) a. [Every girl]$_i$ looked on as John, while he was painting her$_i$ portrait, tore a hole in the canvas.
b. *[Every girl]$_i$ looked on as John, who was painting her$_i$ portrait, tore a hole in the canvas.

	illocutionary independence	split antecedents	categorial nature of antecedent	binding
reduced relative (post)	no	yes	nominal	no

Table 2: Postnominal appositive reduced relative clauses.

(106) When I asked John$_i$ to invite Mary$_j$, [PRO$_j$ recently hired by our department], he was rather reluctant.

(107) When I asked John$_i$ to invite Mary$_j$, [PRO$_{i+j}$ both recently hired by our department], he was rather reluctant.

Split antecedents are possible, as illustrated by the grammaticality of the example in (107).

A summary of the behavior of postnominal appositive reduced relative clauses is illustrated in Table 2.

These facts are not surprising and can be easily be accounted for. Since the postnominal appositive reduced relative clause only projects up to the FinP level or less, and not to the ForceP level, it cannot be illocutionary independent. Split antecedents are allowed, as PRO can pick up the reference of two antecedents (see Burzio 1986 and Williams 1975 for an analysis of reduced relatives containing a PRO subject that is controlled by the head of the relative). The inability to modify phrases other than the nominal ones can be explained by the fact that appositive reduced relatives do not contain E-type relative pronouns, since they don't allow pronouns at all. And finally appositive postnominal reduced relatives do not allow binding because of the presence of CommaP.

Let's now analyze prenominal reduced relative clauses. Consider the following example:

(108) I saw the [recently released] "Sherlock".

There is only one movie called "Sherlock", hence the interpretation of the prenominal reduced relative in (108) is appositive. The example below shows that such reduced relative cannot be interrogative:

(109) *I saw the [released recently?] "Sherlock".

Unsurprisingly, these reduced relatives are also ungrammatical if we attempt to use them to modify anything other than a nominal phrase:

(110) a. *Mary was [$_{IP}$ John not being so][$_{AP}$ intelligent].
b. *Joe [$_{IP}$ successfully done by Chuck too][$_{VP}$ debated in high school].
c. *They talked [$_{IP}$ being a long time][$_{PP}$ from twelve to one o'clock].
d. *[$_{IP}$ Bothering Green][$_{IP}$ Fairly hasn't arrived yet].

As for split antecedents, those constructions are also allowed, as exemplified by the example in (113). Examples (111) and (112) show that prenominal appositive reduced relatives are able to modify a conjoined noun phrase:

(111) The [[simultaneously released] ["Sherlock" and "Game of Throne"]] are highly successful shows.

(112) [[Always passionately singing together] [Pavarotti and Bartoli]] are Vittoria's favorite opera singers.

(113) When I compare "Sherlock"$_i$ to the [PRO$_{i+j}$ simultaneously released] "Game of Thrones"$_j$, it's hard to tell which one I prefer.

When we turn to binding, the situation is more complex. English doesn't allow prenominal modifiers with posthead material (see Sleeman 2007):

(114) a. the [recently opened] door
b. *the [opened by John] door

So, we cannot construct examples in English to show that a pronoun within the appositive prenominal reduced relative cannot be bound. We need to resort to a language that allows such PPs, i.e. an SOV language like German or Dutch:

(115) *Dutch* (Sleeman 2011)
de [door Jon geopende] brief
the by John opened letter
'the letter opened by John'

(116) *German* (Keenan & Comrie 1977)
der [in seinem Büro arbeitende] Mann
the in his study working man
'the man working in his study'

(117) *German* (Cinque 2010: 54)
Er ist ein [sein Studium seit langem hassender] Student.
he is a his study for a long time hating student
'He is a student who has been hating his studies for a long time.'

Let's take for example a prenominal relative clause in German, like the following one:

(118) *German*
das [Lieder singende] Mädchen
the songs singing girl
'the girl singing songs'

This reduced relative can also modify a proper name, and therefore be an appositive (under the default scenario in which only one Marie exists):

(119) *German*
die [Lieder singende] Marie
the songs singing Marie
'Marie, singing songs'

And it is possibile to bind inside such reduced relatives, regardless of whether they modify a proper name or a common noun:

(120) *German*
a. [Jedes Vorschulkind]$_i$ mag den [ihm$_i$ Lieder vorsingenden] Lehrer.
every preschooler likes the to.him songs singing teacher
'Every preschooler likes the teacher who sings songs to him.'
b. [Jedes Vorschulkind]$_i$ mag die [ihm$_i$ Lieder vorsingende] Marie.
every preschooler likes the to.him songs singing Marie
Lit.: 'Every preschooler likes Marie, who sings songs to him.'

To summarize, the observed behavior of prenominal appositive reduced relative clauses is illustrated in Table 3 below:

	illocutionary independence	split antecedents	categorial nature of antecedent	binding
reduced relative (pren)	no	yes	nominal	yes

Table 3: Prenominal appositive reduced relative clauses.

Types of ARCs	illocutionary independence	split antecedents	categorial nature of antecedent	binding
reduced relative (pren)	no	yes	nominal	yes
reduced relative (post)	no	yes	nominal	no
Japanese (fully integrated)	no	no	nominal	yes
Chinese (fully integrated)	no	no	nominal	yes
Italian (semi-integrated)	no	no	nominal	no
Italian (non-integrated)	yes	yes	CP, AP, VP, etc.	no
French (semi-integrated)	no	no	nominal	no
French (non-integrated)	yes	yes	CP, AP, VP, etc.	no
English (non-integrated)	yes	yes	CP, AP, VP, etc.	no
Romanian (non-integrated)	yes	yes	CP, AP, VP, etc.	no

Table 4: Comparison of reduced ARCs with other ARCs.

Prenominal reduced relatives are not illocutionary independent because they are not full clauses, i.e. ForceP. They do allow split antecedents because they host a PRO that can pick up the reference of more than one antecedent. They do not allow other antecedents beside nominal ones because they are not introduced by E-type pronouns. But they do allow binding, because they are fully integrated with the matrix clause (as they are not set off intonationally) and no CommaP is present.

As it is clear from Table 4, appositive prenominal reduced relatives pattern with fully integrated ones (like in Chinese and Japanese), while appositive postnominal reduced relatives pattern with the semi-integrated ones (like in Italian and French), *modulo* the different behavior with respect to split antecedents.

7 Conclusion

Our empirical investigation has led to the following findings:

1. Chinese and Japanese appositive relative clauses are not illocutionary independent, they do not allow split antecedents, the antecedent can only be nominal, and they allow binding, hence they belong to the class of fully integrated appositives.
2. English and Romanian appositive relative clauses are diametrically different from the integrated ones, insofar as they can be illocutionary independent, allow split antecedents, have antecedents of different categorial nature and not allow binding. I classify them as non-integrated appositives.
3. Italian and French have two types of appositives. The semi-integrated ones share with the integrated ones the following features: they are not illocutionary independent, they do not allow split antecedents, and their antecedents can only be nominal; but differently from the integrated appositives of Chinese and Japanese, these semi-integrated appositives do not allow binding. The second type behaves just like the English ones, and hence are classified as non-integrated.
4. Reduced relative clauses can be appositives.

This is summarized in Table 5:

Types of ARCs	illocutionary independence	split antecedents	categorial nature of antecedent	binding
fully integrated (Japanese, Chinese)	no	no	nominal	yes
semi-integrated (Italian, French)	no	no	nominal	no
non-integrated (Italian, French, English and Romanian)	yes	yes	CP, AP, VP, etc.	no
reduced relative (pren)	no	yes	nominal	yes
reduced relative (post)	no	yes	nominal	no
???	yes/no	yes	CP, AP, VP, etc.	yes

Table 5: Classification of ARCs.

The empirical data I presented is accounted for by a proposal that is based on the following core elements:

1. The syntax of non-integrated and semi-integrated appositive relative clauses involves a CommaP such projection is missing from integrated ARCs.
2. The non-integrated appositives' relative pronoun is E-type.
3. The syntax of prenominal appositive relative clauses prevents them from licensing an overt relative pronoun, and therefore an E-type pronoun.
4. The intonational break is the PF instantiation of the Comma head, which by introducing a propositional variable, prevents binding from the host clause.
5. The ARC can be illocutionary independent only if it contains a Force projection.

The empirical data analyzed and the account proposed leave us with an interesting fine-grained typology of appositives, thereby confirming the recent trend in the research on appositives pointing to the conclusion that we are dealing with a more variegated set of constructions than previously thought. What is even more interesting is that the conclusions reached with this study leave us with precise directions to investigate, whether that is enriching the data set of the languages investigated to confirm or disconfirm the findings here established, or determining what other types of appositive relative clauses there could be. To give an example, we may wonder if there could be a language with appositive relative clauses with E-type relative pronouns but no intonational break, as hinted at in the last row of Table 5 above.

Finally, a more detailed study of the parameters that are responsible for the typology of appositive relative clauses, paired with an investigation on a higher number of languages, would shed light on a crucial question for parametric theory, specifically whether parameters are implicational or not (see Longobardi, Gianollo & Guardiano 2008).

Abbreviations

CL = classifier, MOD = modification particle, ASP = sentence-final or verb-final aspect particle, ACC = accusative case marker, NOM = nominative case marker, HON = honorific marker, PAST = past tense, PRES = present tense, FUT = future tense, IMP = imperative mood, SUBJ = subjunctive mood, Q = question particle, REC = reciprocal clitic, REFL = reflexive clitic, DAT = dative case marker, Cl = clitic, SG = singular, NEG = negation, DEM = demonstrative, TOP = topic marker, C = declarative conjunctive marker, P = conjunctive particle

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Competing Interests

The author has no competing interests to declare.

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