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Two Types of Appositives

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1. Introduction *

Appositive relatives are usually conceived of as a unitary type of relative clause (semantically and syntactically opposed to both restrictive and "third type" relatives).

In the literature, they have been analysed either as a sentence grammar phenomenon, specifically as clauses internal to the nominal projection that also contains the Head, like restrictive and "third type" relatives (see, among others, Smith 1964, Jackendoff 1977, chapter 7; Huot 1978; Perzanowski 1980; Cornilescu 1981; Kayne 1994, chapter 8; Bianchi 1999, chapter 5; Kempson 2003; Arnold 2005), or as a discourse grammar phenomenon, i.e., as sentences generated independently of the sentence containing the Head, whose pronouns relate to the Head much like (E-type) pronouns relate to an antecedent across discourse (see, for example, Ross 1967,434ff; Aissen 1972; Emonds 1979, Stuurman 1983, Sells 1985; Haegeman 1988; Fabb 1990; Espinal 1991; Peterson 2004; Grosu 2005, among others).[1]

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[1]. This distinction roughly corresponds to what Emonds (1979,212) calls the Subordinate Clause Hypothesis and the Main Clause Hypothesis, respectively. I abstract away here from the different executions that these two hypotheses have received in the literature, and from those analyses, like Safir's (1986), Demirdache's (1991, chapter 3), and Del Gobbo's 2003,2006b, which combine the two. For a recent overview, see de Vries (2006).

Elaborating on Cinque (1978,1982), I will suggest that the sentence and discourse grammar analyses proposed in the literature should not be seen as competing analyses of a single construction, but as complementary analyses for two distinct appositive constructions; what we might call the "integrated" and "non-integrated" appositive, respectively. Some languages (among which Italian and other Romance languages) display both. Other languages display only one. As suggested in section 6 below, northern Italian dialects (and possibly Chinese, Japanese, and Persian) have just the sentence grammar, or "integrated", appositive; others (English, and Romanian) only the discourse grammar, or "non-integrated", one.

In what follows, I will first review a number of syntactic properties which differentiate the two types of appositives in Italian (those introduced by *che/cui* and those introduced by *il quale*), adding to those pointed out in Cinque (1978,1982). I will then consider English, whose appositives will be seen to systematically pattern with the "non-integrated" *il quale*-appositives of Italian. An (antisymmetric) analysis of the two types of appositives will then be suggested, followed by some comparative remarks. One general consequence of the analysis (if correct) is that the properties which are generally attributed to the appositive construction (because of the earlier focus on English) turn out to be representative only of the "non-integrated" type.

2. Some differences between *che/cui*- and *il quale*-appositives in Italian

In Cinque (1978,1982) I discussed some evidence pointing to the existence of two separate appositive constructions, one of which virtually identical to the restrictive construction.[2] For simplicity, I will call the one identical to the restrictive construction

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[2]. This required considering the appositive construction with *il quale* as conflating two separate paradigms: one identical to the paradigm of (restrictive and appositive) *cui*, with obligatory "deletion" of subject and object pronouns, leaving the complementizer *che*, and no Pied Piping other than that of a PP; and the other distinct from the paradigm of (restrictive and appositive) *cui*, with obligatory retention of subject and object *il quale* pronouns, and Pied Piping of PPs and other phrases. See (1) through (6), where, to avoid confusion, I have used only *cui* for the appositive construction identical to the restrictive construction. For more detailed argumentation, see Cinque (1982). Smits (1988,116) and Bianchi (1999,151f) admit that that there is a residue of appositives that cannot be reduced to an "integrated" (matching or raising) analysis.

the *che/cui*-appositive, and the one distinct from the restrictive construction the *il quale*-appositive, from a fundamental difference that characterizes one of their basic properties, listed below.

2.1. The *che/cui*-appositive

a) *subjects and direct objects are represented not by a relative pronoun but by the complementizer* **che**:

(1)   a. Inviterò anche Giorgio, che/*cui abita lì vicino.
           I will invite also G., that/who lives nearby

       b. Inviterò anche Giorgio, che/*cui voi certamente conoscete.
           I will invite also G., that/who you certainly know

b) *Prepositional objects are represented by the relative pronoun* **cui** *preceded by a preposition*:

(2)   Inviterò anche Giorgio, di cui/*che avete certamente sentito parlare.
       I will invite also G., of whom/that you have certainly heard

c) *no Pied Piping is possible except for that of a prepositional phrase* (compare (2) with (3)):[3]

The same analysis appears to extend to French, with additional complexities due to the *que* → *qui* phenomenology. In addition to the remarks found below, see Kayne (1976), Cinque (1982, section 2.1), and references cited there.

[3]. The relative pronoun *cui* is apparently possible even within some complex PPs (*accanto a cui* 'next to whom/which', *insieme a cui* 'together with whom/which', *senza di cui* '(lit.) without of whom/which',), but not others (**prima di cui* '(lit.) before of whom/which', **oltre (a) cui* 'in addition to whom/which', **da dietro a cui* '(lit.) from behind to whom/which'. The former, but not the latter, also allow what looks like extraction of the embedded PP (*A chi eri seduto accanto*? '(lit.) To whom were you seated next?', *Di chi farete senza*? '(lit.) Of whom will you do without?' vs. **Di chi sei entrato prima*? '(lit.) Of whom did you enter before?' **A chi veniva da dietro*? '(lit.) To whom was he coming behind?' (cf. Rizzi 1988,524ff), which may suggest that the two types of complex PPs differ in internal structure.

(3)   a. *Inviterò anche Giorgio, il fratello di cui è uno dei nostri più cari amici,
          I will also invite G., the brother of whom is one of our dearest friends

     b. *Inviterò anche Giorgio, affezionato a cui per altro non sono,…
          I will also invite G., fond of whom at any rate I am not

     c. *Inviterò anche Giorgio, per liberarmi di cui non so proprio come fare,…
          I will also invite G., to get rid of whom I don't know what to do

     d. *Inviterò anche Giorgio, diversamente da cui io non serbo rancore,…
          I will invite also G., differently from whom I bear no grudge,…

2.2.   The *il quale*-appositive

a) ***subjects and direct objects are (obligatorily) represented by the relative pronoun* il quale:**[4]

(4)   a. Inviterò anche Giorgio, il quale abita lì vicino.
          I will invite also G., who lives nearby

     b. ?Inviterò anche Giorgio, il quale voi certamente avrete avuto modo di apprezzare.
          I will invite also G., who you will have had some opportunity to appreciate

b) ***Prepositional objects are represented by the relative pronoun* il quale *preceded by a preposition*:**

(5)   Inviterò anche Giorgio, del quale/*che avete certamente sentito parlare.
       I will invite also G., of whom/that you have certainly heard

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[4]. As noted in fn.2, the obligatoriness of the pronoun and the unavailability of the complementizer *che* in the *il quale* construction is not immediately obvious due to the parallel existence of the *che/cui*-appositive construction, which has *che* for subjects and objects. It can, however, be indirectly inferred from the respective properties of the two constructions reviewed below, and from the stylistically marked character of the one with *il quale*. See Cinque (1978, 1982), and the text below.

Relativization of objects with *il quale* is actually quite marginal, perhaps for the reason discussed in Cinque (1978, section 3.7). Also see section 5.2 below.

c) ***Pied Piping of different types of phrases is available***:

(6) a. Inviterò anche Giorgio, il fratello del quale è uno dei nostri più cari amici.
   I will invite also G., the brother of whom is one of our dearest friends

   b. Inviterò anche Giorgio, affezionato al quale per altro non sono.
   I will also invite G., fond of whom at any rate I am not

   c. Inviterò anche Giorgio, per liberarmi del quale non so proprio come fare.
   I will invite also G., to get rid of whom I don't know what to do

   d. Inviterò anche Giorgio, diversamente dal quale io non serbo rancore,…
   I will invite also G., differently from whom I bear no grudge,…

The two constructions also differ with respect to a number of other properties, listed in 2.3.1 to 2.3.10).

2.3. Additional differences between *che/cui-* and *il quale*-appositives

2.3.1. Illocutionary independence
Appositives (just like restrictives) can be declarative even if the matrix is interrogative or imperative:

(7) a. Is even Clarence, who is wearing mauve socks, a swinger?   (Ross 1967,435)
   b. Get Bill, who is in charge of this operation!   (Andrews 1975,28)

This property does not distinguish *che/cui*-appositives from *il quale*-appositives. See (8) and (9):

(8) a. Sarà Gianna, che non sopporta tipi del genere, disposta ad aiutarlo?
   Will G., who does not tolerate such kind of people, willing to help him?

   b. Sarà Gianna, la quale non sopporta tipi del genere, disposta ad aiutarlo?
   Will G., who does not tolerate such kind of people, willing to help him?

(9) a. Chiama i Rossi, che certamente non ti diranno di no!
   Call the Rossis, who (lit. that) will certainly not say no

   b. Chiama i Rossi, i quali certamente non ti diranno di no!
   Call the Rossis, who will certainly not say no

More interesting is the converse case, where the matrix is declarative and the appositive interrogative or imperative. Here *che/cui*-appositives differ from *il quale*-appositives. The former, like restrictives, can only be declarative (irrespective of the illocutionary force of the matrix clause), while the latter can have their own (non-declarative) illocutionary force (e.g., interrogative or imperative), distinct from the illocutionary force of the matrix clause. See the contrasts in (10) and (11):[5]

(10) a. Tuo padre, il quale potrà mai perdonarci per quello che abbiamo fatto?, non si sarebbe mai comportato così.
         Your father, by whom will we ever be forgiven for what we have done?, would have never behaved like that

     b. *?Tuo padre, che potrà mai perdonarci per quello che abbiamo fatto?, non si sarebbe mai comportato così.
         Your father, by whom (lit.that) will we ever be forgiven for what we have done?, would have never behaved like that

     c. *Questa è la sola persona che potrà mai perdonarci per quello che abbiamo fatto? (*restrictive*)
         This is the only person that will he ever manage to forgive us for what we have done?

(11) a. Ci sono poi i Rossi, per i quali, ti prego, cerca di trovare una sistemazione al più presto.
         There are then the R.'s, for whom please try to find an accommodation as soon as possible

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[5]. In fact, the matrix need not be declarative when the appositive is non-declarative. See (i), where the matrix and the appositive are both interrogative:

(i) (?)Sarebbe stato tuo padre, al quale potremo mai rivolgerci ora per aiuto?, ben disposto nei nostri confronti?
    Would your father, to whom will we ever be able to ask for help now?, have been well disposed toward us?

Also see the English example (38a) below, where the matrix and the appositive clauses constitute two distinct imperative sentences.

b. *Ci sono poi i Rossi, per cui, ti prego, cerca di trovare una sistemazione al più presto.

There are then the R.'s, for whom please try to find an accommodation as soon as possible

c. *Le sole persone per cui cerca di trovare una sistemazione al più presto sono loro. (*restrictive*)

The only people for whom try to find an accommodation as soon as possible are them

2.3.2. Non adjacency

As opposed to *che/cui*-appositives (and restrictives), which must be adjacent to the Head[6], *il quale*-appositives can be separated from it within the sentence (see (12)) or across discourse (see (13) and (14), from Cinque 1978,79f):[7]

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[6]. Except for limited cases of extraposition, of the type in (i) (appositives) and (ii) (restrictives):

(i) a. Se hanno portato Carletto al mare, che comunque non c'era mai stato, una ragione c'è-

If they took C. to the seaside, who in any case had never been there, there is a motive

b. Ho incontrato il dott. Setti ieri, che mi ha detto che non potrà intervenire-

I met dr. S. yesterday, who told me that he will not be able to participate

(ii) a. Ho trovato un uomo ieri alla festa che ti assomigliava molto.   (cf. Cardinaletti 1987,25)

I met a man yesterday at the party that looked very much like you

b. …crede di non avere ostacoli davanti a sé che non possa abbattere o aggirare.

(Cinque 1988,472)

…(s)he thinks (s)he has no obstacles in front of himself/herself that (s)he cannot pull down or overcome

On the limited applicability of relative clause extraposition in Italian, see Valesio (1974), Cinque (1978,fn.65; 1988,section 1.1.10), Cardinaletti (1987).

[7]. For similar examples of non-adjacency in French with *lequel*, see Gross (1977,136) and Fuchs and Milner (1979,57), among others. This should not be taken to mean that non adjacency is always possible. In fact, there appear to be severe restrictions, reminiscent of those observed for English by Ziv (1973) and Ziv and Cole (1974), whose nature remains largely to be understood. Also see fn. 17 below.

(12) a. Da quando i russi se ne sono andati, i quali non si erano mai veramente integrati con la popolazione, la pace è finita.
'Since the Russians left, who never really intermingled with the population, there is no more peace'

      b. *Da quando i russi se ne sono andati, che non si erano mai veramente integrati con la popolazione, la pace è finita.
'Since the Russians left, who (Lit. that) never really intermingled with the population, there is no more peace'

      c. *Da quando i russi se ne sono andati che non si erano integrati la situazione è migliorata. (*restrictive*)
'Since the Russians left that had not integrated the situation got better'
(Cf. Da quando i russi che non si erano integrati se ne sono andati la situazione è migliorata. 'Since the Russians that had not integrated left the situation got better')

(13) a. Ha difeso la sua tesi quasi contro tutti. La quale sosteneva la necessità del non intervento.
'(S)he defended her thesis almost against everyone. Which asserted the need of non intervention

      b. Ha difeso la sua tesi quasi contro tutti. *Che sosteneva la necessità del non intervento.
'(S)he defended her thesis almost against everyone. That asserted the need of non intervention

      c. *Ha difeso solo la tesi quasi contro tutti che sosteneva la necessità del non intervento. (*restrictive*)
'(S)he only defended the thesis almost against everyone that asserted the need of non intervention

(14) a. Non ho mai parlato dei miei parenti$_j$ a Clara$_i$. Ai quali$_j$ d'altronde non serve alcuna presentazione.
'I never talked about my relatives to C. To whom in any event no introduction is necessary'

      b. Non ho mai parlato dei miei parenti$_j$ a Clara$_i$. *A cui$_j$ d'altronde non serve alcuna presentazione.

c. *Non ho mai parlato dei miei parenti_j a Clara_i a cui_j non serve alcuna presentazione. (*restrictive*)

'I never talked about my relatives to C. to whom no introduction is necessary'

2.3.3. Split antecedents

Il quale-appositives, but not *che/cui*-appositives (nor restrictives), can have split antecedents. See the contrast between (15a) and (15b) (adapted from Cinque 1988,450), and (16a) and (16b):

(15) a. Se Carlo_i non amava più Anna_j, i quali_{i,j} d'altra parte non si erano mai voluti veramente bene, una ragione c'era.

If C. was no longer in love with A., who at any rate never really loved each other, there was a motive

b. *Se Carlo_i non amava più Anna_j, che_{i,j} d'altra parte non si erano mai voluti veramente bene, una ragione c'era.

If C. was no longer in love with A., that at any rate never really loved each other, there was a motive

c. *Se il ragazzo_i non amava più la ragazza_j che_{i+j} si erano voluti bene, una ragione c'era. (*restrictive*)

If the boy no longer loved the girl that loved each other, there was a motive

(16) a. Se Piero_i non si trova più tanto bene con Ida_j, tra i quali_{i+j} d'altronde non c'è mai stata una vera amicizia,..   (Cinque 1981/82,263)

If P. no longer likes to stay with I., between whom in any event there never was a real friendship,…

b. *Se Piero_i non si trova più tanto bene con Ida_j, tra cui_{i+j} d'altronde non c'è mai stata una vera amicizia,…

If P. no longer likes to stay with I., between whom in any event there never was a real friendship,…

c. *Se il ragazzo non si trova più tanto bene con la ragazza tra cui non c'era stata una vera amicizia… (*restrictive*)

2.3.4. Retention of the 'internal Head'

In more careful styles of Italian the 'internal Head', despite its non-distinctness from the 'external one', may be retained in *il quale*-appositives (but is not in *che/cui*-appositives, nor in *che/cui*-restrictives):[8]

(17) a. Questo farmaco, col quale farmaco il Ministero intende iniziare la sperimentazione, è il frutto di molti anni di lavoro.

 This medicine, with wich medicine the Ministery intends to begin the experiment, is the result of many years' work

   b. Giorgio riuscì a sposare la ragazza. Della quale ragazza, devo dire, ero invaghito anch'io.   (cf. Cinque 1988,449)

 G. managed to marry the girl. With which girl, I must say, I was also in love

2.3.5. Non identity of the 'external' and 'internal Heads'

Il quale-appositives, as opposed to *che/cui*-appositives (and restrictives), do not require absolute identity of the 'internal' and 'external Heads' (cf. Cinque 1988,449; and Sandfeld 1936,179, and Kayne 1975, chapt.1 fn.20, for corresponding facts in French):

(18) a. Ha raggiunto la fama con (il romanzo) Il giardino dei Finzi-Contini, il quale romanzo ha poi anche avuto una riduzione cinematografica.

 He became famous with (the novel) Il giardino dei Finzi-Contini, which novel was then also made into a film

   b. Erano venuti quaranta studenti all'appuntamento. Il qual numero non impressionò nessuno.

 Forty students had come to the rendezvous. Which number impressed nobody

For a different case of non identity (where the 'external' and the 'internal Heads' differ in number features) see (19):[9]

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[8]. It can, however, be retained in the very formal *il quale*-restrictive discussed in Cinque (1978,84ff; 1982,section 1.5), which has many of the syntactic properties of *il quale*-appositives, although precisely how many and which ones remains to be investigated more systematically. Here I will not be concerned with the restrictive constructions.

French *lequel*-appositives display the same property. They too can retain the 'internal' Head. See for example Sandfeld (1936,179), Huot (1978,119), and Togeby (1982,463).

(19) Non era certo un romanziere, la prima virtù dei quali è quella di catturare l'interesse del lettore.

He was no novelist (sing.), the first virtue of whom (pl.) is that of catching the reader's interest (cf. (49) below)

2.3.6. Categorial nature of the Head (DP vs. XP)

Il quale- and *che/cui*-appositives also differ with respect to the categorial nature of the antecedent that they can take. While *che/cui*-appositives (and restrictives) only take nominal antecedents, *il quale*-appositives can take a larger class of antecedents, as shown in (20):

(20) a. Carlo lavora troppo poco. La qual cosa verrà certamente notata. (**CP**)

(Cinque 1988,467)[10]

      'C. works too little. Which thing will certainly be noticed'

  b. Carlo lavora troppo poco. *Che verrà certamente notato.

      'C. works too little. That will certainly be observed'

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[9]. Cases of gender mismatch like (i) may only be apparent if the relative pronoun actually agrees with a non pronounced *città* ('city', feminine; cf. *la città del Cairo* 'the city of Cairo) taking *Il Cairo* as its specifier (on non pronunciation see Kayne 2005):

(i) Il Cairo, la quale/*il quale è la capitale dell'Egitto,…

   (Lit.) the (masc.) Cairo, the which (fem./*masc.) is the capital city of Egypt,…

[10]. In both (20) and (21) one can have, in addition to *la qual cosa* '(Lit.) the which thing', *il che* '(Lit.) the that', and the pseudo-free relative *cosa che* 'thing that' and *ciò che* 'that that'. Also see Bianchi (1999,151).

c. Carlo lavora troppo poco. *Di cui si è reso conto anche il suo principale.[11]

'C. works too little. Which even his boss realized'

(21) a. Maria è suscettibile. La qual cosa sua sorella di certo non è.   (**AP**)

'M. is touchy. Which thing her sister certainly is not'

b. Maria è suscettibile. *Che sua sorella di certo non è.

'M. is touchy. That her sister surely is not'

c. Maria è suscettibile. *Di cui non si era resa conto neanche sua madre.

'M. is touchy. Which not even her mother realized'

2.3.7. Preposability (of the sentential relative)

Cinque (1988,467) notes that one exception to the impossibility of *che* in appositives with a sentential antecedent like (20b) is given by contexts where *che* is subject of a nominal predicate, as in (22a-b):

(22) a. Mi sono messo a giocare a carte: che è sempre una distrazione.

(Cinque 1988,467)

I started playing cards: that is always a distracting thing

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[11]. *Cui*, when preceded by *per*, appears to be able to resume a CP (*Lei si e' ammalata, per cui ha dovuto smettere di fumare* 'she got ill, so that she had to quit smoking'). As this is the only preposition that seems to permit such a usage (see (20c) and (i)), I tend to interpret it as a fixed expression. This is confirmed by the fact that *per cui* is not exactly synonymous with *per la qual cosa* 'for which thing'. See (i.e):

(i) a. Se il governo vacilla, alla qual cosa/*a cui ho fatto riferimento anch'io,…

If the government is shaky, to which I too have referred,…

b. Da quando la società è sull'orlo del fallimento, con la qual cosa/*con cui dovremo fare i conti tutti,…

Since the company is going bankrupt, with which all of us will have to cope,…

c. Il prezzo del petrolio è sceso, dalla qual cosa/*da cui tutti hanno tratto benefici.

The oil price lowered, from which everybody benefitted

d. Gianni un giorno si riprenderà, nella qual cosa/*in cui tutti confidano,…

One day Gianni will recover, on which everyone is relying,…

e. Se Gianni non ha pagato le tasse, per la qual cosa/=/=per cui dovrà pagare una multa salata,…

If Gianni did not pay his taxes, for which thing/so that he will have to pay an expensive fine,…

    b. Mi sembra di capire che tua madre ora stia bene, che è la cosa più importante.

                                                (Del Gobbo 2006a,fn.5)

       I understand that your mother is now better, that is the most important thing

Even this use of *che* differs nonetheless from *la qual cosa* (and *il che, cosa che, ciò che*) in not being preposable to the "antecedent". See the contrast between (23a) and (23b) (on a requirement such preposing must meet, see Del Gobbo 2006b,fn.2):

(23) a. *?Da quando, che è sempre una distrazione, mi son messo a giocare a carte,…

          Since, that is always a distracting thing, I started playing cards,…

      b. Da quando, la qual cosa è sempre una distrazione, mi son messo a giocare a carte,…

          Since, which is always a distracting thing, I started playing cards,…

2.3.8. Parasitic gaps

Parasitic gaps, which can appear within restrictives (see (24c)), can also appear within *che/cui*-appositives, but not within *il quale*-appositives. See the contrast between (24a) and (24b):

(24) a. ?La sola persona che i Rossi, che conoscono bene, hanno sempre ammirato è Gianni.

          The only person that the Rossis, who (lit. that) know well, have always admired is G.

      b. *La sola persona che i Rossi, i quali conoscono bene, hanno sempre ammirato è Gianni.

          The only person who the Rossis, who know well, have always admired is G.

      c. (?)La sola persona che quelli che conoscono bene non possono non ammirare è Gianni.

          The only person that those that know well cannot but admire is G.

2.3.9. Temporal DPs as Heads

Che/cui-appositives ((25a) (and restrictives - (25c)), but not *il quale*-appositives ((25b)) can have a temporal adverbial DP as Head (cf. Cinque 1988,464):

(25) a. La settimana prossima, che sono in ferie, ti vengo a trovare.
          Next week, that I am on holidays, I will come and visit you

      b. *La settimana prossima, la quale sono in ferie, ti vengo a trovare.
          Next week, which I am on holidays, I will come and visit you
          (ok: La settimana prossima, nella quale sono in ferie 'Next week, in which I am
          on holidays,..')

      c. La settimana che sono in ferie ti vengo a trovare. (*restrictive*)
          The week that I am on holidays I will come and visit you

2.3.10. Coordination of the wh-pronoun with another DP

Che/cui-appositives also differ from *il quale*-appositives in not allowing coordination with another DP. See the contrast in (26):

(26) a. *Gianni e Mario, fra le rispettive consorti e cui non c'era mai stato un grande
          affiatamento,…
          G. and M., between their respective wives and whom there never was a real
          understanding,…

      b. ?Gianni e Mario, fra le rispettive consorti e i quali non c'era mai stato un
          grande affiatamento,…
          G. and M., between their respective wives and whom there never was a real
          understanding,…

2.4. Relative ordering of *che/cui*-appositives and *il quale*-appositives

For those speakers for whom the two types of appositives can cooccur, *che/cui*-appositives can either precede or follow *il quale*-appositives. See (27):[12]

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[12]. It has been claimed that appositives cannot stack (see for exampleVergnaud, 1985,334; Andrews 1975,26; Jackendoff 1977,171). This may well be true despite claims to the contrary (De Vries 2002, 190f; 2006,252f; Arnold 2005, § 4.3, among others). With appositives, the second relative only modifies the Head, not the Head plus the first relative (see: *...and Pauline, who's next to me, who you'll probably talk to in a minute,...* from the Appendix of Arnold 2005), while with restrictives, the second relative may also modify the result of the intersection of the Head and the first relative. See for example: *I like the ties (that) you wear that your sister knitted for you (not those (that) you don't wear that your sister knitted,*

(27) a. (?) Rossi, che ci ha fatto un'ottima impressione, sui meriti professionali del quale però non sappiamo nulla,…

R., who (lit. that) impressed us very positively, about whose professional merits however we know nothing,…

   b. (?) Rossi, sui meriti professionali del quale non sappiamo nulla, che però ci ha fatto un'ottima impressione,…

R., about whose professional merits we know nothing, who (lit. that) however impressed us very positively,…

3. Some non-differences between *che/cui-* and *il quale*-appositives

3.1. Speech act adverbs and performative verbs

Speech act adverbs like *frankly, honestly*, etc., and performative verbs used performatively, have been claimed to occur only in appositive relatives (Thorne 1972,552f; Vergnaud 1985,335; Emonds 1979,238f; Lehmann 1984,271; Cornilescu 1996,215; and references cited there), and to be thus able to discriminate between appositive and restrictive relatives. One might wonder whether the two types of appositives differ with respect to this property. They don't. See (28a-b):

(28) a. Giorgio, che francamente non si sarebbe mai dovuto comportare così,…

G., who (lit. that) frankly should never have behaved like that,…

   a'. Giorgio, che ti prometto non metterà mai più piede da noi,…

G, who (lit. that) I promise you will never set foot again in our house,…

   b. Giorgio, il quale francamente non si sarebbe mai dovuto comportare così,…

G., who frankly should never have behaved like that,…

   b'. Giorgio, il quale ti prometto non metterà mai più piede da noi,…

G., who I promise you will never set foot again in our house,…

I should point out, though, that in (my) Italian such adverbs and verbs also occur unproblematically in restrictives. See (29):

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nor those (that) you wear that your sister didn't knit). Cf. Grosu (2005, section 2.1). In the case of appositives, a more appropriate term would seem to be 'iteration' (Grosu 2000,112), or asyndetic coordination.

(29) a. La sola persona che francamente mi sentirei di assumere è Giorgio.

'The only person that frankly I could consider employing is G.'

b. La sola persona che ti prometto di non rivedere mai più è Giorgio.

'The only person that I promise you not to see any more is G.'

3.2. Weak Crossover

While restrictive relatives give rise to Weak Crossover violations (see (30), and Safir 1986, section 2.2), both *che/cui-* and *il quale*-appositives appear to be immune from it (see (31a-b)):

(30) *?L'uomo$_i$ che sua$_i$ moglie pensa sia disonesto si è dimostrato una brava persona.
The man that his wife thinks is dishonest turned out to be a good guy
(cf. L'uomo$_i$ che è amato da sua$_i$ moglie ha una diversa visione della vita 'the man that is loved by his wife has a different view of life')

(31) a. Giorgio$_i$, che anche sua$_i$ moglie pensa sia disonesto, si è dimostrato un vero impostore.
G., who (lit. that) even his wife thinks is dishonest, turned out to be a real impostor

b. Giorgio$_i$, il quale anche sua$_i$ moglie pensa sia disonesto, si è dimostrato un vero impostore.
G., who even his wife thinks is dishonest, turned out to be a real impostor

3.3. Pronominalization

As observed in McCawley (1981) a proform can resume a nominal Head plus a restrictive relative (see (32c)), but not a Head plus an appositive relative. Both *che/cui-* and *il quale*-appositives behave in this respect exactly the same. See (32a) and (32b):

(32) a. Gianni ha un bellissimo appartamento, che da' sul Central Park, e adesso ne
vuole un altro. (= bellissimo appartamento; =/= bellissimo appartamento, che
da' sul Central Park)

G. has a beautiful apartment, which (lit.that) overlooks the Centrtal Park, and
now he wants another

b. Gianni ha un bellissimo appartamento, il quale da' sul Central Park, e adesso
ne vuole un altro. (= bellissimo appartamento; =/= bellissimo appartamento, il
quale da' sul Central Park)

G. has a beautiful apartment, which overlooks the Central Park, and now he
wants another

c. Gianni ha un bellissimo appartamento che da' sul Central Park, e adesso ne
vuole un altro. (= bellissimo appartamento; =bellissimo appartamento che da'
sul Central Park)   (*restrictive*)

3.4. Polarity items

While negation can license a polarity item inside a restrictive relative ((33c)), it cannot
license one inside an appositive, whether of the *che/cui*- or of the *il quale*-type ((33a-
b)):[13]

(33) a. ***Nessuno** di voi, che ha **mai** avuto a che fare con la giustizia, può essere
sospettato.

No one of you, who (lit. that) has ever had any problems with the law, can be
suspected

b. ***Nessuno** di voi, il quale ha **mai** avuto a che fare con la giustizia, può essere
sospettato.

No one of you, who has ever had any problems with the law, can be suspected

c. **Nessuno (di voi)** che abbia **mai** avuto a che fare con la giustizia potrebbe
essere esente da sospetti.

No one of you who has ever had anything to do with justice could be free from
suspicion

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[13]. Certain polarity items, however, are not licensed even with indefinite restrictive relatives (cf. Kayne
1994,164fn.72).

4. English

As the data in the following sections will show, English appositives pattern with Italian *il quale*-appositives, lacking the equivalent of the Italian *che/cui*-appositive construction altogether. First, they, like Italian *il quale*-appositives (see section 2.2) obligatorily retain wh-pronouns in subject, object (and, in the presence of preposition stranding, oblique object) positions. See (34).[14] They also retain it with the (more formal) pied piping of a preposition. See (35). In fact, just like *il quale*-appositives, they display Pied Piping of phrases other than just PPs. See (36).[15]

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[14]. Appositives introduced by *that* are generally judged impossible in Modern English (Quirk and Greenbaum 1973,383; Quirk, Greenbaum. Leech and Svartvik 1985, §17.22; Rodman (1976,174); Jackendoff 1977,171; Emonds 1979,§2.3; Sag 1997,fn.37; De Vries 2002,182; 2006,fn.49), although they were possible in Middle English, and literary examples are attested into the nineteenth century (see Maling 1978,723 and references cited there). They are possible in a number of modern British dialects (see, e.g., Beal and Corrigan 2002,128; Peitsara 2002,172; Van den Eynden Morpeth 2002,188, and references cited there), and some cases (with non-personal antecedents) are even attested in the modern standard. See, for example, (i.a-b), and for further exemplification Jespersen (1949, chapter VIII), Jacobsson (1963, 1994), Hudson (1990,396), Huddleston and Pullum (2002,1052).

(i) a. She made me swear on the family bible, that my aunt's poodle chewed up, that I wouldn't buy
        French medicines…   (from Bache and Jakobsen 1980,245)
    b. I hate my untrusting mind, that set Parks on the watch   (quoted from Cornilescu 1981,43fn.2)

They seem, however, to belong to the non written register.

[15]. Cinque (1982) suggested that non "deletion" of subject and object wh-pronouns and Pied Piping other than that of PPs go together. They are shared by Italian *il quale*-appositives and *il quale*-restrictives; by French *lequel*-appositives, and by English appositives and (formal) restrictives. Conversely, obligatory 'deletion' of subject and object (actually, bare DP) wh-pronouns (with the consequent appearance of a complementizer), and no Pied Piping other than that of a PP also go together. They are displayed by *che/cui*-restrictives and appositives in Italian, and by English infinitival relatives (modulo the presence of PRO for the subject position and of an infinitival (*for* or 0) complementizer in place of the finite complementizer *that*). See (i), and the discussion in Cinque (1982,280ff), Pesetsky and Torrego (to appear), and references cited there:

(34) a. John, who/*that/*0 got the offer, will probably refuse.

  b. John, who/*that/*0 we all know, would not have done that.

  c. John, who/*that/*0 we are all proud of, will soon be part of the President's staff.

(35) John, to whom we talked yesterday, said he strongly opposes the decision.

(36) a. That woman, compared to whom Attila the Hun was an angel, is unfortunately my husband's favourite aunt.   (Nanni and Stillings 1978,311)

  b. delicious entertainments, to be admitted to one of which was a privilege,…

                                                                  (Jespersen 1949,194)

  c. certain steps against his treacherous brother, as to the precise nature of which they could not be further enlightened.   (Jespersen 1949,194)

In addition to the similarities just reviewed, in all of the contrasts between *che/cui*- and *il quale*-appositives discussed in section 2.3 above, English appositives side with Italian *il quale*-appositives. Compare sections 2.3.1-10 with sections 4.1-10.

4.1. Illocutionary independence

As with *il quale*-appositives (and differently from *che/cui*-appositives) in Italian (cf. (10)-(11) above), English appositives can also be non-declarative. See (37), where the appositives are interrogative and (38), where they are imperative ((38a-b)), or optative ((38c)):[16]

(i) a. I found someone (*who(m)) PRO to invite.

  b. *I found someone whom PRO to give the book to.

  c. I was looking for someone with whom to repair my bicycle.

  d. *I was looking for someone with whose help to repair my bicycle.

Green (1973,18) however gives a sentence like *I bought a book the cover of which to decorate with crayons* as grammatical.

[16]. It thus appears that differently from Emonds (1979,241) Subject-Auxiliary Inversion can apply in English appositives. On the related question of why Verb Second is unavailable in Dutch and German

(37) a. There is then our father, by whom will we ever be forgiven for what we have done?

b. It may clear up, in which case would you mind hanging the washing out?

(= (10ii) of Huddleston and Pullum 2002,1061)

c. She may have her parents with her, in which case where am I going to sleep?

(= (10iii) of Huddleston and Pullum 2002,1061)

d. I want to talk to that man, who who the hell is he anyway? (Andrews 1975,28)

(38) a. Please accept my check for $3.69, which find enclosed.   (Martin 1972,5)

b. He said he'd show a few slides towards the end of his talk, at which point please remember to dim the lights.

(= (10i) of Huddleston and Pullum 2002,1061)

c.   My friend, who God forbid you should ever meet,…

(John Lyons, reported in Werth 1974,fn.4)

4.2. Non adjacency (cf. (12) to (14) above)

Although non-adjacency to the Head is subject to restrictions, as noted earlier for Italian *il quale*-appositives (cf. fn.7), various examples of non-adjacency are cited in works on English appositives.[17] See:

(39) a. **John** really bothered me at the party last night, **who**/ *that, by the way, I'll never invite to a party again.   (cf. Ziv and Cole 1974,777)[18]

---

appositives, see Emonds (1979,fn.4). Although certain Verb Second relatives are actually possible in German, they are semantically restrictive only (see Gärtner 2001).

[17]. "Restrictive clauses are generally placed immediately after the antecedent, while non-restrictive clauses may stand at some distance" (Jespersen 1949, section 5.3, p.103). An instance of obligatory non-adjacency is represented by (48a) below (from Arnold 2005, section 4.3).

[18]. Following Jespersen (1949 [1927], 85-115), Ziv and Cole (1974,776) make a distinction between non sentence final appositives and sentence final "continuative" appositives (which often bear a causal or temporal relation to the matrix clause, and can be non adjacent to it). Here I take the two types to be two

    b. **John** is coming to stay, **who** we haven't seen for ages.

<div align="right">(Kempson 2003,302fn4)</div>

    c. Only **the flower** is used, **which** is not poisonous and is attached to the plant with a very fine stem.   (= 23i) of Huddleston and Pullum 2002,1066)

    d. I was talking to **Howard** the other day, **who**/*that tells me that you want to resign.   (cf. Peterson 2004,396)

As noted above with (formal) *il quale*-appositives, sentential *which* can also begin a new sentence:

(40) She borrowed a history book. Which suggests that her teacher was having some influence on her.   (Quirk, Greenbaum. Leech and Svartvik 1972,702)

4.3. Split antecedents

As was the case with Italian *il quale-* (but not *che/cui-*) appositives, English appositives also allow for split antecedents. See (41), from Arnold (2005,section 2):

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

According to Demirdache (1991,118) another such case is Perlmutter and Ross' (1970) celebrated split antecedent relative (42), although a restrictive reading is also possible:[19]

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

which she compares to a case like (43), of anaphora across discourse:

---

different manifestations of the same "non-integrated" type of appositive (the non adjacent case being the most restricted).

[19]. Also see the examples given in Huddleston and Pullum (2002,1066,fn.13) and De Vries (2006,fn.38). Indeed, according to my informants, replacing *who* with *that* renders such cases much worse.

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

4.4. Retention of the 'internal Head'

As with (formal) *il quale*- (but not *che/cui*-) appositives (cf. (17) above), in (formal) English appositives the 'internal Head' can also be retained. See (44):[20]

(44) a. he rode twenty miles to see her picture in the house of a stranger, which stranger politely insisted on his acceptance of it.

(Jespersen 1949, section 6.5, p.126)

b. a young woman with a wedding-ring and a baby, which baby she carried about with her when serving at the table.   (Jespersen 1949, section 6.5, p.126)

c. The French procured allies, which allies proved of the utmost importance.

(Poutsma 1916, chapter XXXIX, §4, p.961)

4.5. Non identity of the 'external' and 'internal Heads'

The 'internal Head' which is retained can even be distinct from the 'external' one, as we saw above with *il quale*-appositives in Italian. Various examples are cited in the literature. See, e.g., (45) to (63) (and Jespersen 1949, pp.126-128):

(45) a. Mark belongs to the Knights of Columbus, which organization has been condemned by the Jewish Defense League.   (= (33a) of McCawley 1981,118)

b. *Mark belongs to a club which organization has been condemned by the Jewish Defense League. (*restrictive*)   (= (33a') of McCawley 1981,118)

(46) a. An accident on the road, in which accident several people were hurt,…

(Browne 1986,117)

b. *The accident in the road in which accident several people were hurt. (*restrictive*)

---

[20]. Jespersen (1949, section 6.5, p.126) says that such retention is possible "in a peculiar kind of appositive clause; very often the clause is at some distance from the antecedent, and some substantive is repeated so as to avoid any doubt as to what word is to be taken as the antecedent".

(47) a. this book, which masterpiece I have read twice,…

$\qquad$ (=(ii) of Kayne 1994,165fn73)

 b. *the book which masterpiece I have read twice… (*restrictive*)

(48) a. There were only thirteen senators present, which number was too few for a quorum. $\qquad$ (Arnold 2005, section 4.3)

 b. *These are the only thirteen senators present which number we had forgotten. (*restrictive*)

As with *il quale*-relatives in Italian (see (19)) the internal Head of an English appositive may display non identity in number with the external Head, at least for some speakers. See for example (49), from Cantrall (1972,22):

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

4.6. Categorial nature of the antecedent (DP vs. XP)

As noted by a number of authors,[21] appositives in English differ from restrictives in allowing a wider range of antecedents (as was the case with *il quale*-, but not with *che/cui*-, appositives in Italian). See (50):

(50) a. Sheila was beautiful, which was too bad. $\qquad$ (Ross 1969,357) (**CP**)

 b. She was fond of her boy, which Theobald never was.

$\qquad$ (Jespersen 1949,section 6.4,p.124) (**AP**)

 c. Joe debated in high school, which Chuck did too. (Thompson 1971,84) (**VP**)

 d. Peter put it under the table, where I had put it earlier. (Fabb 1990,60) (**PP**)[22]

---

[21]. See, for example, Jackendoff (1977,171), Fabb (1990,60), Demirdache (1991,108), Borsley (1997,§5), De Vries (2002,185), Arnold (2005,§2).

[22]. On the fact that appositive *where*, but not restrictive *where*, can have the entire PP *under the table* as an antecedent, see the discussion in Fabb (1990,60).

4.7. Preposability (of sentential relatives)

With *il quale*-appositives English appositives also share the possibility of preposing the relative clause to a sentential "antecedent". See (51), from Huddleston and Pullum (2002,1066) (also see the examples given in Poutsma 1916,chapter XXXIX, §13, p.972; Jespersen 1949,section 5.7; and Quirk et al. 1985, p.1120):

(51)   The Net will open up opportunities to exploit tax differences and – which makes it even more of an headache than globalisation – it will make it possible to dodge taxes altogether.

4.8. Parasitic Gaps

As noted in Safir (1986), parasitic gaps, which can appear within English restrictives (see (52a)), cannot appear in English appositives (see (52b)), just as they cannot appear in *il quale*-appositives in Italian (see (24b) above)):

(52)   a. John is a man who everyone who knows admires.   (Safir 1986,673)
       b. *John is a man who Bill, who knows, admires.   (Safir 1986,673)

4.9. Temporal DPs as Heads

Certain temporal DPs can head a restrictive, but not an appositive, in English, just as we saw they cannot head an *il quale*-appositive in Italian:[23]

(53)   *That day, which Clinton and I were born,…
     (cf. The day that Clinton and I were born…)

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[23]. In English this is true also of the manner DP *way*.

4.10. Coordination of the wh-pronoun with another DP

Once again, as with *il quale*-appositives (and differently from *che/cui* appositives) in Italian, wh-pronouns in English appositives can be coordinated with other DPs:

(54) He recalled the name of the solicitor, between whom and himself there had been
      occasional correspondence.   (Jespersen 1949,191)

5. An analysis of the two types of appositives

5.1. The "integrated" appositive

The analysis of the integrated appositive that I am going to propose here is a natural extension of the analysis I presented in Cinque (2003) for restrictive relatives (also see Cinque in preparation). There I proposed that restrictive relatives are merged as IPs in the Specifier of a prenominal functional projection above the Specifiers which host attributive adjectives and numerals and below the projection hosting determiners and demonstratives (i.e., the position in which restrictive relatives overtly appear in many (rigid) OV languages – see Cinque 2005, and in preparation). Following Kayne (1999,2000,2002), I also proposed there that their eventual postnominal position in most VO, and non-rigid OV, languages is due to the raising of IP to a higher licensing position, followed by merger of a (finite) complementizer, which attracts the internal Head, followed in the "matching" variant by merger of another complementizer, which attracts the external Head. In the "raising" variant the external Head is not raised but "deleted" in situ.

    The "matching" derivation for a (restrictive) relative clause like *The two nice books that I read* is given in (55):[24]

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[24]. I do not address here the question of "raising" vs. "matching". If relative clauses are merged prenominally, both derivations are in principle available within Antisymmetry. See Cinque (2003, and in preparation).

Different languages provide overt evidence for one or more of the three C heads postulated in (55) in addition to the *wh*-pronoun, with some displaying up to three such elements simultaneously. See, for example, (i), from Buli (Niger-Congo):

(55) a. [IP$_{rel}$ [Num [A NP]]]] (merge of C$_{(0)}$ and attraction of IP)→

b. IP$_{relj}$ C$_{(0)}$ [t$_j$ [Num [A NP]]]] (merge of C$_{(1)}$ (*that*) and attraction of the *wh*-pronoun/ 'internal Head')) →

c. *wh*$_i$- [*that* [[$_{IPrel}$ t$_i$]$_j$ C$_{(0)}$ [t$_j$ [Num [A NP]]]]] (merge of C$_{(2)}$ and attraction of the 'external Head') →

d. [Num [A NP]]$_k$ C$_{(2)}$ *wh*$_i$- [*that* [[$_{IPrel}$ t$_i$]$_j$ C$_{(0)}$ [t$_j$ [t$_k$]]] (merge of the determiner) →

e. Det [Num [A NP]]$_k$ C$_{(2)}$ *wh*$_i$- [*that* [[$_{IPrel}$ t$_i$]$_j$ C$_{(0)}$ [t$_j$ [t$_k$]]]
   the two nice books that I read

"Integrated" appositives minimally differ in that the IP is merged in the specifier of a nominal projection dominating DP; i.e., outside the scope of the determiner or the demonstrative, as is generally assumed (Lehmann 1984,261f; Kayne 1994,112).[25]

(56) a. [IP$_{rel}$ [$_{DP}$ Dem [Num [A NP]]]] (merge of C$_{(0)}$ and attraction of IP)→

(i) kpàr^{w}à-**wā:y**$_i$ [**ālī** e$_i$ tà nā:b **lá**] (Hiraiwa 2003,46)

farmer-REL C have cow(indef.) Subord.Particle

'the farmer who has the cow'

[25]. So, for example, in languages in which restrictives remain inside the demonstrative, appositives are found outside. This is the case of Vietnamese (see (i)): "When the RC precedes the demonstrative, the RC restricts the meaning of the noun; when the RC follows the demonstrative, the phrase has a non-restrictive meaning" Nguyen 2004,61f) and Indonesian (see (ii) "(a) ist restriktiv, (b) appositiv" Lehmann 1984,282):

(i) a. Tôi thích cái đâm $_{RC}$[mà cô ây chọn] $_{Dem}$[**này**]

I like CLF dress that aunt that choose this

'I like this dress that the aunt has chosen'

b. Tôi thích cái đâm $_{Dem}$[**này**] $_{RC}$[mà cô ây chọn]

I like CLF dress this that aunt that choose

'I like this dress, which the aunt has chosen'

(ii) a. lelaki yang sedang tidor **itu**

man that Prog sleep that

'That man that is sleeping…'

b. IP$_{relj}$ C$_{(0)}$ [t$_j$ [$_{DP}$ Dem [Num [A NP]]]] (merge of C$_{(1)}$ and attraction of the *wh*-pronoun/ 'internal Head')) →

c. *wh*$_i$- [C$_{(1)}$ [$_{IPrel}$ t$_i$]$_j$ C$_{(0)}$ [t$_j$ [$_{DP}$ Dem [Num [A NP]]]] (merge of C$_{(2)}$ and attraction of the 'external Head') →

d. [$_{DP}$ Dem [Num [A NP]]]$_k$ C$_{(2)}$ *wh*$_i$- [C$_{(1)}$ [$_{IPrel}$ t$_i$]$_j$ C$_{(0)}$ [t$_j$ [t$_k$]]]

quei dieci bei gattini, che io amo

'those ten nice kittens, which I love'

5.2. The "non-integrated" appositive

The analysis to be proposed for the "non-integrated" appositive is more tentative. As mentioned at the outset, the construction appears to belong to what Williams (1977) calls Discourse Grammar, whose basic properties, distinguishing it from Sentence Grammar, are the ability to apply "across utterance boundaries", and to be immune to island constraints (Williams 1977,101f).

We have already seen that *il quale*-appositives in Italian and *which/(who)*-appositives in English can relate to an antecedent across discourse. They also appear to be able to do so across islands. So, for example, in such pied piping cases as (57) and (58) the pronoun can relate to its antecedent (the relation called R-binding in Safir 1986) in spite of the adjunct, sentential subject, or complex NP, island boundary between them:[26]

---

b. lelaki **itu** yang sedang tidor

man that that Prog sleep

'That man, who is sleeping,…'

[26]. The more formal cases of "double dependence" in (i) (see Cinque 1988,473, and references cited there) show the same thing. The *wh*-pronoun is fronted to the left edge of the island (possibly into the Spec of a TopicP above the subordinator, if any).

(i) a. (?) Una tale ipoteca, *della quale se voi vi liberaste* sareste certamente più felici, non l'ho mai veduta.

Such a mortgage, of which if you could get rid you would certainly be happier, I have never seen

b. (?) Un circolo, *al quale essere ammessi a tali condizioni* è senza dubbio un privilegio,…

A club, to which to be admitted under such conditions is certainly a privilege,…

(57) a. Questa macchina, **[** per comprare la quale **]** Giorgio si è indebitato fino al collo,…

         This car, in order to buy which, G. is up to his ears with debts

     b. Questa macchina, **[**comprar la quale**]** significa per Giorgio rinunciare a tante altre cose,…

         This car, to buy which means for G. to give up many other things,…

     c. Giorgio, **[**le ragioni per non invitare il quale**]** erano davvero tante,…

         G., the reasons for not inviting whom were really many,…

(58) a. The lecture **[**(in order) to attend which**]** Sally drove 50 miles,…

                                   (Nanni and Stillings 1978,312)

     b. delicious entertainments, **[**to be admitted to one of which**]** was a privilege,…

                                   (Jespersen 1949,194)

     c. John, **[**the many reasons for not inviting whom**]** you are old enough to understand…   (adapted from Jespersen 1949,194)

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    c. (?)Un impegno, *dal quale chi mai riuscirà a liberarsi* si sentirà di sicuro più leggero,…

       A commitment, from which whoever will manage to free himself will certainly feel lighter,…

Also see the quite formal English cases in (ii) from Jespersen (1949,183f):

(ii) a. Until the divinity of Jesus became a dogma, *which to dispute* was death, *which to doubt* was infamy.   (Jespersen 1949,183)

     b. The most piteous tale…*which in recounting* this grief grew puissant…   (Jespersen 1949,184)

     c. ...to understand a little more of the thoughts of others, *which so soon as you try to do honestly*, you will discover…   (Jespersen 1949,202)

That the wh-pronouns are still within the island is indicated by the ungrammaticality of the corresponding cases in which the wh-pronoun is extracted (is no longer contiguous to the island).

The construction was apparently more common in Latin (see Maurel 1989 and references cited there). One example is also given in Ehrenkranz and Hirschland (1972,26). See (i), which they take (unnecessarily, if we are right) to violate the Complex NP Constraint:

(i) non politus iis artibus quas qui tenent eruditi appellantur   (Cic. *Fin*. 1,7,26)

    not polished in those arts the possessors of which (lit. which those who have) are called erudite

Guglielmo Cinque

If we assume Kayne's (1994) Linear Correspondence Axiom (LCA) to hold of Discourse Grammar as well (the null hypothesis), linear precedence in a (one speaker) discourse must also reflect asymmetric c-command. One way to achieve this is to merge the linearly preceding sentence in the specifier of an (empty) head, which takes the following sentence as a complement. Concretely, the discourse fragment in (59) would have the structural representation in (60):

(59) John is no longer here. He left at noon.

(60)

```
          HP
         /  \
       CP    HP
            /  \
           H    CP
```
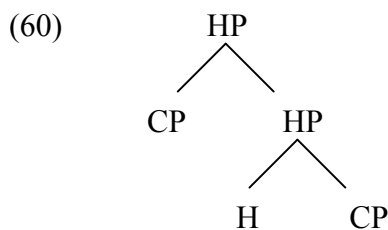
Discourse fragments do not consist of just concatenations of CPs. Other categories can apparently be concatenated; for example, DPs and CPs (*A pink shirt? I will never wear any such thing in my life!*), which would yield the structural representation in (61):[27]

(61)

```
          HP
         /  \
       DP    HP
            /  \
           H    CP
```
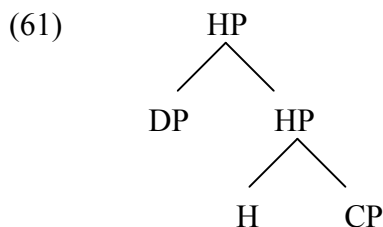
I will take the configurations in (60) and (61) to underlie the "non-integrated" appositive, (60) for the across discourse cases, and (61) for the cases in which the appositive is adjacent to its Head. In both cases, the movement internal to the "non-integrated" appositive CP is likely to be different in target from that of "integrated" appositives (and restrictives). If the target were a CP initial TOP position, as occasionally suggested, one could perhaps make sense of certain properties typical of the "non-integrated" construction, namely the fact that objects cannot easily be

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[27]. The configuration in (61) also plausibly underlies English-type Left Dislocation, and the Romance Hanging Topic construction, where the relation between the left dislocated phrase and the following CP is one of Discourse Grammar (no island sensitivity, no reconstruction, etc.; see Cinque 1990, chapter 2).

relativized with *il quale*-pronouns in Italian (cf. Cinque 1978, 3.7), except in those cases where no clitic is required in the corresponding topicalization case (Cinque 1978,fn.71).[28]

Differently from (English-type) Left Dislocation, and the (Romance) Hanging Topic construction, which are only possible at the Root, presumably due to the discourse head which concatenates DP with CP, "non-integrated" appositives can be subordinate clauses. This can be obtained from the same structure if, in the appositive case, like in unbalanced coordination (Johannessen 1998), the features of the phrase in specifier position (here the categorial features of DP) are able to percolate up and determine the categorial features of the dominating category (rendering HP non-distinct from DP). Cf. Rebuschi (2005,§3.2).

In the spirit of Williams (1977), we must also assume that the 'Discourse Grammar' head H, as is the general rule for sentences in a discourse, blocks every 'Sentence Grammar' relation between its specifier and complement (internal Merge, Agree, Binding, etc.), despite the asymmetric c-command relation existing between the two under the extension of the LCA to Discourse Grammar.

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[28]. Given that "non-integrated" appositives can also be adjacent to a Head internal to an island (*The Ferrari which Pietro, who Sofia adores, bought from me cost him a bundle* - Ross 1967,174), an analysis in terms of extraction (from the island) followed by remnant movement does not seem a plausible alternative.

The present analysis is reminiscent of the "ColonP" analysis advanced in Koster (2000) for both restrictive and appositive relatives, to the ParatacticP analysis which Gärtner (2001,§2) suggests for V2 relatives in German, and to the analyses proposed in Rebuschi (2005) and Frascarelli and Puglielli (2005) (except that we limited it here to the "non-integrated" appositive). De Vries (2002; 2006) proposes modifying Koster's analysis to one of balanced coordination of the Head with a Headless false (or semi-) free relative in apposition to the Head ($[_{\&P}$Anni $[\& [_{DP}$ she$_i$ $[$ t$_i$ who t$_i$ is our manager$]]]]$ – De Vries 2006,248), even though he also has to admit the availability of unbalanced coordination for the cases of non-nominal antecedents (De Vries 2006,fn.25 and K of section 5.2). This modification however implies, contrary to fact, that *il quale*-pronouns in Italian should be found in false free relatives, which are taken to be a necessary component of appositives. See *Quella/una la quale è di là è mia sorella* '(Lit.) That/one which is in the other room is my sister', *Ciò il quale mi hanno detto è falso* 'that which they told me is false'. As noted by Alexander Grosu (p.c.), French *lequel* provides a similar problem. For further critical remarks, see Del Gobbo (2003,§4.4.1)

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5.3. Deriving the properties of the two types of appositives

Let us start from the differences between the two types of constructions noted in 2.3.1 to 2.3.10.

The fact that *il quale*- (but not *che/cui*-) appositives can have illocutionary independence (2.3.1), can be separated from the Head (also across discourse) (2.3.2), can have split antecedents (whereby at least one of the antecedents is not adjacent to the relative clause) (2.3.3), can have non-nominal antecedents (2.3.6), and cannot host a parasitic gap licensed by an operator binding a variable in the matrix (2.3.7), appears to directly depend on the appositive CP being, in both (60) and (61), an independent sentence at the Discourse level, connected to the antecedent by the same kind of (abstract) heads which concatenate discourse fragments.

The impossibility for *il quale*-appositives to have as Head a nominal temporal adverbial (2.3.9) may instead be attributed to the particular relation (Safir's R-binding) that is established between the *wh*-pronoun and the Head. In the "non-integrated" appositive with *il quale* the pronoun is a kind of E-type pronoun requiring coreference with some object(s) (Evans 1980, 340); hence requiring that the antecedent be independently capable of referring (something that nominal temporal adverbials are not).[29]

Properties 2.3.4 (possible retention of the 'internal Head'), 2.3.5 (possible non identity of the 'internal' and 'external Heads'), 2.3.10 (the possibility for *il quale*-pronouns to be coordinated with other DPs), and the property of such pronouns to allow for Pied Piping of phrases other than PPs (2.2), also appear related to the E-type character of *il quale*-pronouns. In that, they behave just like demonstrative pronouns (an adjectives) which can resume an antecedent across discourse, can be followed by an identical or non-identical copy of the antecedent, can be coordinated with other like categories, and can be freely embedded in other phrases:[30]

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[29]. The notion of reference appropriate for E-type pronouns should be qualified given the possibility for such pronouns to have indefinite antecedents under the scope of a quantifier:

(i) Every guest will bring a bottle. It/Which will almost certainly be a bottle of wine.

[30]. Cf. Jackendoff (1977,175): "relative pronouns in appositives can be anaphoric to the same constituents as ordinary demonstrative pronouns can."

The non 'deletability' of *il quale* pronouns instead may possibly be related to the fact that their deletion is unrecoverable given that the pronoun cannot enter into any relation with its antecedent (cf. Cinque 1982,260).[31]

On the other hand, the strictly complementary behavior of the *che/cui*-appositives appears related to their being an integral part of the DP containing their antecedent. As a consequence of that they lack illocutionary independence (2.3.1), they must be adjacent to the Head (except for the limited cases of extraposition allowed) and cannot have split antecedents (2.3.2 and 2.3.3); being merged within the DP that contains their Head (an extended projection of NP), they can take only a nominal antecedent (2.3.6), and are c-commanded by whatever c-commands their Head, thus allowing a parasitic gap to be licensed by an operator binding another variable in the matrix (2.3.8). Not being E-type pronouns requiring an autonomously referential antecedent they appear to also be able to relativize nominal temporal adverbials (2.3.9).

The remaining properties (2.3.4, 2.3.5, 2.3.10) may instead be related to whatever properties force the wh-pronoun *cui* to 'delete' and to be separated from the Head by at most one PP boundary. In Cinque (1978,1982), I took these properties to follow from a principle of obligatory deletion up to recoverability and from the anaphoric status of *cui*, which imposes a strong locality condition on the distance between the Head and the *wh*-pronoun.

Today, I have nothing more interesting to contribute to this aspect of the syntax of *che/cui*-appositives (and restrictives), which still awaits to be properly understood.[32] Concerning the fact that for some speakers *che/cui*-appositives can either precede or follow *il quale*-appositives (§2.4), the reason may reside in the fact that percolation of the D features of the Head of the "non-integrated" appositive renders HP non-distinct from DP.

As to the non-differences between the two types of appositives reviewed in section 3, speech act adverbs and performative verbs, as noted, are possible (at least for me) with both *il quale*-appositive and *che/cui*-restrictives; hence unsurprisingly also with *che/cui*-appositives.

Concerning Weak Crossover, I noted that both types of appositives (as opposed to restrictives) are immune to it. This seems to be due to the fact that the Head of *il quale*-

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[31]. In Cinque (1982,275 and fn.43) I also conjectured that non-anaphoric *wh*-pronouns necessarily have independent uses in the language (e.g., as interrogative pronouns).

[32]. For a recent alternative to the deletion analysis, see Pesetsky and Torrego (to appear).

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appositives necessarily has, and that of *che/cui*-appositives can have, independent reference, so that the possessive may directly relate to the Head rather than to the relative clause internal trace.

The fact that a pronominal can resume a Head plus a restrictive relative but not the Head plus an appositive relative, whether of the *il quale*- or the *che/cui*-type, may be related to the level of attachment of the appositive, which is above DP/QP in the "integrated" option, and independent of the DP/QP in the "non-integrated" option (in either case differently from the restrictive, which is below D/Q).

If the pronominal is the (possibly elliptical) constituent following D/Q (*He wants to buy that <u>one</u>/ another (<u>one</u>)/ two____*), then only a restrictive can be comprised in that constituent.

Finally, the non licensing of a polarity item in *il quale*-appositives should follow from the impermeability of the appositive to elements found outside. Not clear (to me) is the analogous impossibility of licensing a polarity item inside a *che/cui*-appositive given the possible c-command relation between the antecedent and the polarity item. I leave this as an open question, and perhaps as a problem for the present analysis.

6. Some comparative remarks

An in-depth typological study of appositives is missing. The few observations that are found in the literature are sketchy and not even always converging.[33] The remarks that follow thus cannot but be highly selective and tentative.

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[33]. Compare the following passages:

(i)   "The properties of nonrestrictive RC's are quite different from those of restrictive RC's across languages. Some languages apparently have no nonrestrictive RC's; in others they are syntactically quite distinct; in others restrictive and nonrestrictive RC's are syntactically indistinguishable."

(Downing 1978,380)

(ii)   "Formal distinction between restrictive and non-restrictive relatives is found sporadically across languages[..]."   (Comrie 1981,132)

(iii)   "[..] the syntax of non-restrictives in a language will be largely similar to that of restrictives, modulo some small differences, [..]."   (Keenan 1985,169)

As noted in the quote from Downing (1978) in fn.33, not all languages have appositives. In fact Jeng (1977,195), Lehmann (1984,268), Carlson (1994,487) and Aboh (2005, fn.2) explicitly claim this to be the case of Bunun, Dagbani, Supyire and Gungbe, respectively.[34] Andrews (1975,73), and Aygen's (2003,199), mention Navajo as another language not having appositives.[35]

Also see Mallinson and Blake (1981, section 5.5), Andrews (1995,2004), and De Vries (2005).

[34]. Aboh (p.c.) points out that Gungbe (perhaps all Gbe) resorts to overt or covert coordination instead, as does Bunun (Jeng 1977,195). Another strategy, utilized in Yoruba (Sadat-Tehrani 2004,§5), as well as in a number of Mixtecan languages (see Bradley and Hollenbach 1992), consists in inserting a generic noun like 'person' in apposition, followed by a restrictive clause (possibly a sort of pseudo-free relative).

[35]. Also see De Vries (2005,10f; 2006,266), whose claim that prenominal and internally headed relatives cannot be appositive may be correct for the "non-integrated" appositive construction; apparently, languages with exclusively prenominal appositive relatives cannot relativize a sentence, which is one of the hallmarks of the "non-integrated" appositive (see section 6.2 below). It may, however, be wrong for the "integrated" construction. And in fact prenominal and internally headed appositive relatives are documented in the literature. Setting aside those languages where prenominal appositives are of the reduced (participial) type, possibly comparable to English *the recently renovated museum* (e.g. the Marathi ones in Pandharipande's 1977,80f description), some genuine cases of full finite prenominal appositives seem to exist. See the case of Basque (De Rijk 1972,134), and that of Korean and Japanese (Tagashira 1972,217;Kuno 1973,235; Krause 2001a, chapt. IV,§7 and b,§6;Yuasa 2005,§6.3; and references cited there). De Vries's (2006,265) second way to reinterpret "prenominal appositives", namely as "(definite) free relatives followed by an apposition" ('(the one) who I love, Jean, lives in Paris') also appears dubious given Downing's (1978,392) and Keenan's (1985,149) observations that no language with prenominal relatives displays genuine (initial) *wh*-pronouns.

(One of the two classes of) internally headed relatives isolated in Basilico (1996) and Grosu and Landman (1998) (those that do not display an indefinite restriction) can also apparently be appositive. See (i):

(i) a. Taroo-wa [0 rooka-o isoide aruitekita] Hanako-ni deatta-   (Japanese - Itô 1986,109)

    T.-Top   corridor-Acc hurriedly walked H.-Dat   met

    'Taro happened to meet Hanako, who was hurriedly walking through the corridor'

  b. [Kim-ssi-ka pang-eyse naonun kes]-lul manasse.   (Korean – Jung 1995,241)

    K.-Mr.-Nom room-from coming.out kes-Acc met

    'I met Mr.Kim, who was coming out of the room'

Most languages however do have appositives, although the question now arises whether they have one, or the other, or both, of the appositive types singled out above. Apparently, it so happens that in addition to languages with both types, there are languages which only have one: either the "integrated" or the "non-integrated" appositive. This latter fact may be at the basis of the other observations of Downing's (1978) cited in fn.33. Perhaps, in those languages where "restrictive and nonrestrictive RCs are syntactically indistinguishable" only the "integrated" type is present, which we saw differs minimally from restrictives (in Italian). In those in which "they [restrictive and nonrestrictive RCs, G.C.] are syntactically quite distinct" it is tempting to think that just the "non-integrated", Discourse Grammar, type of appositive is present, which was seen above to pattern quite differently from restrictives (and "integrated" appositives).

6.1. Languages with both "integrated" and "non-integrated" appositives

As seen, Italian possesses both types. And so does French (see the discussion above and Cinque 1982, section 2.1). Spanish, Catalan and (European) Portuguese, which can use either the complementizer or a wh-pronoun, plausibly also display both types (see Brucart 1999, Solà 2002, and Brito 1988, respectively).

Germanic languages, except for Nynorsk, and modern spoken Faroese and Icelandic (and certain dialects of Swedish – Karlsson and Sullivan 2002,103), which only use the relative complementizer *som/sum/sem*, possibly have both types too (Platzack 2002). They employ either wh-pronouns, like English, or d-pronouns. Since only d-pronouns appear compatible with raising of the Head (only d-pronouns can relativize amounts and idiom chunks - Prinzhorn and Schmitt 2005,498fn.2; Salzmann 2006,chapter 2), they

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c. (ded) Edwin wayazaka ki he (ded) thi.   (Dakota – Alboiu 1997,267)

    (here) E.   3rd sg.sick the that (here) house

    'Edwin, who is sick, lives here'

Jung (1995,section3) argues in fact that Korean internally headed relatives can only be appositives (though see Kim 2004,273f), and Prost (1969), cited in Culy (1990,251), claims the same thing for Togo Kã. On appositive internally headed relatives, see Culy (1990,chapter 5,§2.4).

must enter an "integrated" relative.[36] This suggests that when they appear in the appositive construction, they also enter the "integrated" type (while wh-pronouns presumably enter the "non-integrated" one).

To judge from Sotiri (2006), Albanian, but not Arberesh (the Albanian spoken in Central and Southern Italy), also displays both types of appositives.[37] And so do apparently Slavic languages, which utilize either an invariant complementizer (*čto, co, deto,..*), or a wh-paradigm (*który, kotoryi, koito,..*).

6.2. Languages with only "integrated" appositives

As originally noted by Paola Benincà (p.c.), Northern Italian dialects lack *il quale*-appositives altogether.[38]

The same is possibly true of Chinese. As shown in great detail in Del Gobbo (2001, 2003, 2004, 2005, 2006a), Chinese relatives receiving an "appositive" interpretation behave with respect to many of the properties reviewed above like English restrictives (and *che/cui*-appositives in Italian) rather than like English appositives (and *il quale*-appositives in Italian). For example, they can only have nominal antecedents, and allow

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[36]. This implies that a restrictive relative like *Ich kenne nicht den Mann der da ist* 'I do not know the man who is there' involves some kind of doubling. Both the Head (*den Mann*) and the d-pronoun raise to (two adjacent) COMP(s), possibly as in the so-called Contrastive Left Dislocation construction (*Den Mann, den kenne ich nicht* 'the man, I do not know'), except that in the former case one has to assume that the Case assigned to the Head within the relative clause is overridden by the Case assigned to the landing site from outside (cf. Kayne 1994,155,fn.15). Alternatively, the d-pronoun is actually an agreeing complementizer, much as Pesetsky and Torrego (to appear) argue for for the corresponding d-pronouns of Dutch.

[37]. Like Italian, it can utilize either the finite complementizer (*që*) or a wh-pronoun (*cil-in* 'which-the'). In fact, like Italian, Albanian also seems to display two types of restrictives as it employs either the complementizer or wh-pronouns for them too. See Kallulli (2000,359f) and the article by Sotiri quoted in the text.

[38]. In fact, they utilize no wh-pronoun (except for *dove* 'where'), but just the complementizer of finite complement clauses and either a gap or a pronominal (clitic, where possible, or tonic) within the relative clause, depending on the complement position being relativized.

a long-distance anaphor to be bound by an antecedent outside of the appositive. This suggests that (possibly in addition to reduced relatives, which share properties of appositive adjectives – Del Gobbo 2004,2005) the only type available in Chinese is the "integrated" appositive (see, in fact, the conclusion in Del Gobbo 2006c).

To judge from Kuno (1973,235), Andrews (1975,48f), Emonds (1979,fn4), and Kameshima (1989,4.3.3), Japanese appositives, which are identical syntactically to restrictives (pace Yuasa 2005), may also just be of the "integrated" type (for example, the language lacks sentential relatives, like Italian *che/cui*-appositives).[39]

Similarly, Basque and Yoruba appositives (de Rijk 1972,134; and Sadat-Tehrani 2004) cannot have a whole sentence as antecedent, again suggesting that the language may have only appositives of the "integrated" type. De Rijk (1972) also notes that "Japanese, Tamil, and Turkish do not allow sentential relatives, either." (p.135), and connects it to the SOV character of all these languages. Following Kayne (1994, 174,fn71), I will rather take this to be related to the fact that all these languages have prenominal relative clauses, which characteristically lack wh-pronouns (which alone can enter the "non-integrated" type of appositives, we have assumed).

Persian appositives can only be introduced by the same complementizer that introduces finite restrictive (and complement) clauses, *ke*, which again suggests that it may only have the "integrated" appositive (cf. Mahootian 1997,33f).

6.3. Languages with only "non-integrated" appositives

As argued above, English has just the "non-integrated" appositive construction.

Another language that appears to be like English is (modern standard) Romanian, whose appositives (and restrictives) only employ *wh*-pronouns (also used in interrogatives), and never show the presence of the finite indicative complementizer *că* (Dobrovie-Sorin 1994,213; Grosu 1994,212):

(62)   *Ioana, că mi-au prezentat(-o) ieri, nu mi-a plăcut.   (cf. Grosu 1994,212)
       I., that they introduced (her) to me yesterday, did not appeal to me

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[39]. Andrews (1975,49 and 62) and Emonds (1979,fn.4) take the fact that appositives can stack in Japanese (and Korean) as a further indication that appositives in these languages are like restrictives. More generally Andrews claims that languages with exclusively prenominal relative clauses do not mark the restrictive/nonrestrictive distinction (p.63).

Indeed, Romanian appositives display the typical properties of English appositives and of *il quale*-appositives in Italian.

They allow for the Pied Piping of phrases other than PPs (see (63)), show illocutionary independence (see (64)), possible non adjacency to the Head (see (65)), split antecedents (see (66)), retention of the 'internal Head' (see (67)), which may also be non strictly identical to the 'external Head' (see (68)); furthermore they may take non-nominal antecedents (see (69)), and may prepose the appositive in front of a sentential antecedent (see (70)):[40]

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[40]. Coordination of the *wh*-pronoun with another DP, however, was not accepted by my informants. Older stages of the language and (archaic) literary Romanian possess another relative construction, headed by *ce* (lit. 'what'), also used in free relatives (*eu spun ce am auzit* 'I say what I heard'; *fericit de tot ce vedea* 'pleased of all that I saw'). See Nilsson (1969, chapter 3), Dobrovie-Sorin (1994, §6.1.4.2), Grosu (1994,§8.3). Grosu (1994,212ff) discusses evidence that while the *ce* of free relatives is a wh-pronoun or -adjective, the *ce* which introduces (non neuter) headed relatives is a complementizer. Given the possibility of appositives like (ia-b) in (archaic) literary Romanian one may hypothesize that that language also has the "integrated" construction:

(i) a. Când trecurăm print-un sat, ce Hidveg îi zicea   (Nilsson 1969,25)

      When we passed through a village, which (lit. what) they call it Hidveg

   b. Cuconu Costache Bănescu, ce fusese numit şef de poştă aci   (Nilsson 1969,57)

      'Master C.B., who (lit. what) had been appointed head of the post office here'

Colloquial (substandard) Romanian appears to have reanalysed *care* as a complementizer (so that one could argue that that variety of Romanian also has both types of appositive constructions) (cf. Grosu 1994,212):

(i) a. A venit la noi un elveţian, care proiectul lui l-a interesat pe director   (Gheorghe 2004,279)

      A Swiss came to us, who his project interested the director

   b. Ion, care l-am văzut pe el ieri,…

      Ion, who I saw him yesterday,…

Pied Piping of phrases other than PPs

(63) a D. maior E. B., **graţie amabilită ţii căruia** opera filantropică avusese
           concursul gratis,…   (Caragiale, quoted in Nilsson 1969,19)
           'D. major E.B., thanks to the amiability of whom the philanthropic deeds had a
           free competition,…'

    b. Ii cunosc bine pe fraţii tăi, **cel mai înalt dintre care** e fără îndoială Ion.

                                                         (Grosu 2005, §3.3.2.1)
       'I am acquainted with your brothers, the tallest of whom is undoubtedly I.'

    c. Am făcut de curând cunoştinţa unui mare savant, **a discuta în mod serios cu
       care** mi-ar cere   cunoştinţe pe care nu le am.   (Grosu 2005, § 3.3.2.1)
       'I have recently made the acquaintance of a great scholar, to carry out serious
       discussions with whom would require knowledge I do not possess'

Illocutionary independence

(64) a. Ion, **pe care nu uita să-l inviţi la nuntă!**, te-a căutat ieri.

                                                              (Grosu 2005, §2.1)
       'I., who do not forget to invite to the wedding!, looked for you yesterday'

    b. Ion, **pe care cine s-ar gândi să-l invite?**,…
       Ion, whom who would think of inviting?,…

Non adjacency

(65) a. întreba pe cei dinprejur: - Joci? **Care** la rândul lor răspundeau într-un glas:
          - Se poate.   (Nilsson 1969,52)
          '(he) was asking those around : - Will you play ? Who in turn answered
          unanimously: - Maybe'

    b. peste două ore vine trenul de Predeal – **Care** trece pe la Sinaia.

                                                              (Nilsson 1969,130)
       'In two hours the Predeal train arrives – Which passes through Sinaia'

c. îmi oferea premii de încurajare pentru răspândirea săpunului în Țara Românească şi pe cât se poate pentru uzul betistei. **La care** răspundeam.

(Nilsson 1969,130)

'(he) was offering me prizes of encouragement for the promotion of soap in Valachia and as far as possible for the use of the handkerchief. To which I replied'

Split antecedents

(66) ?Dacă Ion$_i$ n-o mai iubeşte pe Maria$_j$, **care copii**$_{i+j}$ de altfel nu s-au iubit nicciodată cu adevărat,…

If I. is no longer in love with M., which young people in any event never really loved each other,…

Retention of the 'internal Head'

(67) Guvernul a făcut o propunere cu ramificaţii multiple şi complexe, **care propunere** fusese deja făcută de opoziţie cu mulţi ani în urmă.

(Grosu 2005, §3.3.2.1)

'The government made a proposal with multiple and complex ramifications, which proposal had already been made by the opposition many years ago'

Non identity of the 'external' and 'internal Heads'

(68) a. un Micul, **care nume** îi trădează originea vlahă,…   (Nilsson 1969,12)

'a guy named M., which name betrays his valachian origin,..'

b. E posibil ca guvernul să demisioneze în curând, **în care caz** va urma o lungă perioadă de incertitudine politică.   (Grosu 2005, §3.3.2.1)

'It is possible for the government to fall soon, in which case a long period of political uncertainty will follow'

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Categorial nature of the antecedent (DP vs. XP)

(69) a. In patruzeci şi nouă de lupte crâncene nu-şi pierduse niciodată sângele rece, salvase situaţia de multe ori, **drept care** fusese de atâtea ori lăudat, decorat, îmbrăţişat.   (Nilsson 1969,48)   (CP)
'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. Lelu le-a prezentat-o pe Geta, **după care** au mers în casă.
(Gheorghe 2004,149)   (CP)
'L. introduced G. to her, after which they went into the house'

Preposability (of the sentential relative)

(70) Ne umplu, cu vârf, farfuriile, cu ciorbă, ne aşeză frumos şerveţelele şi – **lucru la care** nu gândeam – ne întinse şi câte o ceaşcă dolofană cu prăştină.
(Nilsson 1969,51)
'(he) filled up the plates with broth, nicely laid the napkins and – something which I had not thought of – (he) also served us a fat cup with prăştină'

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German Modal Particles in the Functional Structure of IP

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1. Introduction [1]

German modal particles (MPs) are a group of about twenty words,[2] which are mainly used in the spoken language. They have been long neglected by the linguistic research, but have recently become an important field of study for many scholars interested in spoken-language phenomena.

    Their function is to express the speaker's mental attitude toward or belief about what he or she is saying, i.e. they usually add the speaker's subjective point of view to the basic meaning conveyed by the utterance.

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[1]. The present work is a shortened version of some chapters of my M.A. thesis, which was presented at the *seminario di ricerca in sintassi avanzata* held in Venice on January 30th 2006. Most parts of sections 2 to 7 have also been presented at the *Zweite Tagung Deutsche Sprachwissenschaft in Italien*, held in Rome on February 9th-11th 2006). I would like to thank Anna Cardinaletti for her very helpful comments and suggestions.

[2]. *Aber*, *auch*, *bloß*, *denn*, *doch*, *eben*, *eigentlich*, *einfach*, *etwa*, *halt*, *ja*, *mal*, *nur*, *ruhig*, *schon*, *sowieso*, *vielleicht*, *wohl* and other rather controversial lexemes. I wish to draw attention to the fact that the denomination 'modal particles' is not the only one that can be found in the literature, since one can possibly meet other names, such as 'discourse particles', 'illocutive particles' and so on. I use the term 'modal' here since, as I will illustrate, MPs are not only semantically, but also syntactically related to the mood and modality projections of the clause. S. Coniglio (2005:38).

This group of words has mainly been analysed from a narrow perspective, i.e. only from a semantic and pragmatic one. No deep investigation has been made to capture their syntactic behaviour and most scholars limit themselves to the generic and vague statement that these particles can only occur in the *Mittelfeld* (middlefield) of a sentence, that is in that portion of the sentence which is delimited, to the left, by the inflected verb[3] and, to the right, by the uninflected form.

This article is a preliminary attempt to define their exact position with respect to the placement of the different classes of adverbs as defined in Cinque (1999) in the framework of generative studies. The fine-grained structure of the IP he proposes calls for a deeper syntactic analysis of the material showing up in between IP-linked elements.

Below, I will first present some restrictions on the use of MPs, and in the third section, I will target three of these lexemes, namely *ja*, *schon* and *wohl*. Section 4 is a brief introduction to Cinque's theories on the structure of IP and the linear order of adverbs. In sections 5 and 6, I will present grammaticality tests on the three particles under consideration and extend the analysis to all other particles, while in section 7 I will draw a clear boundary between higher and lower functional projections. Section 8 is dedicated to the possibility for MPs to co-occur in the same sentence, while in the last section I will take into account the syntactic status of MPs and argue for an analysis in terms of movement in compliance with the X-bar model.

2. Modal particles and restrictions on their use

As I have already noted, MPs are generally considered middlefield-related elements, i.e. lexemes which occupy some place in between the two verbal positions of matrix clauses of German. However, at a closer inspection, we can see that their use is not restricted to the middlefield. In fact, they can occur:

1. in the middlefield of matrix clauses, which is the main object of my research:

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[3]. This is true only for matrix clauses, where the inflected verb has undergone the so called V2-movement. In embedded sentences, where the verb remains in a clause-final position, the left edge is represented by the complementizer.

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(1)   Du wirst es *schon* schaffen.
       You will   it *schon* manage

2. in the middlefield of embedded clauses:

(2)   Er hat ein schlechtes Gewissen,   weil   er *wohl* gelogen hat.
       He has a   bad   conscience because he *wohl* lied   has
                                                              (Asbach-Schnitker 1977:48)

3. in the prefield (*Vorfeld*) of wh-interrogative clauses:

(3)   Wer *schon* wird das tun wollen?   (Ormelius-Sandblom 1997a:85)
       Who *schon* will it   do   want-to?

4. in complex NPs:

(4)   In der *wohl* größten urbanen Umgestaltung seit der   Neuerschaffung von Paris…
       In the *wohl* biggest urban   reshaping   since the reconstruction of   Paris…
                                                              (Métrich *et al.* 2002:348)

Therefore, a closer scrutiny reveals that they can in principle be found in a number of positions (except for the postfield one – *Nachfeld*),[4] although it is not always clear if we should consider all occurrences of such lexemes as 'proper' MPs. It could be the case that only those elements that are restricted to the middlefield of the clause are MPs in the right sense (this definition could be extended to particles in complex NPs too), and that, for instance, homophonous particles in the prefield of wh-questions are words of a different nature, since other elements (such as adverbs and DPs) can appear in this position. Nevertheless, for the sake of simplicity, I will focus my attention on the their occurrences in the clausal middlefield.

From a diachronic point of view, the cause and origin of this restriction have been sufficiently studied and explained.[5] However, if we want to determine, how many and which positions in the middlefield MPs can occupy, we must state that there is no

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[4]. Cf. Meibauer (1994:29).

[5]. See Abraham (1991) and Coniglio (2005:69ff).

agreement among researchers on this point. They usually place these special adverb-like lexemes in an adjunct position on the edge of the VP. Furthermore, we find only vague descriptions of their position with respect to other elements, such as:

a. DPs and PPs: it is often claimed that, since MPs are found before the rhematic elements, they also function as a marking edge of the theme-rheme structure of the proposition. For instance, in the following contrast, the MP *ja* has to occur before the indefinite NP *einen Mann* 'a man' in (5a), but in presence of a definite NP in (5b), both positions, before and after *den Mann* 'the man' are possible. What follows the MP is the rheme of the sentence.

(5) a. Sie hat {ja} einen Mann *{ja} kennen gelernt.[6]
        She has {ja} a   man   *{ja} got-to-know
     b. Sie hat {ja} den Mann {ja} kennen gelernt.
        She has {ja} the man   {ja} got-to-know

This is probably the result of a movement operation that can only concern definite phrases. By comparison, indefinite ones cannot rise past an MP. Therefore the reason why one cannot find a rhematic constituent before an MP is that the first occupies a position structurally lower than the latter.

b. Subject pronouns: it is generally observed that MPs can either precede or follow strong pronouns, as in example (6b), but they cannot precede a weak pronoun, only follow, as illustrated in (6a).

(6) a. Die Waschmaschine hast *{ja} du {ja} GESTERN   repariert.
        The washing machine have *{ja} you {ja} YESTERDAY repaired
     b. Die Waschmaschine hast {ja} DU   {ja} gestern   repariert.
        The washing machine have{ja} YOU {ja} yesterday repaired

What determines the surface order in these examples is the position of the pronoun, which can occur either before or, if stressed, also after the MP…{du/DU} *ja* {DU}...[7]

. Here and in what follows, braces mean that the lexemes occupies alternatively either one position or the other.

. However, there are cases where a clitic MP, such as *'n* (a reduced form of *denn*), can occur before a weak subject pronoun (see also Grosz 2005:17ff):

c. Adverbs:[8] some authors have emphasised that an unstressed particle can either precede or more rarely follow a sentence adverb, as in (7a). On the other hand, a stressed one can normally be found only after a sentence adverb, as in (7b):

(7) a. Wir sind {ja} wahrscheinlich {ja} pleite.
        We are {ja} probably   {ja} broke
     b. Er soll *{JA} notwendigerweise {JA} auf den Schadenersatz verzichten.
        He must *{JA} necessarily   {JA} the compensation forgo

However, one can often find deviations from this general rule. Cf. Meibauer (1994:102):

(8) A: Müller sagt, daß Fritz wahrscheinlich krank ist. Aber ich glaube das nicht.
        Müller says, that Fritz probably   sick is but I believe it not
     B: Fritz ist *DOCH wahrscheinlich* krank. (Ich weiß das von der Krankenschwester.)
        Fritz is *DOCH probably*   sick I know it from the nurse

In this article, I am mainly concerned with precisely the problematic relation between MPs and adverbs. By means of several grammaticality tests I will try to determine the reciprocal syntactic behaviour of the two word classes, thus shedding some light on an issue that has been scarcely investigated until now.

3. Modal particles and sentence-type restrictions. Three case studies.

Another set of restrictions which are well documented in the literature concerns the impossibility for all particles to be found in all sentence types, i.e. each MP can occur only in certain well-defined sentence types, with the further complication that it is not always obvious if we are dealing with one MP that can be used in different contexts or

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(i) Hast*'n* du ein Auto?   (Weydt *et al*., 1983:20)

   Have*'n* you a car

[8]. Cf. Ormelius-Sandblom (1997b:45ff) and Meibauer (1994:99ff).

with more homophonous particles.[9] Leaving aside this long unsolved dispute, I present here a table showing the distribution of each MP with respect to the main sentence types.

(9)   *Sentence-type restrictions:*[10]

	Declarative	Yes/no-int.	Wh-interr.	Imperative	Optative	Exclamat.	Wh-exclam.
aber						+	antiquated
auch	+	+	+	+			+
bloß			+	+	+		+
denn		+	+				
doch	+		+	+	+		+
eben	+			+			
eigentlich	?	+	+				
einfach	+	+		+			
etwa		+					
halt	+			+			
ja	+						
JA	+	seldom		+	+		
mal	+	+		+			
mir	+			+		+	
nur			+	+	+		+
ruhig	+			+			
schon	+		+	+			
sowieso/eh	+	seldom					
vielleicht		+				+	
wohl	+	+	+				

As we can see, MPs are clearly subject to considerable restrictions. For example, a particle like *denn* can be found only in interrogative sentences, either yes/no- or wh-questions, but on no account can it occur in any other sentence type.[11]

    I'll now consider three case studies, namely *ja*, *schon* and *wohl*, and, after giving a very brief account of their function and meaning, I will take into account the sentence types in which each of them can appear.

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[9]. This issue is particularly relevant in the case of the particle *ja*. See 3.1.

[10]. Cf. Thurmair (1989:49), Abraham (1986:36; 1991:334), Helbig and Buscha (1991:486ff), Hentschel (1986:199) and Ormelius-Sandblom (1997b:24ff).

[11]. But see the problematic case of sentences like (43) below.

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3.1. *Ja*/*JA*

Traditionally, we distinguish two MPs or two variants of the same particle *ja*, that is:
• an unstressed form, which is usually marked by the semantic feature <BEKANNT>$_H$ (Thurmair 1989:104 and Weinrich 1993:844), i.e. 'known to the hearer', because the information conveyed by the utterance is or in principle should be already known to the hearer;[12]
• a stressed form *JA*[13], whose function is characterised by the feature <VERSTÄRKUNG> ('strengthening', Thurmair (1989):109), since it is generally used to strengthen the illocutive force of the utterance.[14]

In the specialist literature, there is now general agreement in considering *ja*/*JA* as two different, though homophonous particles.[15] But, in order to make this distinction more concrete, let us now turn our attention to the observation of the contexts in which they are used.

<u>*ja* in declarative sentences</u>
It can have many meanings but its general function is to express that the information is accessible to the hearer.

(10)   Der Attentäter ist *ja* von der Polizei festgehalten   worden.
        The assassin   is *ja* by the police detained   been

<u>*JA* in imperative sentences</u>
It strengthens the illocutive force of the utterance and is often used in warnings and threats.

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[12]. See Coniglio (2005:48ff).

[13]. Here and in what follows, capital letters are used to indicate the stressed form.

[14]. See Coniglio (2005:51ff).

[15]. This is proved by the possibility of combining them in the same sentence:

(i) Ich darf *ja* meine Unterlagen *JA* nicht vergessen.   (Meibauer, 1994:140)
    I   may *ja* my   documents *JA* not   forget

(11) Sei *JA* vorsichtig!
      Be *JA* careful

JA in optative sentences
It is generally preceded by other MPs which are compatible with this sentence type too, such as *doch* and *nur*.

(12) Würde er die Wahrheit *nur JA* bekennen!
      Would he the truth   *nur JA* confess
      'If only he confessed the truth!'

JA in yes/no-questions
It is always preceded by the MP *auch*.

(13) Haben Sie *auch JA* auf den Schadenersatz verzichtet?
      Have   you *auch JA*   the   compensation forgone

JA in declarative sentences
We must distinguish between two different uses:

• *JA* can sometimes be accompanied by certain modal verbs, such as *sollen* 'must', *wollen* 'want-to' and *dürfen* 'may', and its function is the same as in imperative sentences:

(14) Er   soll *JA* auf den Schadenersatz verzichten.
      He   must *JA*   the   compensation forgo

• there is another variant of *JA* in declarative sentences, which is used to react to a precedent negated proposition. This 'reactive' variant is often considered as an adverb:

(15) Speaker A: Der Attentäter ist nicht von der Polizei festgehalten worden.
      Speaker B: Der Attentäter ist *JA* von der Polizei festgehalten worden.
      'The assassin was not detained by the police ~ (Quite the reverse,) the assassin
      WAS detained by the police'

3.2. *Schon*

In the specialist literature, this particle is often described by means of the semantic feature <GELTUNGSEINSCHRÄNKUNG> 'validity restriction/limitation', since its main function consists in limiting possible counter-arguments by making a concession (cf. Thurmair 1989:148ff). However, deviations from this basic meaning are frequently registered, according to the sentence type under consideration and/or to the eventual presence of an accent.[16]

<u>*SCHON* in declarative sentences</u>
In principle it can also be unstressed and is used in many contexts (even idiomatic expressions). The following is a case of a concessive structure:

(16) Ich versteh *SCHON*, dass du nichts   sagen darfst. Aber…
      I understand *SCHON* that you nothing say   may. But…

<u>*schon* in declarative sentences</u>
It expresses certainty as to the realisation of a future event or the truth of a fact that has not yet been proved.

(17) Er wird es *schon* schaffen.
      He will it *schon* manage

<u>*schon* in wh-questions</u>
It is used in two contexts:

• in the case of temporary lack of information:

(18) Na,   wie heißt   er *schon*?
      Hmm how is-called he *schon*

• in rethorical questions:

---

[16]. See Coniglio (2005:55ff).

(19) Wer verzichtet *schon* auf einen Schadenersatz?
      Who forgoes   *schon*   a   compensation

schon in imperative sentences
It expresses friendliness, encouragement, warning or even impatience.

(20) Na   los, komm *schon*!
      Come on, come *schon*

3.3. *Wohl*

The particle *wohl* is used to restrict the validity of an utterance. That is why it is often described by means of the semantic feature <EINSCHRÄNKUNG> 'limitation, restriction' (Thurmair (1989):140 and Weinrich (1993):849).[17]

wohl in declarative sentences
It expresses a supposition, thus limiting the validity of the utterance.

(21) Die Polizei wird *wohl* von der Verhaftung   berichten.
      The police will *wohl* on the arrest   report

Reactive *WOHL* in declarative sentences
As in the case of *JA* and *SCHON*, also this particle has an adverb-like reactive variant.

(22) Speaker A: Der Attentäter ist nicht von der Polizei festgehalten worden.
      Speaker B: Der Attentäter ist *WOHL* von der Polizei festgehalten worden.
      'The assassin was not detained by the police ~ (Quite the reverse,) the assassin WAS detained by the police.'

wohl in yes/no-questions
Although seldomly used, it is mainly found in polite questions:[18]

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[17]. See Coniglio (2005:62ff).

[18]. But it is also found in threatening requests:

(23) Könnten Sie mir *wohl* bei dieser Angelegenheit helfen?

     Could you me *wohl* with this affair help

<u>*wohl* in wh-questions</u>

This variant is mainly used in contexts where the speaker assumes that the hearer's capacity to answer is limited:

(24) Wie geht es ihr *wohl* in ihrem neuen Job?

     How goes it to-her *wohl* in her new job

     'Who knows how she is doing with her new job?'

4. An account of the hierarchical order of adverbs

The starting point of my investigation was the observation of the striking behaviour of MPs entering into combinations with adverbs. Let us consider the following examples, where three different MPs (*JA*, *schon* and *wohl*) were combined with the same three adverbs (*notwendigerweise* 'necessarily', *unvermeidlicherweise* 'inevitably' and *nochmals* 'again'):

(25) a. Er soll *{JA} *notwendigerweise* {JA} auf den Schadenersatz verzichten.

     b. Er soll *{JA} *unvermeidlicherweise* {JA} auf den Schadenersatz verzichten.

     c. Er soll {JA} *nochmals* ??{JA} auf den Schadenersatz verzichten.

       He must {JA} *necessarily/inevitably/again* {JA} the compensation forgo

(26) a. Nun melden Sie *{schon} *notwendigerweise* {schon} Köln an!

     b. Nun melden Sie {schon} *unvermeidlicherweise* {schon} Köln an!

     c. Nun melden Sie {schon} *nochmals* *{schon} Köln an!

       Now book (you) {schon} *necessarily/inevitably/again* {schon} Cologne prt

(27) a. Die Polizei wird {wohl} *notwendigerweise* {wohl} von der Verhaftung berichten.

(i) Wirst du *wohl* die Klappe halten?   (Thurmair, 1989:143)

   Will you *wohl* shut-up

b. Die Polizei wird {wohl} *unvermeidlicherweise* {wohl} von der Verhaftung berichten.

c. Die Polizei wird {wohl} *nochmals* *{wohl} von der Verhaftung berichten.

The police will {wohl} *necessarily/inevitably/again* {wohl} on the arrest report

The behaviour of the three particles is rather puzzling: *JA* has to follow adverbs like *notwendigerweise* 'necessarily' and *unvermeidlicherweise* 'inevitably', but obligatorily precedes an adverb like *nochmals* 'again'. Concerning the particle *schon*, it can occur before *unvermeidlicherweise* 'inevitably' too. Finally, *wohl* can also be found before adverbs like *notwendigerweise* 'necessarily'.

In order to explain these facts, it is necessary to ground the research on a sound syntactic theory, which accounts for the internal structure of the middlefield and the position of IP-related constituents, such as adverbs. In this respect, I wish to suggest that Cinque's proposals (1999) seem to provide a quite convincing explanation of examples (25) to (27). He starts from the observation of data about the order of free and bound functional morphemes from a large variety of languages, which is considered a piece of evidence for the underlying structure of IP. By comparing their order with the reciprocal order of adverbs observed in a number of languages, there seems to exist an almost perfect one-to-one relation between adverbs and functional morphemes. He thus claims that adverbs would be licensed in the Spec-position of dedicated functional projections, whose heads would be either phonetically silent or realised by such morphemes.

What follows is the complete hierarchy of the functional projections inside IP with an example of each adverb class hosted in their specifiers.

(28) *The universal hierarchy of clausal functional projections* (Cinque 1999:106ff):

[*frankly* Mood$_{speech\ act}$ [*fortunately* Mood$_{evaluative}$ [*allegedly* Mood$_{evidential}$ [*probably* Mod$_{epistemic}$ [*once* T(Past) [*then* T(Future) [*perhaps* Mood$_{irrealis}$ [*necessarily* Mod$_{necessity}$ [*possibly* Mod$_{possibility}$ [**willingly** **Mod$_{volition}$** [**inevitably** **Mod$_{obligation}$** [*cleverly* **Mod$_{ability/permission}$** [*usually* Asp$_{habitual}$ [*again* Asp$_{repetitive(I)}$ [*often* Asp$_{frequentative(I)}$ [*quickly* Asp$_{celerative(I)}$ [*already* T(Anterior) [*no longer* Asp$_{terminative}$ [*still* Asp$_{continuative}$ [*always* Asp$_{perfect}$ [*just* Asp$_{retrospective}$ [*soon* Asp$_{proximative}$ [*briefly* Asp$_{durative}$ [*characteristically* Asp$_{generic/progressive}$ [*almost* Asp$_{prospective}$ [*completely* Asp$_{SgCompletive(I)}$ [*tutto* Asp$_{PlCompletive}$ [*well* Voice [*fast/early* Asp$_{celerative(II)}$ [*again* Asp$_{repetitive(II)}$ [*often* Asp$_{frequentative(II)}$ [*completely* Asp$_{completive(II)}$

The serialisation presented here is not actually the one proposed by Cinque himself, since root-modal projections and subject-oriented adverbs (which are linked to these) are placed in a position immediately lower than alethic adverbs (*necessarily*, *possibly* and so on), as suggested by Cinque (1999:78ff). However, he asserts that these functional projections are possibly even lower than habitual adverbs and other adverb classes, but since the data about their reciprocal order is not always consistent, he leaves the question open. Cinque (2001) comes back to this problem and, grounding his analysis on the behaviour of restructuring verbs in Romance languages, he claims that these projections are situated in between aspectual projections, which are the lowest clausal functional projections. As a matter of fact, the observation of the linear order of modal and functional verbs suggests a cartography of the lower portion of the clausal functional projections such as the following:

(29) *Revised hierarchy of clausal functional projections from $Asp_{habitual}$* (Cinque 2001:153):

… $Asp_{habitual}$ > $Asp_{delayed/finally}$ > $Asp_{predispositional}$ > $Asp_{repetitive(I)}$ > $Asp_{frequentative(I)}$ > **$Mod_{volition}$** > $Asp_{celerative(I)}$ > $Asp_{terminative}$ > $Asp_{continuative}$ > $Asp_{perfect}$ > $Asp_{retrospective}$ > $Asp_{proximative}$ > $Asp_{durative}$ > $Asp_{progressive}$ > $Asp_{prospective}$ > $Asp_{inceptive}$ > **$Mod_{obligation}$** > **$Mod_{ability}$** > $Asp_{frustrative/success}$ > **$Mod_{permission}$** > $Asp_{conative}$ > $Asp_{Completive(I)}$ > Voice > $Asp_{celerative(II)}$ > $Asp_{inceptive(II)}$ > $Asp_{completive(II)}$ > $Asp_{repetitive(II)}$ > $Asp_{frequentative(II)}$ …

Nevertheless, I assume that subject-oriented adverbs occupy a higher position, one between alethic and habitual adverbs, since their position is more difficult to determine.[19] In this article I will not be pursuing this issue, although further

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[19]. Cf. Coniglio (2005:15 n. 12). We should probably distinguish more clearly between subject-oriented adverbs from homophonous manner adverbs. For instance, the sentence:

(i) John has cleverly read the book.

is structurally ambiguous between a subject-oriented (iia) and a manner interpretation (iib):

(ii) a. It was clever of John to read the book.

    b. John read the book cleverly.

See also Cinque (1999:19f).

investigation is needed. What matters here is that, except for very few cases, this hierarchy seems to hold for German as well.[20]

5. The reciprocal order of modal particles and adverbs

In this section, I present some grammaticality tests on the three particles. For reasons of space and perspicuity I will report only some experiments on the lexeme *ja/JA*. For the other tests on *ja*, *schon* and *wohl* I refer to Coniglio (2005:125ff).

In order to investigate their exact position in the clausal middlefield, I combined each MP-variant with the different adverbial classes outlined by Cinque (1999). I asked some native speakers to judge the grammaticality of sentences where each variant either preceded or followed the adverb in question. I thus collected some interesting data which can possibly give some hints as to the underlying syntactic structure hosting these elements.

Insurmountable problems have often arisen since these tests call for very delicate judgments, thus being susceptible of variation. Furthermore, not all adverbs can occur in all sentence types. Therefore, in these cases it was not possible to construe sentences which were 'semantically' acceptable. Native speakers, nevertheless, seem to be able to judge the syntactic wellformedness of a sentence, although it is semantically impossible or deviant. In such cases, I preferred to mention the combination between omission marks, providing the grammaticality judgements anyway.

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[20]. See Coniglio (2005:148). Just to give a very simple example, consider (i), where an adverb like *damals* 'then', related to a temporal projection, is combined with the adverb *schnell* 'fast', occupying the specifier of a celerative projection, according to Cinque. The former must obligatorily precede the latter, thus proving the existence of a fixed linear order of adverbs.

(i) a. Er hat *damals schnell* eine neue Wohnung gefunden.

   He has *then   fast*   a   new apartment found

   b. *Er hat *schnell damals* eine neue Wohnung gefunden.

   He has *fast   then*   a   new apartment found

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5.1. *Ja* in declarative sentences

Below, I present the first battery of tests on the unstressed particle *ja* in declarative sentences. In order to allow a more comfortable reading of the data, I have intentionally omitted the translation glosses. Nonetheless, beside each sentence, I indicated the functional projection which hosts the adverb under consideration.

$Mood_{speech\ act}$ _____	Der Attentäter ist {ja} *ehrlich gesagt* {ja} von der Polizei festgehalten worden.
$Mood_{evaluative}$ _____	Der Attentäter ist {ja} *glücklicherweise* {ja} von der Polizei festgehalten worden.
$Mood_{evidential}$ _____	Der Attentäter ist {ja} *offensichtlich* (?){ja} von der Polizei festgehalten worden.
$Mod_{epistemic}$ _____	Der Attentäter ist {ja} *vermutlich* {ja} von der Polizei festgehalten worden.
T(*Past*) _____	Der Attentäter ist {ja} *damals* {ja} von der Polizei festgehalten worden.
T(*Future*) _____	Der Attentäter wird {ja} *jetzt* {ja} von der Polizei festgehalten.
$Mood_{irrealis}$ _____	Der Attentäter ist {ja} *vielleicht* (?){ja} von der Polizei festgehalten worden.
$Mod_{necessity}$ _____	Der Attentäter ist {ja} *notwendigerweise* {ja} von der Polizei festgehalten worden.
$Mod_{possibility}$ _____	Der Attentäter ist {ja} *möglicherweise* (?){ja} von der Polizei festgehalten worden.
$Mod_{volition}$ _____	Der Attentäter ist {ja} *absichtlich* ?{ja} von der Polizei festgehalten worden.[21]
$Mod_{obligation}$ _____	Der Attentäter ist {ja} *unvermeidlicherweise* {ja} von der Polizei festgehalten worden.
$Mod_{abil./permiss.}$ _____	Der Attentäter ist {ja} *klugerweise* {ja} von der Polizei festgehalten worden.
$Asp_{habitual}$ _____	Der Attentäter wird {ja} *normalerweise* {ja} von der Polizei festgehalten.
$Asp_{repetitive(I)}$	Der Attentäter ist {ja} *nochmals* *{ja} von der Polizei festgehalten worden.
$Asp_{frequentative(I)}$	Der Attentäter ist {ja} *oft* *{ja} von der Polizei festgehalten worden.
$Asp_{celerative(I)}$	Der Attentäter ist {ja} *schnell* *{ja} von der Polizei gefesselt worden.
T(*Anterior*)	Attentäter ist {ja} *bereits* *{ja} von der Polizei festgehalten worden.
[…]	[…]

Some interesting facts emerge from the observation of these first tests. The particle *ja* seems to be able to indifferently[22] precede or follow certain adverb classes, and

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[21]. As seen in section 4, subject-oriented adverbs such as *absichtlich* 'intentionally, deliberately', *freiwillig* 'voluntarily', *gerne* 'with pleasure, not reluctantly' etc. seem to be rather problematic.

[22]. The pre- or post-adverbial position of MPs can actually entail slight changes in the meaning of the utterance and enrich it with new subtle nuances, which are very difficult to capture and interpret.

precisely not only all Cinque's higher adverbs, but also the first class of the lower adverbs, i.e. habitual adverbs. The particle cannot follow (higher) repetitive adverbs[23] and all adverb classes lower than these.

If we adopt an approach à la Cinque, with adverbs occupying a fixed position and forming a strict hierarchy, we have to determine which positions MPs occupy, especially since they can occur in between these adverb phrases. We could postulate the existence of MP-related projections interspersed between the ones hosting adverbs. Their exact number could be in principle identical to that of the higher functional projections detected by Cinque. But I will come back to this point in section 9.

One could claim that a particle like *ja* in the tests above actually occupies only two positions, a very high one (before adverbs in Mood$_{\text{speech act}}$) and a very low one (between habitual and repetitive adverbs). These would be sufficient to derive all grammatical orders reported above. However, let us observe example (30), where I combined adverbs of different classes (*glücklicherweise* 'luckily', *vermutlich* 'probably' and *nochmals* 'again') and tested all possible occurrences of the MP *ja*:

(30) Er ist {ja} glücklicherweise {ja} vermutlich {ja} nochmals *{ja} von der Polizei
        festgehalten worden.
        He is {ja} luckily   {ja} probably   {ja} again   *{ja} by the police
        detained been

In presence of more than one adverb, all positions before repetitive adverbs seem to be available, and also the intermediate ones. That is why we have to assume the existence of many intermediate functional projections hosting MPs, but a deeper investigation

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[23]. It is worth mentioning the fact that Cinque (1999:91ff) distinguishes between higher and lower repetitive adverbs. Consider the following sentence:

(i) Gianni ha di nuovo battuto alla porta di nuovo/ancora.   (Cinque, 1999:92)
    'G. again knocked on the door again'

He observes that "[t]he leftmost *di nuovo* quantifies over the event (of knocking on the door, perhaps many times), while the rightmost quantifies over the act itself of knocking". MPs interact only with the higher class, therefore in the following discussion I will refer to this, although I sometimes omit the adjective 'higher'.

would be necessary in order to determine their exact number and position. See section 9 for some proposals in this regard.

5.2. *JA* in imperative sentences

JA in imperative sentences is a more complex case because, as I hinted before, certain adverb classes are excluded from this sentence type. Therefore, some of the following examples could sound more artificial and unnatural, but nevertheless provide some interesting insight into the phenomenon.

Mood$_{speech\ act}$	Sei *{JA} *ehrlich gesagt* {JA} vorsichtig!
Mood$_{evaluative}$	Sei *{JA} *hoffentlich* {JA} vorsichtig!
Mood$_{evidential}$	… ?{JA} *offensichtlich* {JA} ...
Mod$_{epistemic}$	… *{JA} *vermutlich* {JA} …
T(Past)	… {JA} *damals* {JA} …
T(Future)	Sei *{JA} *jetzt* {JA} vorsichtig!
Mood$_{irrealis}$	… *{JA} *vielleicht* {JA} …
Mod$_{necessity}$	Sei *{JA} *notwendigerweise* {JA} vorsichtig!
Mod$_{possibility}$	… *{JA} *möglicherweise* {JA} …
Mod$_{volition}$	… (?){JA} *absichtlich* {JA} …
Mod$_{obligation}$	Sei (?){JA} *unvermeidlicherweise* {JA} vorsichtig!
Mod$_{abil./permiss.}$	Sei *{JA} *klugerweise* {JA} vorsichtig!
Asp$_{habitual}$ _____	… *{JA} *normalerweise* {JA} …!
Asp$_{repetitive(I)}$	Sei {JA} *nochmals* ?{JA} vorsichtig!
Asp$_{frequentative(I}$	Sei {JA} *oft* *{JA} vorsichtig!
Asp$_{celerative(I)}$	Iss {JA} *schnell* *{JA} die Suppe auf!
T(Anterior)	Sei {JA} *bereits* *{JA} vorsichtig!
[…]	[…]

Notwithstanding omissions and doubtful cases, the MP in question displays a significantly different behaviour from the unstressed form, since it can apparently occupy only one position, namely the one between habitual and repetitive adverbs.

6. Analysis

The following tables give a brief overview of the grammaticality tests on the MP *ja, schon* and *wohl* (see Coniglio (2005):117ff). I've listed here the different MP-variants and illustrated the positions these can occupy with respect to the clausal functional projections mentioned in the far left column.

As to the particle *ja/JA,* it displays a rather varied behaviour according to the sentence type taken into consideration. The two particles can potentially occupy all positions before repetitive adverbs, except for *JA* in imperative and declarative sentences. In these cases only the intermediate position between habitual and repetitive adverbs seems to be available.

	ja	JA				
	Declarative	Imperative	Optative	Yes/no-int.	Declarative	React. decl.
Mood$_{speech\ act}$	●		●	●		●
Mood$_{evaluative}$	│		│	│		│
Mood$_{evidential}$	│		│	│		│
Mod$_{epistemic}$	│		│	│		│
T(Past)	│		│	│		│
T(Future)	│		│	│		│
Mood$_{irrealis}$	│		│	│		│
Mod$_{necessity}$	│		│	│		│
Mod$_{possibility}$	│		│	│		│
Mod$_{volition}$	│		│	│		│
Mod$_{obligation}$	│		│	│		│
Mod$_{abil./permiss.}$	│		│	│		│
Asp$_{habitual}$	●	●	●	●	●	●
Asp$_{repetitive(I)}$						
Asp$_{frequentative(I)}$						
Asp$_{celerative(I)}$						
T(Anterior)						
[…]						

Just like *ja/JA*, the particle *schon* can 'regularly' occupy either more positions (in declarative sentences, when stressed, and in rhetorical questions, if unaccented) or just one position (in declarative sentences, when stressed). However, in wh-interrogatives and in imperatives the particle *schon* displays an anomalous behaviour if compared with that of the other particles: it can occur before subject-oriented adverbs, but not higher, i.e. it cannot precede adverbs in Mod$_{necessity}$ and in Mod$_{possibility}$.

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	SCHON	schon			
	Declarative	Declarative	Wh-interr.	Rhet. Wh-int.	Imperative
Mood$_{speech\ act}$	•			•	
Mood$_{evaluative}$					
Mood$_{evidential}$					
Mod$_{epistemic}$					
T(Past)					
T(Future)					
Mood$_{irrealis}$					
Mod$_{necessity}$					
Mod$_{possibility}$			•		•
Mod$_{volition}$					
Mod$_{obligation}$					
Mod$_{abil./permiss.}$					
Asp$_{habitual}$	•	•	•	•	•
Asp$_{repetitive(I)}$					
Asp$_{frequentative(I)}$					
Asp$_{celerative(I)}$					
T(Anterior)					
[...]					

Finally, the particle *wohl* diplays an apparently more uniform behaviour, since it can, in any event, occupy the highest positions in the hierarchy of the clausal functional projections. All occurrences higher than Asp$_{repetitive(I)}$ seem to be possible.

	WOHL	wohl		
	React. decl.	Declarative	Yes/no-int.	Wh-interr.
Mood$_{speech\ act}$	•	•	•	•
Mood$_{evaluative}$				
Mood$_{evidential}$				
Mod$_{epistemic}$				
T(Past)				
T(Future)				
Mood$_{irrealis}$				
Mod$_{necessity}$				
Mod$_{possibility}$				
Mod$_{volition}$				
Mod$_{obligation}$				
Mod$_{abil./permiss.}$				
Asp$_{habitual}$	•	•	•	•
Asp$_{repetitive(I)}$				
Asp$_{frequentative(I)}$				
Asp$_{celerative(I)}$				
T(Anterior)				
[...]				

Therefore, despite the considerable difficulties in collecting such data, one thing can be stated with certainty: the three particles cannot occur after repetitive adverbs. This conjecture is also confirmed by the behaviour of the other MPs. As I will illustrate in the next section, when MPs are combined with each other, they always display a precise (although not always unique) order. Since the lowest particles in constellations are *mal* and *JA*, we would expect that, if they can never occur after repetitive adverbs, all other particles cannot either. This seems to be the case. We have already seen that *JA* complies with this assumption, but as to *mal* things are more complicated. There is at least one homophone of the particle *mal*, namely the temporal adverb (*ein*)*mal*, which often blurs the data. Nonetheless, I wish to claim that repetitive adverbs like *wieder* draw a boundary between the MP and the homophonous temporal adverb (*ein*)*mal* 'once/some day/any time', as is illustrated in the following example:

(31) a. Komm (*ein*)*mal* wieder vorbei!
          Drop-in (*ein*)*mal* again on-me
      b. Komm wieder (*ein*)*mal* vorbei!
          Drop-in again (*ein*)*mal* on-me

In example (31a) *mal* is a MP, since the full form of the adverb (*ein*)*mal* is not allowed in this position. *Mal* in example (31b) is probably a temporal adverb, because in this case the full form is available too.

To summarize, it is now ascertained that all particles have to occur above a certain adverb class, namely higher repetitive adverbs, but nothing can be said as to the highest position they can occupy as a class.

7. The boundary between higher and lower clausal projections

More straightforward is to try to answer as to why there is a clear cut between habitual and higher repetitive adverbs. This fact is not very surprising, since the lower portion of the clausal architecture hosts adverbs which are linked to aspectual projections, while in the higher one there are only non-aspectual projections, with speaker- and (maybe[24]) subject-oriented adverbs, and MPs have obvious closer connections to these projections,

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[24]. See section 4.

rather than to aspectual ones. Hence, it is not at all unexpected for particles to occupy the highest part of the clausal structure.

There is one problem with this scenario. Habitual adverbs are inserted in a projection of aspectual type, because they seem to be linked to the event structure of the verb. But from the observation of my data, they seem to belong to the class of the higher adverbs. That is to say that in their lowest position, MPs would mark the boundary between higher and lower clausal projections. In what follows, I collected some hints (in Italian and German), which suggest that the projection $Asp_{habitual}$ is to be considered as a higher projection, and habitual adverbs consequently as higher adverbs. Let us examine some of these proofs:

1. In Italian and in other Romance languages higher adverbs can occur in the post-complement "space" only if they are "de-accented", as in example (32). The same holds for habitual adverbs, as illustrated in example (33). Cf. Cinque (1999:14f):

(32) a. * Prenderò il treno probabilmente.   *Italian*
          'I will get the train probably'
       b. Prenderò il treno, probabilmente.
          'I will get the train, probably'

(33) a. *Gianni beve vino solitamente.   *Italian*
          'G. drinks wine usually'
       b. Gianni beve vino, solitamente.
          'G. drinks wine, usually'

On the contrary, lower adverbs are usually accented if they occur in the post-complement space. Cf. Cinque (1999:13f):

(34) Da allora, non accetta sempre i nostri inviti mica PIU'.   *Italian*
      'Since then, he doesn't accept always our invitations not any longer'

2. Higher adverbs cannot move under wh-movement, as we can see from example (35a) and the Italian equivalent (36a). The same curiously holds for habitual adverbs, as is illustrated by examples (35b) and (36b), while some lower adverbs are admitted in such constructions, as can be observed in examples (35c) and (36c). Cf. Cinque (1999:16f).

(35) a. *Wie vermutlich geht sie in die Disko?
      'How probably will she go to the disco?'

      b. *Wie normalerweise geht sie in die Disko?
      'How usually does she go to the disco?'

      c. Wie oft geht sie in die Disko?
      'How often does she go to the disco?'

(36) a. *Quanto probabilmente va in discoteca?   *Italian*

      b. *Quanto normalmente va in discoteca?

      c. Quanto spesso va in discoteca?

3. In a variety of languages habitual adverbs often display a particular ending (for example –*weise* in German and –*mente* in Italian), which are usually found in some higher adverbs.[25] See, for instance, the German adverbs *normalerweise*, *gewöhnlicherweise*, *üblicherweise* etc. and the Italian ones *normalmente*, *solitamente* an so on.

4. The Italian verb *solere* '(to be) used to' and similar periphrastic constructions related to the projection Asp_{habitual,} such as *essere solito*, *essere uso* and *aver l'abitudine di* seem in a certain sense to be "subject-oriented", thus showing some connection to higher projections. For example, they require the subject of a sentence to be alive. Cf. Bertinetto (1991:148):

(37) La fabbrica ?soleva / ??era solita / *aveva l'abitudine di aprire alle 5.   *Italian*
      the factory   used   to open at 5

Furthermore, *solere* behaves as a modal verb, not as an aspectual one. A simple test to demonstrate this fact is provided by Cardinaletti and Shlonsky (2004). In contrast to aspectual (38b) and lexical verbs (38c), modal (and auxiliary) ones (38a) can occur in very marked Aux-to-C structures. Cf. Cardinaletti and Shlonsky (2004:545) citing Rizzi (1982:112 n. 10):

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[25]. As for example German *möglicherweise* 'possibly', *glücklicherweise* 'luckily' and Italian *probabilmente* 'probably', *necessariamente* 'necessarily'. Note that this ending is typical for some manner adverbs as well, which are event-related adverbs, therefore very low ones. See for instance Italian *irriverentemente* 'impiously' or *brutalmente* 'brutally'.

(38) a. Ritengo [$_{CP}$ dover [$_{IP}$ tuo fratello/lui tornare   a casa]].   *Italian*
    (I) believe (to) have   your brother/he (to) come-back to home

  b. *Ritengo [$_{CP}$ cominciare [$_{IP}$ tuo fratello/lui a dire sciocchezze]].
    (I) believe   (to) begin   your brother/he (to) tell nonsense

  c. *Ritengo [$_{CP}$ raccontare [$_{IP}$ tuo fratello/lui questa storia]].
    (I) believe   (to) tell   your brother/he this   story

Also *solere* seems to be allowed in such constructions, displaying another connection
with modal verbs, rather than with aspectual ones:

(39) Ritengo [$_{CP}$ soler   [$_{IP}$ tuo fratello/lui dimostrare grande coraggio]]   *Italian*
    (I) believe (to) be-used your brother/he (to) display great   courage
    'I believe your brother/he usually displays great courage'

To summarize, there are a lot of reasons to claim that Cinque's Asp$_{habitual}$-P is actually a
high projection and MPs provide further evidence in favour of this hypothesis as well.

8. The reciprocal order of modal particles

As I mentioned before, it is possible to find MPs in combinations, which can often
achieve a high level of complexity:

(40) Das ist *ja denn doch* die Höhe! […]   (Thurmair, 1989:222)
    That is *ja denn doch* the limit

When combined with each other, MPs enter a precise syntactic order, which is not
always easy to determine. Helbig and Kötz (1981:41f), for example, proposed to divide
them into the following five groups, claiming that the particles of the first class precede
those of the second one and so forth:

1) *denn, doch, eigentlich, etwa, ja*
2) *aber, eben, halt, vielleicht, wohl*
3) *DOCH, schon*
4) *auch, mal*
5) *bloß, nur*

However, such a classification cannot foresee the linear order of two MPs belonging to the same group. Unfortunately, the data are further complicated by the fact that some particles can alternatively occur before or after other particles according to particular circumstances, such as the presence or absence of stress. For instance, see the case of *ja/JA* in the following example (Meibauer 1994:140), where the unstressed variant precedes the particle *auch*, while the stressed one has to follow it:

(41) a. Der hat *ja auch* seine Hausaufgaben schon   gemacht.
   　　 He has *ja auch* his   homework   already done
   b. Mach *auch JA* deine Hausaufgaben!
   　　 Do   *auch JA* your homework

Therefore, MPs should be analysed having in mind their single variants, because their syntactic behaviour varies according to these. This is in any case an extremely complex operation, given the number of possible combinations, without considering that not all particles can occur in the same sentence types. Here I present the sequence of the main MPs, which one can summarily observe:[26]

(42) *ja > denn > doch > halt/eben > DOCH > wohl > eh/sowieso/nur > bloß > schon/ruhig > mal/JA*[27]

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[26]. This serialisation is perhaps the result of scope relations between them, since they are apparently ordered from the more generic to the more specific one. Cf. Thurmair (1989:288f) and Abraham (1995).

[27]. Here I mention some examples from Thurmair (1989:203ff) which confirm the plausibility of such a hierarchy. Translations are omitted for the sake of brevity:

(i)　　Das ist *ja denn doch* die Höhe! […]

(ii)　　[…] der kann *eben wohl auch* nicht so aus seiner Haut.

(iii)　　[…] und auf seine Art hat er mich *ja wohl auch* gern gehabt oder geliebt.

(iv)　　Das müssen die *wohl schon* machen.

(v)　　[…] Wie konntest du *auch nur* diesem Halunken vertrauen?!

(vi)　　Komm *doch nur ruhig mal* vorbei!

(vii)　　Sperr *nur JA* das Haus immer gut zu! […]

Needless to say this order is very simplified, since not all MP-variants were taken into account. However, some problematic aspects deserve mentioning:

1) The order *ja > denn > doch* is not unchallenged. It is based mainly on exceptional examples like the following:

(43) Das ist *ja denn doch* die Höhe! […]   (Thurmair, 1989:222)
       That is *ja denn doch* the limit

However, as the Thurmair herself (ibid.) claims, in this case *denn* is rather a variant of the temporal adverb *dann* 'then', which is attested in some varieties of German. Otherwise, we could explain why a particle like *denn*, which can occur only in interrogatives (see table (9)), can be found also in exclamative contexts.

2) The reciprocal order of *halt* and *eben*, *eh/sowieso* and *nur*, *schon* and *ruhig*, *mal* and *JA*, are rather problematic. The particles in each pair seem to exclude one another for semantic and maybe even for syntactic reasons. We can observe that every particle either convey the same meaning as the other particle in the pair (as, for instance, in the case of *halt* and *eben*, which are almost synonyms) or the opposite one (see the case of *mal* and *JA*). Hence, since they express identical or exactly opposite values of the same semantic feature, I would suggest that they also occupy the same syntactic positions.

3) *Eigentlich* and *vielleicht* occur before *wohl*, but are not mentioned in (42) because it is difficult to determine their position with respect to other MPs.

4) *Auch*, *aber* and *einfach* possibly occupy more positions, therefore they are not inserted in (42). More subtle distinctions could be drawn among their different uses and variants.

Despite many unresolved questions, what is interesting to observe here is the fact that the order between two MPs is always attained, even when other material is inserted between them. As we see in example (44), the combination of the two MPs *ja* and *wohl* can only yield the linear order *ja > wohl*, no matter if an adverb like *vermutlich*

'probably' precedes (44a), follows (44b) or separates them (44c)[28]. All other combinations (44d, e, f), where the particles are in the reversed order *wohl > ja*, are excluded:

(44) a. Das ist vermutlich *ja wohl* nicht wahr.
      b. Das ist *ja wohl* vermutlich nicht wahr.
      c. Das ist *ja* vermutlich *wohl* nicht wahr.
      d. *Das ist vermutlich *wohl ja* nicht wahr.
      e. *Das ist *wohl ja* vermutlich nicht wahr.
      f. *?Das ist *wohl* vermutlich *ja* nicht wahr.
          'That's probably not true'

If we assume that there exists a fixed sequence of adverbs and that particles can occur interspersed between them, it is striking for MPs to be hierarchically ordered as well; it's as if adverbs and MPs were two parallel lines somehow capable of touching each other or intersecting. Hence, it is necessary to formulate some syntactic hypotheses in order to explain these curious facts.

9. Modal particles and the X-bar model

The present section is dedicated to the analysis of the syntactic behaviour of German MPs, an issue which is often evaded by many scholars, even in the framework of the generative studies on Universal Grammar. In most cases, they have been considered as a special group of adverbs, so that they have shared the same fate as this word class, which has not yet found a definite place in the clausal structure. As a consequence, from a syntactic perspective, they were mainly analysed as free adjuncts occupying a position on the edge of VP, which is a common characteristic of (non-circumstantial) adverbs and MPs. This explanation, however, has the flavour of a contrivance devised for residual constituents (such as adverbs and MPs), which can be hardly integrated into the syntactic structure.

    Besides this theory-internal consideration, the hypothesis of free adjunction shows other considerable drawbacks.

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[28]. This last option is only available for open MP constellations, as in the present case. In close constellations (such as *nicht etwa*) nothing can intervene between the MPs.

As in the case of adverbs,[29] if we want to support this conjecture, we should find an explanation for the fact that the sequence of MPs is rigid too, as we have seen in the preceding section. The combination of the two MPs in (44) is supposed to follow a precise order, namely *ja > wohl*, while the inverted one is not allowed. If this were a case of free adjunction, we would expect both orders to be possible, but this is not the case.[30] Furthermore, the free adjunction hypothesis cannot explain cases where other elements besides MPs, such as adverbs, occur. But I will come back to this point below.

Recent cartographic studies (Cinque 1999, see section 4 above) have shed some light on the syntactic nature of adverbs and other elements, which had long been considered to be free-adjoined, thus calling for a deeper investigation of these phenomena. But, before targeting the problematic position of MPs in the functional structure of IP, I would like to address a preliminary question, namely the long disputed syntactic status of MPs, which are considered by some authors to be heads and maximal projections by others. A clear and unique classification for these lexemes seems to be difficult to achieve.

9.1.   The syntactic status of modal particles

The arguments for the hypothesis that MPs are head-elements are more convincing[31] and more numerous. Like heads, MPs:[32]

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[29]. Cf. Cinque (1999:47ff) in this regard.

[30]. See below where I claim that MPs are subject to a movement operation. I will take into account complex MP-constellations in presence of adverbs, which free adjunction cannot easily explain, if at all.

[31]. However, it would remain unexplained how these anomalous non-projecting heads would be integrated in the clausal structure. Also the adjunction hypothesis is rather problematic. See (i) below, where *ja* occurs between two maximal projections. If we suppose that heads are adjoined only to other heads, one should explain to which head the MP in question is adjoined:

(i) Die Polizei hat den Attentäter *ja* in einem Bierhaus gefasst.

    the police has the assassin *ja* in a   pub   caught

[32]. Cf. Coniglio (2005:29ff).

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1) cannot be topicalised:

(45) a. Trinken Sie *ruhig* noch ein Bier!
          Drink   you *ruhig* another beer
      b. *Ruhig* (,) trinken Sie noch ein Bier!
          Ruhig (,) drink   you another   beer

2) cannot be coordinated:

(46) Gehen Sie *doch* (*und) *mal* zum   Arzt!
      Go   you *doch*   and   *mal* to-the doctor

3) cannot be modified:

(47) ≠?Trinken Sie *sehr ruhig* noch ein Bier!
        Drink   you *very ruhig* another   beer

4) cannot be used in isolation:

(48) *Wie kann ich noch ein Bier trinken? *Ruhig*.
       How can I   another beer drink   *ruhig*

5) cannot be focalised and usually do not have contrastive accent:[33]

(49) a. Halt *mal* den HAMMER!
          Hold *mal* the HAMMER

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[33]. MPs cannot have focus accent, but in the present work (see 3.1, 3.2 and 3.3) also lexemes with contrastive accent are considered to be MPs. See (i):

(i) Speaker A: Er ist nicht betrunken.
     Speaker B: Er ist *JA/SCHON/WOHL* betrunken!
     'He is not drunk. ~ (Quite the reverse,) He IS drunk!'

In such cases they are not accepted as MPs by all researchers. However, from a syntactic point of view they display the same behaviour as MPs. See section 6.

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    b. *Halt *MAL* den Hammer!
       Hold *MAL* the hammer

Those who plead for the hypothesis that MPs are maximal projections have less convincing arguments, since they generally adduce only negative proofs. They insist that, otherwise, it would be impossible to reconcile their alleged status as heads with their syntactic behaviour in cases where scrambled DPs and PPs occur between two MPs. Cf. Ormelius-Sandblom (1997b:40):

(50) […] weil es   *ja bei jedem Menschen wohl* eine gewisse Entwicklung gibt.
     because there *ja in every person*   *wohl* a   certain development is

The author (ibid.) claims that, since the PP *bei jedem Menschen* occurs between two MPs, it should be an adjunct to the head Mood° (the one which would host the MP). However, an adjunction of a maximal projection to a head is not admitted. That is why an analysis of MPs as heads should be rejected.

   As to the opposite conjecture, according to which they are maximal projections, one should state more precisely what kind of projections they are. Two possible solutions have been maintained, i.e. they could be:
1) adjuncts to VP.
2) specifiers of or adjuncts to a functional projection;
The hypothesis of adjunction to VP is old-fashioned and inadequate, since MPs clearly occur in an IP-internal position and are only apparently on the left edge of VP.[34] Therefore, one could only adopt the second solution, which is in principle very close to Cinque's proposals as far as adverbs are concerned.

   Hence, on one side MPs have intrinsic properties which remind us of head-elements, but on the other side they behave like maximal projections in presence of other constituents in the middlefield. How can we solve this aporia?[35] We could maintain that both hypotheses are correct.[36] As hinted above and in section 5, in analogy with

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[34]. Cf. Ormelius-Sandblom (1997b:41ff) and Meibauer (1994:56).

[35]. Cf. Meibauer (1994:53).

[36]. Cf. Cardinaletti (forthcoming) for a similar conclusion.

Cinque's analysis of adverbs, MPs could be considered to be specifiers of MP-related functional projections (MoodPs). In this sense, they would be maximal projections, namely modal particle phrases (MPPs), as is illustrated in the following tree-structure:[37]

(51)   MoodP
             /   \
         MPP   Mood'
                  /   \
              Mood°   […]
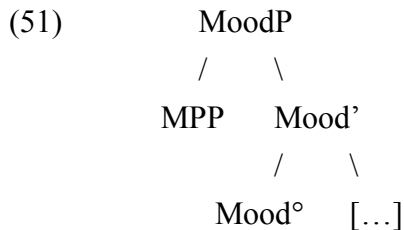
Thus, MoodP would be similar to the functional projections which host AdvPs and DPs.[38]

The most delicate point is, however, the internal structure of MPP. I would claim that, since particles cannot project, they must probably be considered deficient non-branching structures, as illustrated here:[39]

(52)   MPP
                 |
                 |
               MP°

---
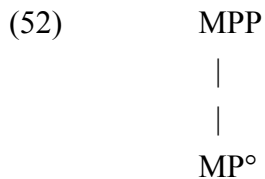
[37]. Cf. Ormelius-Sandblom (1997b:37).

[38]. Cf. Cinque (1999:44ff and 108f).

[39]. Cf. Ormelius-Sandblom (1997b:43 n. 87). The author claims that the fact that they cannot be "expanded" does not entail that MPs cannot be maximal projections, because there are units, such as *sicherlich* 'certainly', that cannot be modified as in the case of MPs (i), but that can nevertheless occur in the prefield (ii) and must therefore be maximal projections:

(i) *sehr/*gerade *sicherlich*
     very / right   *certainly*

(ii) *Sicherlich* wird sie morgen   da   sein.
     certainly   will she tomorrow here be

MPP would be as to say a 'degenerated' maximal projection. It is interesting to observe that many or maybe all these particles have originated from adverbs, which have undergone a grammaticalisation process, and their exceptional behaviour is, perhaps, the consequence of this phenomenon[40]. Also intriguing is the hypothesis that MPs are generated as maximal projections, but behave as if they were heads, because they are deficient XPs. Consequently, they cannot occupy those positions which are only available for full-fledged XPs.[41]

9.2. The movement hypothesis

Much more problematic is the syntactic freedom of MPs with respect to other clausal elements. In fact, the possibility for them to co-occur interspersed between adverbs and other constituents make the analysis more complex. One could interpret the phenomenon in either of the following ways:[42]

1) Flexible base generation (Flexible Merge): MPs could be merged "at any time" during the derivation, before or after a certain adverb, in one of the different MP-related functional projections. Let us consider this example:

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[40]. See Abraham (1991) and Coniglio (2005:86ff). As to the hypothesis that MPs are the result of a grammaticalisation process cf. Diewald (1997, 1999), Meibauer (1994), Molnár (2002), Ormelius-Sandblom (1997b) and Wegener (2002).

[41]. Developing the tripartite classification of pronouns proposed by Cardinaletti and Starke (1999:176) and extending it to adverbs, an interesting parallel could be drawn between adverbs and MPs, on one side, and pronouns and full DPs, on the other, as illustrated by (i), but this would require a more elaborate discussion.

(i) Clitic MPs ("clitic adverbs") < MPs ("weak adverbs") < 'Proper' adverbs < Adverbials

    Clitic pronouns < Weak pronouns < Strong pronouns < Full DPs

See n. 7, where I first mentioned clitic MPs. They can be found in some varieties of German and display a quite different behaviour. Cf. Grosz (2005).

[42]. Cf. Ormelius-Sandblom (1997b:43ff).

(53) Das ist {ja} vermutlich {ja} nicht wahr.

This is {ja} probably {ja} not true

The two grammatical orders of the adverb and the particle in this sentence would be the result of a simple Merge operation of the kind in (54a), if the particle is merged before the adverb is, or of the kind in (54b), if it is merged afterwards. Therefore, MPs would be base-generated in the same position where they occur at PF. No movement would affect them.

(54) a. … [$_{\text{MoodP}}$ *vermutlich* Mood° [$_{\text{MoodP}}$ *ja* Mood° [$_{\text{IP}}$ …]]]

b. … [$_{\text{MoodP}}$ *ja* Mood° [$_{\text{MoodP}}$ *vermutlich* Mood° [$_{\text{IP}}$ …]]]

2) Movement analysis (Merge & Move): MPs would be merged in a low base position and undergo movement to the specifier of an MP-related functional projection MoodP.[43] The two possible combinations in sentence (53) would be obtained through a movement operation concerning the particle *ja* and targeting two different landing sites, either before or after the projection of the epistemic adverb *vermutlich* 'probably'. But the starting position of this movement would be the same in both cases.

(55) a. … [$_{\text{MoodP}}$ *vermutlich* Mood° [$_{\text{MoodP}}$ *ja*$_i$ Mood° [$_{\text{IP}}$ … t$_i$ …]]]

b. … [$_{\text{MoodP}}$ *ja*$_i$ Mood° [$_{\text{MoodP}}$ *vermutlich* Mood° [$_{\text{IP}}$ … t$_i$ …]]]

Here I will argue for the second hypothesis. That this is a movement phenomenon can be inferred by a simple example.[44] Let us combine the two MPs *ja* and *wohl* with the same adverb *vermutlich* 'probably', as in example (56) and (57). Both the pre-adverbial and the post-adverbial position are available for the two particles:

(56) a. Das ist *ja* vermutlich nicht wahr.

This is *ja* probably not true

b. Das ist vermutlich *ja* nicht wahr.

This is probably *ja* not true

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[43]. See section 6.

[44]. See Cinque (1999:47ff), who adopts this method to challenge the free adjunction hypothesis.

(57) a. Das ist *wohl* vermutlich nicht wahr.
           This is *wohl* probably   not   true

      b. Das ist vermutlich *wohl* nicht wahr.
           This is probably *wohl* not   true

If we now try to combine per analogy the two MPs, we would expect that, given that adverbs occupy a fixed position, both sequences in (58) are correct. However, surprisingly, the sentence (58b) is not acceptable.

(58) a. Das ist *ja* vermutlich *wohl* nicht wahr.
           This is *ja* probably *wohl* not   true

      b. *?Das ist *wohl* vermutlich *ja* nicht wahr.
           This   is *wohl* probably *ja* not   true

Whatever intervenes between the MPs, the sequence must be necessarily *ja > wohl*.[45] Notice that the conjecture of a flexible base generation cannot easily explain these facts.[46] As we saw in section 8, MPs display a fixed linear order also "at distance", i.e. when they are interspersed between adverbs, scrambled DPs and so on. There is clearly a strong link between them and a good viable solution is to surmise that they are generated in a common base position, where they can enter a rigidly ordered hierarchy.

Hence, the movement hypothesis is highly plausible.[47] MPs would be generated in a base position which I would claim to be the functional projection between habitual and higher repetitive adverbs. As we saw above, this is the lowest position that all MPs can occupy.[48] For reasons that are still to be explained, under certain circumstances they can

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[45]. See section 8.

[46]. The drawbacks are identical with those of the free adjunction hypothesis for adverbs (see Cinque (1999):47ff).

[47]. See Ormelius-Sandblom (1997b:43ff) against the movement hypothesis. She claims that MPs occupy a fixed position (as adjuncts) and that the variable overt positions of the MPs are due to the movement of other phrases. It would be difficult to reconcile this idea with the perspective adopted here that adverbs stay put in fixed positions. If adverbs cannot be moved, MPs must move past them.

[48]. See section 5 and 6.

rise from this position to the different MP-related functional projections which are interspersed between the mood and modality projections proposed by Cinque, thus being able to climb over some adverb classes. So, for instance, if we look at the tables in section 6, in the case of *JA* in imperative sentences no movement is allowed, while as to *wohl* this is always available, even targeting a projection higher than all AdvPs. Finally, in the case of *schon* in imperatives, this movement is possible, but limited in its range, since the highest projections are precluded.

However, it is not clear how many and which MP-related functional projections are involved and if they are created by the movement itself or if they are always present in every sentence, but I would postulate the existence of as many projections as are those detected by Cinque for the higher portion of the sentence, but further research would be necessary on this point.

9.3. Movement of particle constellations

We have still to explain how this movement over some adverb classes can take place when we are dealing with a particle constellation. Let us consider example (44), repeated here as (59):

(59) a. Das ist vermutlich *ja wohl* nicht wahr.
       b. Das ist *ja wohl* vermutlich nicht wahr.
       c. Das ist *ja* vermutlich *wohl* nicht wahr.
       d. *Das ist vermutlich *wohl ja* nicht wahr.
       e. *Das ist *wohl ja* vermutlich nicht wahr.
       f. *?Das ist *wohl* vermutlich *ja* nicht wahr.
           'That's probably not true'

In (59), the movement operation can involve only the particle *ja*, both *ja* and *wohl* or neither *ja* nor *wohl*. Under no circumstances is it admitted for the particle *wohl* to move past *ja*:[49]

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[49]. One could suspect that, in example (59), it is the adverb (not the particles) that for some reason has been moved. But see example (30) again or example (i) below, where *ja* and *wohl* are combined with the adverbs *glücklicherweise* 'luckily' and *vermutlich* 'probably'. The particles seem to behave the same way. Every other possible order is excluded. Translations are omitted for the sake of clarity:

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(60) * … *wohl* ₍ᵢ₎ … *ja* … t ₍ᵢ₎ …

Here I argue that MP-combinations imply 'multiple adjunctions' à la Kayne (1994:19ff). A cluster of MPs is generated in the Spec-position of a functional projection MoodP through recursive adjunctions.[50] An open constellation,[51] such as *ja wohl* in (59), would be generated in a structure like the following:

(61)

```
                    MoodP
                   /     \
                  /       \
            MP₁P*          Mood'
           /    \            |
          /      \           |
      MP₂P      MP₁P      Mood°
        |         |
        |         |
      MP₂°      MP₁°
       ja       wohl
```
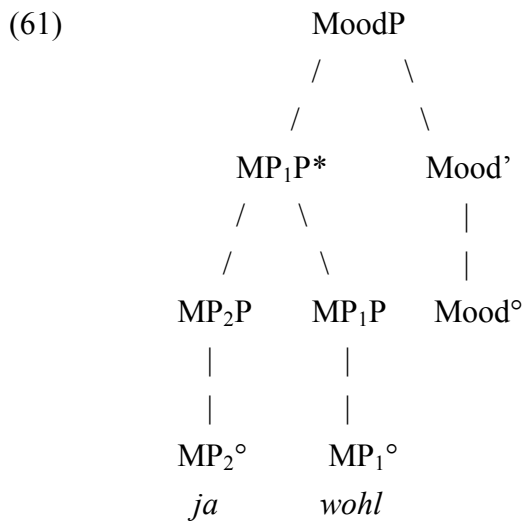
(i) a. Der Attentäter ist glücklicherweise vermutlich *ja wohl* von der Polizei gefasst worden.

  b. Der Attentäter ist glücklicherweise *ja* vermutlich *wohl* von der Polizei gefasst worden.

  c. Der Attentäter ist *ja* glücklicherweise vermutlich *wohl* von der Polizei gefasst worden.

  d. Der Attentäter ist glücklicherweise *ja wohl* vermutlich von der Polizei gefasst worden.

  e. Der Attentäter ist *ja* glücklicherweise *wohl* vermutlich von der Polizei gefasst worden.

  f. Der Attentäter ist *ja wohl* glücklicherweise vermutlich von der Polizei gefasst worden.

[50]. This would also explain the narrow link that seems to exist between some particles in (multiple) combinations. See for instance the case of *(doch wohl) nicht etwa* and close constellations in general. See n. 51.

[51]. Open constellations are those combinations of MPs where one or more constituents, such as AdvPs, DPs and PPs, can occur between them; close constellations are, on the other hand, indivisible sequences of MPs. Cf. Thurmair (1989:290ff).

This is probably the underlying structure in the base generation position (between $Asp_{habitual}$ and $Asp_{repetitive(I)}$). It is precisely here that MPs would enter the hierarchical order *ja > wohl*. And, from here, the particles can possibly rise to the specifier of higher MP-related projections MoodPs. If we take into account the movement options that are at stake in this example, we observe that three possibilities can be envisaged:

1) both particle stay put,[52] thus giving the sentence (59a);

2) the whole cluster MP_1P^*, namely *ja wohl*, moves, thus resulting in (59b);

3) only MP_2P, i.e. the particle *ja* alone, moves, as in (59c).

Such movement operations take place in respect of a sort of minimality between particles, so that, in example (59), no order where *wohl* precedes *ja* is possible.

This would answer the question why two particles can be linked also 'at distance'. In a movement analysis there is a unique sequence admitted, which is exactly established in the base projection, and movement can take place only preserving this order.

The hypothesis of the generation in a unique base projection preceding every movement operation would allow us to explain two other important facts. Firstly, we can account for the existence of close or lexicalised MP-constellations, such as *nicht etwa*,[53] which cannot be split by other intervening material (adverbs, DPs and so on). Such an analysis can foresee that, since these combinations are generated in inseparable clusters in adjacency conditions, on no account can they be split. Secondly, we can explain the strict restrictions arising in the creation of (open) MP-constellations, which cannot take place at random, but always depends on certain compatibility criteria, such as the possibility for the particles to show up in the same sentence type (see section 3) and the agreement of their semantic features (see Thurmair (1989):203).

In conclusion, I would like to emphasise that although it is now clear enough why MPs occur in the higher portion of the clausal structure, much work remains to be done in order to explain the reasons for their movement. A more refined analysis of the interaction between adverbs and MPs from a semantic point of view will probably give a definitive answer to this problem.

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[52]. Notice that they could have undergone some movement operation anyway, although there is no overt element that allows us to perceive it.

[53]. See n. 51.

10. Conclusions

In this article I addressed the issue of the syntactic behaviour of German modal particles. I started by introducing three case studies, namely *ja*, *schon* and *wohl*, and by considering their use restrictions. I then presented some grammaticality tests on the three lexemes and showed that they all follow a precise syntactic pattern. Hence, I tried to extend my analysis to the other particles and to the cases where they are combined with each other. I claimed that MPs are base-generated in a functional phrase between two of Cinque's clausal projections, namely $Asp_{habitual}$ and $Asp_{repetitive(I)}$. Finally I argued for a movement hypothesis and tried to explain all these facts in compliance with X-bar theory.

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A Syntactic Way to Subjunctive

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1.   Introduction

In this paper I'll discuss the syntactic properties of the Italian subjunctive and their relevance at the syntax/semantics interface.

The starting point will be the consideration that the subjunctive plays a characteristic role in sequence of tense phenomena. Languages that show the Double Access Reading —henceforth, DAR—with the indicative, in general do not exhibit it with the subjunctive.[1]

In this work I'll discuss the syntax associated with subjunctive—in particular, the syntax of the CP layer—and show that in DAR languages its properties systematically correlate with the temporal interpretation assigned to the embedded clause. I propose, following ideas by Giorgi and Pianesi (1997, 2004a), that this pattern can be explained by means of the following hypothesis: the CP layer, when the embedded clause has a DAR interpretation, contains a projection that is read off at the interface as pointing to the speaker's (temporal and spatial) coordinate. In the other, non-DAR, cases such a projection is absent and therefore the speaker's coordinate doesn't intervene in the temporal interpretation of the embedded clause.

Even if this suggestion cannot explain the whole of the subjunctive phenomena, it nevertheless opens the way to a better understanding of some empirical observations.

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[1]. There are exceptions, however. In some peculiar contexts the subjunctive forms as well exhibit DAR effects. This is a very important point, because it permits to highlight the nature of the DAR, on one side, and the syntactic structure of embedded clauses, on the other. For this reason, Giorgi and Pianesi's (1997, 2004a, 2005) works on subjunctive mostly focused exactly on these cases.

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The following generalizations will be shown to hold: In DAR languages, the contexts where the speaker's coordinate *must always* be represented, are the indicative ones. The contexts where it must *not* be represented, are the contexts where a subjunctive verbal form *must* appear. This proposal is based on the analysis of contexts where the speaker's coordinate *can* be present, but *must* not, which exhibit a peculiar syntax and a corresponding peculiar semantics.

This analysis has the advantage of permitting a natural distinction between the so-called subjunctive in DAR languages and the apparently corresponding mood found in non-DAR languages. The sets of so-called *subjunctive phenomena* in the two language groups present systematic differences, which can appear in a different light, once connected to the syntax and semantics of the CP layer as analyzed here.

2. Complementizer Deletion in Italian and Sequence of Tense

2.1. Complementizer Deletion: a description

Syntactically, one of the most interesting properties of the Italian subjunctive is constituted by the fact that it admits Complementizer Deletion—henceforth, CD—as opposed to the indicative mood, which never allows it. Consider for instance the following sentences:

(1)   Gianni ha detto *(che) ha telefonato Maria.
       Gianni said that has(IND) called Maria
       'Gianni said that Maria called'

(2)   Gianni credeva (che) avesse telefonato Maria.
       Gianni believed (that) had(SUBJ) called Maria
       'Gianni believed that Maria called'

The only erlevant difference between (1) and (2) is the subjunctive/indicative alternation in the embedded clause.[2]

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[2]. In this paper I'm using the present perfect form of the indicative, instead of the simple past one, both in main clauses and in subordinate ones. I.e., *ha detto* (lit: has said) instead of *disse* (said) and *ha telefonato* (lit: has called) instead of *telefonò* (called). In Italian in fact, the present perfect, especially in

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In (2) the subjunctive permits CD, whereas this is impossible in (1).[3]

Italian is quite isolated in the Romance domain in admitting CD. In this, it apparently resembles English, which also permits the complementizer to be omitted in some contexts. The two languages however, appear very different once the question is studied in depth. I'll not replicate here the discussion of the comparative facts and refer the reader to the relevant literature.[4]

I'll argue that the study of this property of Italian complement clauses might shed light on the general characteristics of the subjunctive mood in DAR languages. In particular, In this paper I'll develop a proposal put forth in Giorgi and Pianesi (1997,

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the central and northern varieties, serves—approximately—the same function as the simple past in English. With stative verbs, such as *credere* (believe) and *desiderare* (wish)—i.e., verbs expressing an attitude of the subject toward a certain content—the past form usually chosen is the imperfect of the indicative: *credeva (*believed) and *desiderava* (wished*). The present perfect (*ha creduto, ha desiderato*) and the simple past *(credette, desiderò)* convey the meaning that the psychological state, or attitude, of the subject doesn't hold anymore. This effect is presumably to be connected with the aspectual and actional properties of the predicates. Concluding this brief remark, these questions are intriguing and complex ones, but do not have much to do with the issue considered in this paper, therefore I leave them aside. See Giorgi and Pianesi (1997) for a comparative, Romance vs. Germanic, discussion.

[3]. Notice that though permitted, CD is never *obligatory*, in that the non-CD option is always available. Another important property is constituted by the disjoint reference effect, i.e., *obviativity*, with the subjunctive, but not with the indicative, as exemplified by the following examples:

(i) Gianni$_i$ crede che pro$_{j/*i}$ parta.
     Gianni believes that he leaves

(ii) Gianni$_i$ ha detto che pro$_{i/j}$ partirà.
     Gianni said that he will leave

A null embedded subject of a subjunctive complement clause cannot be coreferent with the main subject, whereas there is no ban if the embedded clause is an indicative one. For analysis of these facts, as well as of some relevant exceptions to this pattern, see Costantini (2005).

[4]. Giorgi and Pianesi (1997, 2004a) agree with Poletto (1995, 2000, 2001) who argues that Italian and English CDs are different phenomena. She however claims that Italian CD structures have the same properties of embedded V2 in German. On this point Giorgi and Pianesi disagree. See the quoted reference for further discussion.

2004a) and argue that in Italian the speaker coordinate can be represented in the CP-layer of the embedded clause.

Giorgi and Pianesi's proposal is the following: the speaker's coordinate always intervenes in DAR contexts, which typically select the indicative. In general, the subjunctive gives rise to a representation of the embedded clause in which the speaker's coordinate is not represented. However, even if *most* DAR contexts are with the indicative, *some* subjunctive embedded clauses exhibit the DAR.

The syntax of subjunctive clauses with DAR effects will be shown to parallel the one of embedded indicative clauses. More precisely, DAR sentences are introduced by a complementizer projection—CP—which is not realized when the complement clause does not exhibit DAR effects.

In this section I'm going to illustrate the data concerning the correlation in Italian between the absence of the complementizer—i.e., CD—and the temporal interpretation of the embedded clause. The contexts I'll consider are mostly the ones where the sentence is a clausal complement of the verb. In Quer's (1998) and Stowell's (1993, 1996) terminology this is the so-called *intensional* subjunctive. The basic piece of evidence has already been provided in (1) vs. (2).

Interestingly, for some Italian speakers—but not for me—a verb such as *credere* (believe) can either select for a subjunctive or for an indicative verbal form. However, only the subjunctive admits CD. Consider for instance the following example:

(3)   (*)Gianni crede *(che) ha telefonato Maria.
      Gianni believes that has(IND) called Maria
      'Gianni believes that Maria called'

Modulo the marginality of the indicative, in this case CD is impossible, on a par with the verbs of *saying* such as *dire* (say), illustrated in example (1).

From this piece of evidence it follows that CD is not a property of the main verb—or at least *not only* a property of the main verb—but has to do with the indicative /subjunctive divide.

With respect to this last point, consider also that there is a class of verbs requiring the subjunctive, disallowing however CD. This is the class of factive—or better, *factive-emotive/psych*—verbs, as in the following case:

(4)   *Gianni rimpiange che è partita.
      Gianni regrets that (she) has (IND) left

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(5)   Gianni rimpiange *(che) sia partita.
       Gianni regrets that (she) has (SUBJ) left

These verbs select subjunctive in the embedded clause—as can be inferred by the ungrammaticality of example (4)—but do not allow CD—as shown by example (5).

Giorgi and Pianesi (1997, 2004a) analyzed this paradigm and pointed out a correlation with the sequence of tense phenomena, whihc I'll briefly discuss in the next section.

2.2. DAR Phenomena

It is a well-known fact that Italian—together with French, Spanish, Catalan, English and many other—is a DAR language. In these languages the embedded indicative form is evaluated twice: once with respect to the utterance time and once with respect to the time of the main event. Consider for instance the following case:

(6)   Gianni ha detto che Maria è incinta.
       Gianni said that Maria is pregnant

The pregnancy of *Maria* is taken to hold both at the time the speaker is uttering the sentence and at the time Gianni said it. Namely, if Gianni said *Maria is pregnant* three months ago, the sentence implies that she still is pregnant *now* and therefore that it is not the case that she gave birth in the meanwhile. Analogously, the following sentence is odd:

(7)   #Due anni fa Gianni ha detto che Maria è incinta.
       Two years ago Gianni said that Maria is pregnant

The oddity of this sentence is explained in the same way: it cannot be the case, Maria being a human, that she was pregnant two years ago and that she still is. She might be pregnant *again*, but this is not inferable from the sentence in question, in that the meaning of the sentence must be that the *same* event of being pregnant holds at both times.

Languages that do not exhibiting the DAR, such as Russian, Japanese and Romanian, do not evaluate the embedded event twice. The temporal evaluation takes place only

once—i.e., with respect to the superordinate event. In these languages therefore, sentence (6) would be equivalent to the following one in Italian, English or French:

(8)   Gianni ha detto che Maria era incinta.
       Gianni said that Maria was(IMPERF) pregnant

In example (8) the embedded verbal form in Italian is in the imperfect of the indicative. This sentence implies that Maria's pregnancy was certainly holding at the time Gianni spoke about it, but not necessarily *now*, i.e., at the time of the utterance. Sentences of the type (6) have precisely this meaning in non-DAR languages. Coherently with what said so far, the equivalent of (7) is felicitous:

(9)   Due anni fa Gianni ha detto che Maria era incinta.
       Two years ago Gianni said that Maria was(IMPERF) pregnant

By means of the imperfect, it becomes possible to properly express the meaning that two years ago Gianni said that *at that time* Maria was pregnant, without simultaneously implying that she still is at utterance time. I'll not consider here the properties of the embedded imperfect, given that they are connected with aspectual properties lying outside the scope of this paper

    Many scholars studied these phenomena and proposed several accounts for them. Here I'll rely on the theoretical proposal elaborated by Giorgi and Pianesi (1997, 2000, 2004b).[5]

    Giorgi and Pianesi argued that the DAR is not a property peculiar of the present tense, but that it must be considered as a general property of embedded indicative forms. Consider a the following example, with a past indicative embedded under a past:[6]

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[5]. Among the others, see Abush (1997), Ogihara (1996), Higginbotham (1995, 2001). See also Schlenker (2005) for a discussion of related topics.

[6]. As exemplified by the examples (8) and (9), the indicative imperfect is exempt from DAR effects, due to independent, presumably aspectual properties.

(10) Gianni ha detto che Maria ha comprato una casa.
      Gianni said that Maria bought a house

According to this sentence, the buying of the house by Maria must have occurred before Gianni uttered the sentence. In this case, therefore, the requirement of a double evaluation is trivially met: the embedded event *is* evaluated as past, *both* with respect to the superordinate one *and* with respect to the event of the utterance. It is not the case in fact, that it could ever be considered as past with respect to the utterance event alone, and therefore placed *after* the saying. On the other hand, since it is placed before the saying, the buying event precedes the time of the utterance, the main event being past.[7]

The main property of Sequence of Tense is exactly this: temporal anchoring of an event embedded in a complement clause to the superordinate event is obligatory—as shown also by the languages which lack the DAR. On the contrary, the anchoring of an embedded eventuality to the utterance time—which gives rise to the DAR—is not a universal property.

Consider now what happens if the embedded event appears with future verbal morphology. Let me point out that the verbal form in Italian is a typical morphological ending, etymologically derived by means of incorporation of auxiliary *have* into the verb. This is the unmarked historical evolution of most cases of temporal morphological endings in Italian.

In this sense, the Italian future tense differs from the English one and from the Germanic future tense in general. In Germanic languages, in fact, the future is always periphrastic and in particular in English it is obtained by means of the modal verbs *will* and *shall*.

Concluding this brief remark, one could claim that even if it might be legitimate to consider the future tense as a modal expressing futurity in English—and perhaps in other Germanic languages as well—it also seems legitimate to consider it a well-behaved *tense* in Italian. Consider now the following example:

(11) Gianni ha detto che Maria comprerà una casa.
      Gianni said that Maria will buy a house

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[7]. In principle, it could be the case that the embedded event is evaluated only with respect to the utterance time, i.e., indexically. This does not happen, however. Moreover, this is a universal property, as pointed out by the studies on sequence of tense phenomena, as the main *tenet*. See for instance the seminal work by Enç (1987).

In this sentence, the embedded event must be located in the future *both* with respect the saying of Gianni and also with respect to the utterance event.[8]

For to a (too) simple theory of sequence of tense, this fact constitutes a challenge. Let us consider it in detail.

Let's imagine the following theoretical account: the main event must be anchored to the utterance event, and the embedded one must be anchored to the superordinate one. According to this theory, the double evaluation of the embedded present tense illustrated by the examples above is a property of the present tense by itself. Furthermore, this theory would be able to predict the interpretation of the embedded past, as illustrated by the examples in (10) above. It would run into trouble, however, with respect to the interpretation of an embedded future in (11).[9]

The embedded event in fact cannot be anchored exclusively to the superordinate one, because this would leave open the possibility of a temporal interpretation under which the buying of the house follows the saying of Gianni, but *precedes* the utterance event, contrary to facts.

Notice also that this peculiar temporal relation can be expressed by languages, by means of the so-called future-in-the-past. This verbal form expresses futurity with respect to the superordinate event, but does not (necessarily) imply futurity with respect to the utterance time. Consider for instance the following example:

(12) Gianni ha detto che Maria avrebbe comprato una casa.
      Gianni said that Maria would buy a house

The building of the house is posterior to Gianni saying it, but may or may not be future with respect to the utterance event.[10]

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[8]. Notice that interestingly this is also true in English, even if the future is expressed by means of a modal.

[9]. The properties of the embedded future have often been disregarded in the literature about the topic. On the contrary, however they seems to be able to shed light on these questions.

[10]. Interestingly, a Romance language such as Romanian—a non-DAR language on a par with Russian and Japanese—has only one type of future, lacking the so-called future-in-the-past. This is actually expected under the present proposal, and constitutes additional evidence in its favor. A non-DAR language in fact, would never require an evaluation of the embedded event with respect to the speaker's

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Therefore, it is reasonable to conclude that the DAR is actually enforced in all cases where an indicative appears. It is empirically detectable with the present tense and the future, whereas it is not visible with an embedded past form—under the assumption that anchoring to the superordinate event is in any case obligatory. Giorgi and Pianesi (2001) labeled this pattern *Generalized DAR*. The intent was to make explicit the observation that in Italian-like languages the double temporal evaluation of the embedded event must be conceived of as a general property of (indicative) complement clauses.

2.3.   The subjunctive and the DAR

Let's consider now the complement clauses with a subjunctive verbal form. In these cases, the Latin-like *consecutio temporum et modorum* (sequence of tense and mood) is at work, which gives rise to the following pattern:

(13)   Gianni crede che Maria sia/*fosse incinta.
        Gianni believes that Maria is(PRES SUBJ)/*was(PAST SUBJ) pregnant

(14)   Gianni credeva che Maria fosse/*sia incinta.
        Gianni believed that Maria was(PRES SUBJ)/*is(PAST SUBJ) pregnant

It is a well-known fact that with subjunctive temporal agreement is enforced. I.e., the embedded form must appear in the past or in present form, depending upon the form of the superordinate verb: present under present and past under past. The temporal interpretation assigned to the event of the embedded clause is simultaneity with the main predicate—i.e., the pregnancy holds at the time Gianni believed it.[11] Anteriority can be expressed by means of the periphrastic perfective form, as in the following cases:

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coordinate, the evaluation with respect to the superordinate subject's coordinate being all that is required. Consequently, the language doesn't *need* another future form and, coherently, didn't develop it.

[11]. The simultaneous interpretation can be said to be the *default* one, given that it is the one obtained in absence of any further specification. If temporal adverbs intervene, the interpretation will vary according to the temporal specification carried by the adverbial modifier. I'll discuss this point below.

(15) Gianni crede che Maria abbia telefonato.
      Gianni believes that Maria has(PRES SUBJ) called

(16) Gianni credeva che Maria avesse telefonato.
      Gianni believed that Maria had(PAST SUBJ) called

In this case, the leaving event might be prior to the utterance time. Therefore all possible temporal relations seem to be available in this case.

In these cases, the appropriate morphology appears on the auxiliary, followed in turn by the past participle. In this case, therefore, anteriority is derivative on aspectual properties (perfectivity), and not directly obtained by means of a *temporal* morpheme.

These considerations point to the conclusion that subjunctive morphology does not instantiate a relational tense—i.e., a temporal relation between two events—but only a sort of *temporal agreement* with the superordinate verbal form.

The temporal vacuity of the embedded form is also confirmed by the following piece of evidence:[12]

(17) Gianni credeva che Maria partisse ieri/ adesso/ domani.
      Gianni believed that Maria left(PAST SUBJ) yesterday/ now/ tomorrow

Analogously, it is possible to have the sentence with the anaphoric temporal modifier:

(18) Gianni credeva che Maria partisse il giorno dopo.
      Gianni thought that Maria left(PAST SUBJ) the next day

In this example, the same verbal form *partisse* (left-PAST SUBJ) is compatible with temporal modifiers indicating past, present, or future. Sentence (17) means that Gianni had a belief concerning a past, present, or future event. Notice that the temporal adverbs are indexical ones—i.e., they identify a certain time with respect to the *speaker*. This shows that the time of the speaker and the temporal morphology on the verb are not related to each other, as is the case with the indicative. Consider in fact that the equivalent of (17) and (18) are not possible with an indicative verbal form:[13]

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[12]. On anaphoric temporal adverbs, see Giorgi and Pianesi (2003).

[13]. The sentence with *adesso* (now) is acceptable:

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(19)   Gianni ha detto che Maria è partita ieri/*domani/ *il giorno dopo.
        Gianni said that Maria left(IND) yesterday/*tomorrow/ *the next day

(20)   Gianni ha detto che Maria partirà domani/ *ieri.
        Gianni said that Maria will leave tomorrow/ yesterday

With the indicative, the temporal adverb and the verbal form must be coherent: if one expresses past-ness, the other one has to express it as well, and analogously with respect to futurity.

Going back to the DAR, it might be concluded that there is no *a priori* possibility for it to arise in embedded subjunctive complements, given that the embedded event does not undergo an independent temporal evaluation at all.

As a consequence of this analysis, one might be tempted to conclude that the DAR is, for some unclear reason, a property of the indicative and not of the subjunctive. In what follows I'll try to show that this is not the case and that there is some deeper property of embedded contexts, which has among its side effects the DAR, and that the property in question has to do with the syntax of the CP layer.

These observations might seem trivial, but actually they are far from being so, once we try to find an answer to the following question. How come that the location of the utterance event, as exemplified be the compatibility with the temporal adverbs, is relevant for the selection of the embedded verbal forms? After all, the compatibility of a subjunctive form with all kinds of modifiers points to the conclusion that this is not an *a priori* necessary property of the embedded verb.

(i)   Gianni ha detto che Maria è partita adesso.

      Gianni said that Maria left now

The temporal value, however, is still past-ness with respect to the utterance event. In this case *now* actually means *a moment ago*. The sentence cannot mean *Gianni said that Maria is leaving*. Analogously with a future:

(ii) Gianni ha detto che Maria partirà adesso.

      Gianni said that Maria will leave now

The sentence means that the leaving will take *in a moment*. These consideration however, can be attributed to the semantic properties of *adesso* and *now*, combined with the aspectual properties of the predicate, and not to the verbal temporal morphology in itself.

Recall also that the speaker is not endorsing the truth of the embedded clause. Both sentences can be continued with a disclaimer of the truth. Consider for instance the following examples:

(21)   Gianni ha detto che Maria ha telefonato, ma non è vero.
        Gianni said that Maria called(IND), but it is not true

(22)   Gianni crede che Maria abbia telefonato, ma non è vero.
        Gianni believes that Maria has (SUBJ) called, but it is not true

Furthermore, as shown above in examples (4) and (5), some factive verbs select the subjunctive mood. In these cases, contrary to (21) and (22), the truth of the embedded clauses is presupposed. These facts point to the conclusion that the truth of a certain proposition is independent from the morphology on its predicate and it is not connected with the presence of a certain mood—i.e., indicative vs. subjunctive.[14]

Concluding, let me capitalize on the following observations: a) The truth of an embedded clause is not at stake here and does not distinguish between the indicative and the subjunctive. b) The location in time of the speaker is relevant for the indicative verbal morphology, but not for the subjunctive one, as shown by the compatibility with time modifiers illustrated above.

Notice also that, coherently with the observations discussed so far, even in the case of factive complements, the subjunctive exhibits no compatibility requirement with respect to indexical time modifiers:

(23)   A Gianni dispiaceva che Maria partisse ieri/ oggi/ domani.
        Gianni was sorry that Maria left(PAST SUBJ) yesterday/ today/ tomorrow

The truth of the embedded clause is presupposed, but the location in time of the event with respect to the speaker—as specified by the indexical adverbs—doesn't have any relevance.

Let me now illustrate a last point. The so-called *past* subjunctive is also triggered by present tense verbs, which however appear with a non-indicative morphology, such as the conditional one. Consider the following pattern:

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[14]. In this sense, the notion of *realis* vs. *irrealis*, often adopted to describe the properties of the indicative vs. the subjunctive mood, seems to be incoherent.

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(24) Gianni vuole che Maria parta/*partisse.
      Gianni wants(PRES) that Maria leaves(PRES SUBJ)/ *left (PAST SUBJ)

(25) Gianni vorrebbe che Maria partisse/*parta.
      Gianni would like(PRES COND) that Maria left(PAST SUBJ)/ *leaves (PRES SUBJ)

The main verbal form *vorrebbe* in example (25) is a present one, in the sense that the *wanting* is present with respect to the utterance event, but it is a modal form—i.e., a conditional—meaning that the wish is *removed* with respect to the real world. This provides additional evidence in favor of he idea that the past morphology on the subjunctive does not mark any past-ness of the embedded event.

The following paradigm however contrasts with the previous one:

(26) Il testimone crede che *ieri alle 5* l'imputato fosse/*sia a casa.
      The witness believes that *yesterday at five* the defendant was(PAST SUBJ)/ *is(PRES SUBJ) at home

In this case the embedded verbal form must be a past subjunctive, and cannot be a present, even if the superordinate verb is a present verbal form.
Notice however that an explicit, or implicit, past time reference must be provided—i.e., in (26) the temporal locution *yesterday at five* cannot be omitted, or, if omitted, something of the same kind must be understood. If omitted the only available form is the present subjective *sia* (is) and the past one , *fosse* (was), is ungrammatical[15]

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[15]. Consider the following sentence:

(i) Gianni credeva che Maria abitasse/ *abiti a Roma.
     Gianni believed that Maria lived(PAST SUBJ)/ * leaves(PRES SUBJ) in Rome

(ii) Gianni credeva che Maria fosse/ *sia incinta.
     Gianni believed that Maria was(PAST SUBJ)/ is(PRES SUBJ) pregnant

The embedded present subjunctive is ungrammatical. However, as far as its interpretation goes, it exhibits DAR effects. This might mean that, in order to interpret the embedded verbal form, the *wrong* CP structure must be projected in the embedded clause, yielding ungrammaticality. On similar cases, which on the contrary turn out to be grammatical, see section 2.2 below.

Concluding this section, on the one hand, it can be claimed that sequence of tense for the indicative verbal forms follows rules which are totally different with respect to those holding for subjunctive. On the other hand, the evidence discussed in (26) seems to show that the subjunctive can to a certain extent have an autonomous temporal status. Moreover, the rule governing the appearance of the past or present subjunctive cannot be a simple agreement rule, given the evidence discussed in (24) and (25).

In previous work, Giorgi and Pianesi (1997, 2004a) noticed that in spite of the fact that in most cases the subjunctive does not have an *independent* temporal interpretation of its own, it is not true that it is always immune from DAR effects. Consider the following cases:

(27) Gianni ha ipotizzato che Maria fosse incinta.
      Gianni hypothesized that Maria was(PAST SUBJ) pregnant

(28) Gianni ha ipotizzato che Maria sia incinta.
      Gianni hypothesized that Maria is(PRES SUBJ) pregnant

The main verbal form is past in both cases, but in the complement clause the past and the present subjunctive are both available. Interestingly, the interpretation of the embedded clause in (28) a DAR one. The following example is accordingly odd:

(29) #Due anni fa, Gianni ha ipotizzato che Maria sia incinta.
      Two years ago, Gianni hypothesized that Maria is(PRES SUBJ) pregnant

This piece of evidence therefore closely parallels the phenomena discussed in section XX above. Concluding the discussion of this section: on one hand, subjunctive verbal forms seem to be *inert* from the temporal point of view. At a closer look, however, the subjunctive morphology does not seem totally devoid of temporal content—even if it *looks* like that in most cases—and the subjunctive sometimes undergoes the same SOT rules which govern the indicative.

In what follows, I'll try to answer the following questions: what triggers subjunctive morphology? What is the relation between subjunctive and the DAR? The answers to these questions will prove to be relevant not only with respect to a better characterization of the subjunctive in itself, but also to clarify what exactly determines the indicative/ subjunctive distinction.

3. The left periphery of subjunctive clauses

3.1. The representation of the speaker's coordinate in subjunctive clauses

In this section I'm going to propose an account for the facts observed in the previous section. Let me begin with considering the distribution of CD in the *ipotizzare* (hypothesize) cases, repeating here the relevant examples given above:[16]

(30) Gianni ha ipotizzato (che) fosse incinta.
      Gianni hypothesized (that) (she) was(PAST SUBJ) pregnant

(31) Gianni ha ipotizzato *(che) sia incinta.
      Gianni hypothesized (that) she is(PRES SUBJ) pregnant

In the first case, where the embedded verbal form appears with the past subjunctive morphology—i.e., where the sequence of tenses is the *normal* one—CD is optional, as usual. In the other case, when the embedded verbal form is a present subjunctive—i.e., the sequence of tenses is anomalous with respect to the normal subjunctive distribution—CD is impossible. In sentence (31) The DAR in enforced, so that the sentence means that the pregnancy of Maria—as hypothesized by Gianni—holds both at the time of the hypothesis and at the utterance time. It clearly cannot be due to the presence of a present tense vs. a past *per se*, given that the following sentence is perfectly possible with CD:

(32) Gianni ipotizza (che) sia incinta.
      Gianni hypothesizes (that) (she) is (PRES SUBJ) pregnant

Notice also that there is a slight but systematic interpretive difference between sentence (31) and (30) on th one hand and (32) on the other. The speaker might decide to use the verb *hypothesize* to describe two different things. He might be talking about Gianni's *mental* processes—in which case, the sentence concerns a particular thought which appeared in Gianni's mind in a hypothetical form—or about Gianni's *behavior*. In this

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[16]. For a detailed discussion of the topic, see Giorgi and Pianesi (1997 and 2004a).

case, the speaker is reporting a *communication* of some sort made by Gianni in a hypothetical way.[17]

In sentence (31) only the latter possibility is available, whereas in the other cases it is left unspecified. The verbs of communication in Italian are exactly those verbs that select the indicative. This does not seem to be a universal property, given that in many languages—as French and Spanish, among the others—verbs of *believing* select the indicative as well. However, as I'll discuss in section 4.6, this distinction, which is relevant in Italian, seems to be relevant in German as well.[18]

Consider now briefly the distribution of indicative/subjunctive with this class of verbs. I already showed above that CD is impossible with the indicative, and therefore sentence (1) given above—repeated here for simplicity—cannot undergo CD:

(33) Gianni ha detto *(che) ha telefonato Maria.
       Gianni said that has(IND) called Maria
       'Gianni said that Maria called'

When these verbs convey a *iussive* meaning they select subjunctive:

(34) Gianni ha detto *(che) partissero al più presto.
       Gianni said that they leave(PAST SUBJ) as soon as possible
       'Gianni ordered that they leave as soon as possible'

(35) Gianni ha detto *(che) partano al più presto.
       Gianni said that they leave (PRES SUBJ) as soon as possible
       'Gianni ordered that they leave as soon as possible'

When conveying this meaning, *dire* (say) behaves like the verb *ordinare* (order):

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[17]. The verb *guess* in English seems to be sensitive to the same distinction. I thank J. Higginbotham for this observation.

[18]. A semantic parameter might perhaps be hypothesized to account for this point: some languages might be more sensitive to the speech act/ mental state distinction—as Italian. Other ones might be more sensitive to the peculiar modal properties of the contexts, as hypothesized in Giorgi and Pianesi (1997).

(36) Quel miliardario ha ordinato *(che) si comprasse quella villa.
      That billionaire ordered that *si*-impersonal buy(PAST SUBJ) that villa
      'That billionaire ordered that they buy that villa'

(37) Quel miliardario ha ordinato *(che) si compri quella villa.
      That billionaire ordered that *si*-impersonal buy(Pres SUBJ) that villa
      'That billionaire ordered that they buy that villa'

In the embedded clauses in these cases, the verb can either be realized as a past subjunctive or as a present one and CD is always ungrammatical. The two verbal forms, however, correspond to different temporal interpretations.[19]

Let me try to explain the peculiar temporal interpretation of these sentences. In the examples given above the order concerns an event which, as natural, is supposed to take place in the future with respect to its issuing. However, in sentences (34) and (36)—where the past subjunctive appears—the buying of the house must be future only with respect to the issuing of the order itself. Therefore, in this sentence the buying of the house might already have taken place at utterance time and the speaker might simply be reporting the issuing of the order, without any implication concerning the time of the buying.

In the other examples—sentences (35) and (37)—when a present subjunctive is realized, the buying of the house must follow the ordering but *also* the utterance time, i.e., it must be in the future with respect to the speech event itself.

The difference between the two cases can be considered as parallel to the one just described with respect to *ipotizzare* (hypothesize). The differences between (34)-(36) and (35)-(37) can be accounted for as a DAR effect. The nature of the predicate requires that the embedded event be interpreted as the content of the order, and therefore derivatively located in the *future* with respect to it. In other words, we can conceive of the *content* of the order as simultaneous with respect to the *issuing* of the order. The *carrying out* of the order, due to the semantic and pragmatic properties of ordering, must lie in the future with respect to it.

According to this view, a double evaluation applied to the content of the order predicts exactly the judgements illustrated above. In these cases, the content of the order

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[19]. Both verbs can also select the infinitive. In this paper however, I'll disregard the relationships between infinitival clauses and subjunctive ones.

is simultaneous both with respect to the event of issuing the order, and with respect to the utterance time; the carrying out of the order lies in the future with respect to both.

The conclusions that can be reached on the basis of the previous analysis seem therefore to be the following ones: a) A present subjunctive under a past superordinate verbal form is admitted as far as the higher verb can be interpreted as a predicate of communication. b) In this case, the DAR is enforced; c) The complementizer cannot be omitted. Therefore, iussive verbs constitute another case in which the subjunctive shows the existence of DAR effects. [20]

At this point the question to be answered is the following one: What is the relation between the complementizer and the DAR?

Giorgi and Pianesi investigated this question in detail. They proposed that the complementizer introducing subjunctive clauses is not the same as the one introducing the indicative clauses. In some languages the two are lexically distinct. For instance, Balkan languages a different complementizer, and not a different inflectional morphology, signals the difference between indicative and subjunctive. I'll not discuss again this point in this work—given that it is a widely known fact—and refer the reader to the cited references.

The starting point is therefore that, even if in standard Italian the complementizers are both realized by means of the word *che*, the indicative one and the subjunctive one fulfill different roles and occupy different positions in the syntactic tree—i.e., *che* (that) can head two different projections. Giorgi and Pianesi (1997, 2004a) addressed this question, and I'll briefly summarize the issue here.

They proposed that the subjunctive verbal form is not a relational tense, in the sense indicative tenses are. As I showed above, the past or present forms of the subjunctive do not instantiate a simultaneous or a precedence relation between two events. The

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[20]. The opposite generalization however does not hold. That is, there are some contexts in which the complementizer cannot be omitted and there is no DAR, for instance in sentences with left, or right, dislocation:

(i) *(che) Gianni fosse partito, Maria lo credeva.

   That Gianni had left, Mary it-believed

(ii) Maria lo credeva, *(che) Gianni fosse partito.

   Maria it-believed, that Gianni had left

This topic is discussed in Giorgi and Pianesi (1997, 2004a), and I'll not consider the issue here.

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morphological appearance of the inflection is due to an *agreement* process between the superordinate and the embedded verbs.[21]

The bulk of the hypothesis concerning the complementizer in this case is that it is *part of* the subjunctive inflection. In other words, the Italian subjunctive exhibits a sort of *discontinuous morphology*, including both the verbal ending *and* the complementizer. The two can either be realized together—i.e., *sincretically,* adopting Giorgi and Pianesi's terminology—or *scattered*, in which case the word *che* appears in the embedded clause.

Let's consider first the *scattered* realization. Giorgi and Pianesi claimed that the subjunctive verb carries both mood and tense-agreement features. In non-CD clauses, the features force movement of the verb at LF to the complementizer layer. The complementizer in this case, as argued by Giorgi and Pianesi, lexicalizes the Mood features. Abstracting away from the distribution of embedded topic and focus, the structure of the embedded clause can be represented as follows:

(38) Gianni credeva che Maria dormisse.
      Gianni believed that Maria slept(PAST SUBJ)

(39) $[.....[_V$ credeva $[_{MOOD-P}$che $[_{TP}$ … dormisse$_{\{+mood;\ +past\}}$…$]]]]$

Simplifying the discussion, in this case the modal and temporal features of the subjunctive verb are realized on two independent projections, one headed by the verb *dormisse* and the other headed by the complementizer *che.* At LF, movement of the verb to Mood, triggered by the mood feature on the verb, locates the verb in the correct configuration for tense agreement with the main verb. The result will be that Gianni has a belief, located in the past, given the past morphology on *credere*, concerning a calling by Maria, which *morphologically* agrees with it. Given that in this case the temporal location of the calling is not specified, the interpretation will be *simultaneity*. Recall also that, as illustrated above, temporal modifiers, either anaphoric or indexical, can variously determine the relation between the events. They can locate the embedded event in the past or in the future with respect to the main one.

Let's consider now the other realization—i.e., the s*incretic* one. Giorgi and Pianesi crucially suggested, in order to account for the word order properties of the embedded

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[21]. The question concerning *the reason why* such an agreement between the verbs is needed is to a certain extent a different one, and I'll address it in section 4 below.

clause, that when the complementizer is not realized—i.e., in CD clauses—the temporal and modal features are sincretically realized on the same verbal head. The structure obtained in this way is therefore the following one:[22]

(40) Gianni credeva dormisse.
      Gianni believed she slept(PAST SUBJ)

(41) [.....[$_V$ credeva [$_{MOOD/TP}$ dormisse$_{\{+mood;\ +past\}}$...]]]

In this case, there is no complementizer in the head of the Mood projection. The verb itself occupies the MOOD/TP position and verbal agreement with the superordinate verb *credeva* (believed) works as in the case illustrated above.

Therefore, in both cases, we can say that the morphology of the subjunctive form— past or present—is determined by a head-head relation holding between the main verb and the embedded one.

The indicative complementizer, on the contrary, plays a totally different role and can never be deleted. Moreover, the indicative is always a relational tense, so that it must be interpreted accordingly, giving rise to the DAR in Italian-like languages. Finally, according to Giorgi and Pianesi, a relational tense has to move to C at LF.

The indicative configuration is therefore the following one:[23]

(42) Gianni ha detto che Maria ha telefonato.
      Gianni said that Maria has(IND) called

(43) [.....[$_V$ detto [$_{CP}$ ... che$_\Sigma$ [$_{TP}$ ... T$_\sigma$ ... [... ha telefonato$_{\{\Sigma;\ \sigma\}}$...]]]]]

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[22]. The data accounted for by this hypothesis concern the impossibility of a focus phrase in CD embedded clauses, the marginality of topic ones, and the peculiar distribution of the embedded subject. See Giorgi and Pianesi (2004a).

[23]. I put aside the questions arising with the indicative imperfect, as in the following sentente:

(i) Gianni ha detto che Maria dormiva.

     Gianni said that Maria slept(IMPF IND)

This question has been considered in Giorgi and Pianesi (2004b). I'll not take it into account here, given that it seems quite marginal for the present analysis.

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The embedded past verbal form, *called*, is a relational tense: $e > e'$. The event *e* is constituted by the calling event itself and bears a pair of features: Σ and σ. In Italian, the verb moves overtly to T. Here the feature σ is interpreted at the interface as referring to the bearer-of-attitude's—i.e., the main subject—temporal coordinate. At this point, the embedded event is interpreted as past with respect to the temporal location of *Gianni*.[24]

Movement of the verb to C is forced by the presence of the feature Σ. Let's consider now the role of this feature. The idea is that it is a pointer to the context, interpreted at the interface as the speaker's temporal coordinate—i.e., the utterance time *now*. At this point in the derivation, the embedded event is also interpreted as past with respect to the temporal location of the speaker, i.e. past with respect to the utterance time.

Given this role of the indicative complementizer, it is possible to understand how it could not be sincretic on anything. It is not part of the *morphology* of the verb, but a linguistic formative with an interpretive function. It is responsible for the DAR arising in Italian indicative embedded contexts.

Let's approach now the core hypothesis of this paper. I illustrated two contexts in which the DAR arises with the subjunctive: with verbs of cognition, working as verbs of communication—such as *ipotizzare* (hypothesize)—and with the iussive subjunctive—a communication context as well. In both cases the complementizer cannot be deleted. Moreover, the verb appears in a verbal form not predicted by the Latin-like *consecutio*, which would allow only a temporal agreeing form to be realized. In these sentences in fact a present subjunctive appears under a past verbal form, which should be in principle disallowed.

The question arising in this connection is how the present morphology is licensed in these configurations. Consider again the example given above:

(44)   Gianni ha ipotizzato che Maria sia incinta.
       Gianni hypothesized that Maria is(PRES SUBJ) pregnant

The hypothesis discussed by Giorgi and Pianesi (1997, 2004a) is that Mood-P and CP in this case co-occur, giving rise to the following structure:

(45) $[\ldots..[_{\text{V}}$ hypothesized $[_{\text{CP}}$ che$_\Sigma$ $[_{\text{MOOD-P}}$ sia$_{\{+\text{mood}; +\text{pres}\}}\ldots]]]]$

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24. On the reason why the notion *bearer-of-attitude* is more appropriate than the notion of superordinate *subject*, see Giorgi and Pianesi (2001) and Giorgi (2004, 2005). See also Costantini (2005).

Let's propose that the verb moves—either overtly or covertly, it does not matter for the purposes of this argument—to MOOD-P, given that it is a subjunctive form. The complementizer *che*, occupying the head position of CP, bears the feature Σ, which points to the speaker's temporal coordinate. As a consequence, the utterance time licenses the present form of the subjunctive. Tense agreement is instantiated exactly as in the cases given above, the only difference being that in this case the head-head configuration does not involve the main verb, but the complementizer in C.

Let's consider now the temporal interpretation of the clause. The embedded subjunctive is anchored to the superordinate verb—as obligatory in all languages—and is, by default, interpreted as simultaneous with the main eventuality, even in absence of temporal agreement. The presence of the feature Σ in C also forces the interpretation in which the embedded event is located with respect to the speaker's coordinate. Therefore, a (default) simultaneous interpretation with respect to the utterance event is assigned.

Concluding this section, a subjunctive verbal form embedded under communication verbs will give rise to the DAR by means of the same mechanism determining this reading in the indicative cases—i.e., by virtue of a double interpretation. The difference between the indicative and the subjunctive concerns the fact that the interpretation of the indicative is derived via the interpretation of a *relational* tense, locating two events one with respect to the other. The temporal interpretation of the subjunctive is always a simultaneous one, by default. However, the necessity of assigning this simultaneous interpretation twice, leads to the DAR.

3.2. Temporal topics and other issues

Let's consider now the case in which the past subjunctive seems to have an independent temporal reading. I repeat the relevant example here for simplicity:

(46) Il testimone crede che ieri alle 5 l'imputato fosse/*sia a casa.
      The witness believes that yesterday at five the defendant was(PAST SUBJ)/
      *is(PRES SUBJ) at home

To license an embedded past subjunctive, a temporal topic is necessary. Such a topic can either be provided overtly, or by the context. It can then license the temporal morphology of the embedded verb in a way analogous to the cases seen above:

(47) [.....[$_V$ crede [$_{MOOD-P}$che [$_{TOP-P}$ ieri alle 5 [$_{TP}$ … fosse$_{\{+mood; +past\}}$…]]]]]

Ieri alle 5 (yesterday at five) is interpreted as a past temporal reference—by virtue of the meaning of *ieri* (yesterday)—and therefore licenses the past feature on the verb. The default interpretation locates the embedded event at the time specified by the topic. Further movement of the verb to Mood, required by the presence of feature [+mood], does not modify this interpretation. Differently from the cases seen above in fact, the speaker's coordinate is not represented in C. *Credere* (believe) is not a communication verb and, accordingly, it does not require the high C projection to be realized. Given that the past form on the embedded verb is licensed by the temporal topic, the temporal interpretation is completed prior to the movement of the verb to Mood, and the sleeping event is correctly located in the past, as specified by the time adverb.[25]

Consider now the licensing of a past verbal form in sentence (25), repeated here:

(48) Gianni vorrebbe che Maria partisse/*parta.
      Gianni would like that Maria left(PAST SUBJ)/*leaves (PRES SUBJ)

The main verb is the present form of the so-called *conditional mood*. It is not therefore a past form and does not express a *past* meaning—i.e., Gianni's wish is located in the present, even if removed to a possible world. In the embedded clause, the subjunctive mood is licensed by virtue of being a complement of a volitional predicate, but in this case, the *modality* of the main verb, and not its tense, licenses the embedded past. Consider also that an embedded present subjunctive—cf. the ungrammaticality of *parta* (leaves)—is ungrammatical.

The question is therefore how the past form is licensed in this context, given that no agreement process seems to be available, if we consider the feature as somehow connected to *past*. Several options come to mind. For instance, one might suggest that the feature on the past subjunctive has to be conceived of as [-actual], instead as [+past]. Another possibility would be to encode the difference between the present subjunctive and the past subjunctive as a binary feature [±present]. In this paper, I'll leave the question open. What is important to stress here is that this observation constitutes

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[25]. Aspectual questions are put aside in this paper, even if they are obviously relevant with respect to the final interpretation of the embedded verbal form. In the case of the example (46), for instance, the interpretation of the embedded event is a continuos one, in that the being at home is supposed to have begun *before* and to be continuing *after* the temporal interval specified by the topic.

additional evidence in favor of the absence of temporal specification in the subjunctive and therefore in favor of the theory according to which the subjunctive is a non-relation form.

There is another context where the past tense is available in absence of a visible licenser. The context in question is the so-called independent subjunctive expressing wishes by the speaker:

(49) (Che) ti pigliasse un colpo!
    That a stroke take(PAST SUBJ) you!

In this case, however, the past form alternates with the present one, quite freely, without giving rise to differences in meaning:

(50) (Che) ti pigli un colpo!
    That a stroke take(PRES SUBJ) you!

Notice also that CD is optional in this case, as in ordinary subordinate contexts. From these data, one might conclude therefore that the sentences in (49) and (50) are MOOD-Ps, and not CPs, where an *extra*-feature for modality—the one licensing the past subjunctive—can optionally be available. In this respect, these examples would be analogous to the one in (48) above.[26]

At his point it might be relevant to say a few words on the relationship between the analysis of the CP proposed here and Rizzi's (1997, 2001, 2002) one. In particular, the relation between the high C projection hypothesized here and Rizzi's *force*.

Conceptually, they do not correspond to each other, in that Rizzi's *force* is presumed to mark the *assertive force* and similar properties of the embedded clause. In the cases considered here, on the contrary, the high CP projection is to be understood as a pointer to the speaker, independently of the nature of the clause—i.e., independently of its being an assertion, a question, etc. The role of C at the interface is to relate the content of the embedded clause—in particular the temporal interpretation of the event—with the speaker's *hic et nunc*. It doesn't seem to me however, that the two approaches cannot be made compatible, given that empirically I didn't find so far counter-arguments to this proposal in Rizzi's work. Further inquiry is however required.

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[26]. For an analysis of exclamative contexts, see Zanuttini and Portner (2000 and 2003).

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4. Answering some questions about the distribution and interpretation of indicative and subjunctive

By means of the hypothesis I just sketched, some guidelines can be drawn about how to account for the interpretation and distribution of the embedded subjunctive.

According to the view I proposed, the indicative/subjunctive divide would not have to rely on an a priori *realis/irrealis* distinction, but on the properties arising from the presence vs. absence of the representation of the speaker's coordinate.

In *most* subjunctive contexts, the speaker's coordinate is not represented—cf. for instance, the clauses under desiderative verbs—whereas this is an obligatory property of the indicative clauses—as for instance the verbs of *saying*.

Incidentally, notice that this distinction is visible only in DAR languages. In languages such as Rumanian, which do not enforce any DAR reading, there is no way of detecting the presence of the speaker's coordinate in the embedded clause. Recall also that, coherently with the remarks discussed above, in Balkan languages, which usually exhibit no DAR, the distribution of the indicative and subjunctive mood exhibits different properties with respect to the one found in Italian and Italian-like languages. This is actually expected under the present account.

Putting aside non-DAR languages, Giorgi and Pianesi's (1997) generalization concerning Italian complement clauses can be restated in the terms of this paper more or less in the following way: on one extreme, verbs of communication always require the representation of the speaker and feature the indicative. On the other one, verbs concerning cognitive states do not require the speaker's coordinate and select the subjunctive. In the middle, there are some verbs—like *ipotizzare* (hypothesize)—which can be at the same time both verbs of communication *and* of cognitive states. Consequently, they might require the speaker's coordinate to be represented *and* select the subjunctive. Some verbs, furthermore, might shift from one class to the other. This might be the case with the Italian *credere* (believe), which varies with respect to the form selected in the embedded clause, and admits—even if not equally well for all speakers—both the indicative and the subjunctive.[27]

In this section, I'm going to work out this hypothesis and see how far it can go to provide an explanation for the basic questions concerning subjunctive contexts.

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[27]. In my Italian, an indicative embedded under *credere* (believe) is usually not a possible option.

4.1. A *proviso* about main first person verbs

A crucial *proviso* is in order at this point. It is very important not to have first person features on the main verb, given that this might give rise to a peculiar syntactic structure. As discussed by Giorgi and Pianesi (2005), in fact, the subordinate clause *sia partita* (she left) in the following example exhibits properties that are not typical of embedded contexts, but pattern together with main clauses:

(51) Credo sia partita.
      I believe she left

As a first consideration, observe that the meaning of this sentence is not: *I have a belief concerning the leaving of Maria*, but rather: *I assert that Maria left, and my degree of certainty about this fact is less than 100 %.* This is because the speaker is talking about herself, and not about another person whose thoughts, to be known, must be either communicated or inferred on the basis of various evidence. One's own thoughts are immediately accessible.

From the syntactic point of view, several properties strengthen this perspective. For instance, some speakers—more or less the half of the Italian speakers, myself included—do not admit a preverbal subject with CD clauses:[28]

(52) Gianni crede *(che) Maria sia partita.
      Gianni believes that Maria has(SUBJ) left

(53) Gianni crede (che) sia partita Maria.
      Gianni believes that has left Maria

(54) Gianni crede (che) sia partita.
      Gianni believes that (she) left

For some speakers, the presence of a preverbal lexical subject inhibits CD, as opposed to a postverbal or a null one, which are acceptable for everybody. This is not the case with a main first person verb:

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[28]. For a discussion of the preverbal subject with CD, see Giorgi and Pianesi (1997 and 2004a).

(55) Credo (che) Maria sia partita.
      I believe that Maria has left

The preverbal subject is acceptable in this case even for those speakers who reject it in (52). The explanation provided by Giorgi and Pianesi (2005) for this—and several other related phenomena—is that the form *credo* is only apparently a main clause, but it actually is an epistemic adverb, bearing first person features.

I'm not going to reproduce here the discussion and the evidence by Giorgi and Pianesi. I only would like to stress that expressions such as *I think*, *I hope*, *I admit*, *I confess*, etc. might often be amenable to the analysis just sketched and therefore should *not* be used as evidence concerning the relation main/ subordinate clause.

4.2. A discussion of some relevant facts

4.2.1. Emotional factive verbs

I already discussed above what the differences between *dire* (say), *credere/ desiderare* (believe/ wish) and *ipotizzare* (hypothesize) amount to—i.e., presence vs. absence of the speaker's coordinate.

One might speculate why it should be like that. It can be said that in DAR languages the verbal morphology—i.e., the indicative mood—has the role of placing the event with respect to the *real* world, which doesn't (necessarily) mean that the speaker believes that the propositional content of the clause is true. The truth of the embedded clause can be presupposed in some cases, as in factive sentences, but otherwise this is not the case. Yet, the indicative forces the embedded event to be located with respect to the speaker's temporal, and spatial, coordinates, which pertain to the *actual* world, as perceived and interpreted by the speaker.[29]

One might think that this is what happens when the speaker is describing a behavior of some sort, as for instance a communicative act by a subject. On the contrary, there is no event to be placed according to the actual temporal and spatial speaker's coordinates,

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[29]. See Giorgi (2004, 2005) for an analysis of long distance anaphors along these lines. The main hypothesis in that case, is that the presence of the speaker's coordinate blocks the long distance anaphor from looking further up for an antecedent. It is a well-know fact that indicative contexts contrast with subjunctive ones with respect to long distance binding. Giorgi (2004) also sketches an analysis along these lines for long distance anaphors in non-DAR languages, such as Chinese.

if what is described by the speaker is a purely cognitive and emotional state pertaining to the subject. Notice that the subtle, but systematic, difference between the DAR and non-DAR interpretation of *ipotizzare* (hypothesize) in Italian goes exactly in this direction.

Let me consider now an apparently anomalous case—namely, complement clauses of emotional factive verbs, which select the subjunctive, which I already mentioned in section 2 above.

According to the hypothesis I just sketched, emotional factive verbs, by virtue of being *emotional* ones, therefore describing cognitive states, select the subjunctive. I reproduce here the relevant example:

(56)   Gianni rimpiange *(che) sia/ *fosse partita.
       Gianni regrets that (she) has (PRES SUBJ/ *PAST SUBJ) left

(57)   Gianni rimpiangeva *(che) fosse/ *sia partita.
       Gianni regretted that (she) had (PAST SUBJ/ *PRES SUBJ) left

 In this case the Latin-like *consecutio* is strictly enforced and the complementizer cannot be omitted. These facts in the present hypothesis mean that this case does not pattern with of the ones we saw above. If the structure were like the one embedded under *credere/ desiderare*, the complementizer would be deletable. On the other hand, if the structure were like the one under *ipotizzare*, a present-under-past configuration should be possible, contrary to facts. Giorgi and Pianesi (2004a) propose that in this case the structure is basically the one instantiated with *credere/ desiderare*—i.e., a MOOD-P projected by (subjunctive) *che*. The peculiar property of these verbs is constituted by the presence of an extra-feature, +F, in the head position of MOOD, marking the factive status, which cannot be lexicalized sincretically by the subjunctive verb. As a consequence therefore, the complementizer must appear. I endorse here this view, which also seems to correspond to most theories and intuitions concerning factive verbs —i.e., to the fact that there is an additional property/ position that renders factive predicates exceptional from a syntactic point of view.[30] The structure in these cases should therefore be the following one:

(58) $[.....[_V$ rimpiangeva $[_{MOOD-P}$ che$_{+ mood;+F}$ $[_{TP} ...$ fosse$_{\{+mood; +past\}}...]]]]$

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[30]. For instance, they are islands for extraction. See Cinque (1991) and Rizzi (1991).

4.2.2. Conditionals

In this section I'm not going to enter in all the very complex details concerning the syntax and semantics of conditionals. I would only point out what the contribution of this hypothesis might be to the general picture.

This proposal applied to conditionals makes the correct prediction: in indicative conditionals the protasis is evaluated with respect to the speaker's coordinate.[31] In subjunctive ones, this is not the case. Again, this is what gives the *realis/ irrealis* flavor.

Therefore in the following case, the events of both protasis and apodosis are located with respect to the speaker's coordinate, given that an indicative appears:

(59) Se Gianni ha comprato quella casa ieri, Maria l'ha venduta l'altroieri.
       If Gianni bought that house yesterday, Maria sold it the day before yesterday

Interestingly, in this case the protasis, though syntactically a subordinate clause, is not temporally anchored to the main clause, as shown by the temporal modifiers. The time of the event of the protasis in fact, follows the time of the event of the apodosis. As discussed in section 2 above, this cannot happen in complement clauses, given that in that case, anchoring is obligatory. For completeness, notice that also the reverse possibility is available:[32]

(60) Se Gianni ha comprato quella casa l'altroieri, Maria l'ha venduta ieri.
       If Gianni bought that house the day before yesterday, Maria sold it yesterday

Consider now the so-called subjunctive conditionals. In this case, according to our hypothesis the speaker's coordinate is not represented. Consider the following example:

(61) Se Gianni comprasse quella casa, Maria sarebbe felice.
       If Gianni buy(PAST SUBJ) that house, Maria would be(PRES COND) happy

Notice that in Italian the present subjunctive would be ungrammatical in this case:

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[31]. See also Schlenker (2005).

[32]. I'm intentionally leaving out any consideration concerning the imperfect of the indicative. It raises problems of its own, which lie outside the scope of this work.

(62) *Se Gianni compri quella casa, Maria sarebbe felice.
      If Gianni buy(PRES SUBJ), Maria would be happy

Nor would a non-conditional be grammatical in the apodosis:

(63) *Se Gianni comprasse quella casa, Maria è felice.
      If Gianni buy(PAST SUBJ), Maria is(IND) be happy

In this case, the offending form is the indicative present on the verb of the apodosis, *è* (is).

   A way of looking at these cases can be the following one. The conditional mood appears on the apodosis—the syntactic main clause—to express the peculiar semantics of the conditional. Let's suppose that the conditional mood syntactically inhibits the presence of the complementizer C, which bears the speaker's coordinate. This makes sense, because in these cases the event of the protasis should *not* be located with respect to the speaker's coordinate, i.e., with respect to the actual world.

   As a consequence, the subjunctive appears in the protasis. Analogously to the example (25), rediscussed in (48), moreover, the modality of the main clause licenses the feature [-present]—or [-actual]—on the subordinate verbal form, which therefore must surface as a past subjunctive. Finally, an indicative in the apodosis cannot co-occur with a subjunctive in the protasis, as shown in example (63). The subjunctive cannot be licensed in this case, yielding ungrammaticality.[33]

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[33]. For completeness, notice that even a present subjunctive in the protasis would not be grammatical with an indicative apodosis:

(i) *Se Gianni compri una casa, Maria è felice.
     If Gianni buy(PRES SUBJ) a house, Maria is(PRES IND) happy

Moreover, contrary to French (Schlenker 2003), in Italian the second conjunct of a conditional cannot be in the subjunctive, if the first conjunct is not, independently of the mood—indicative vs. conditional—of the apodosis:

(ii) Se Gianni venisse e fosse malato, lo cureremmo.
     If Gianni comes(PAST SUBJ) and were(PAST SUBJ) sick, we would take(PRES COND) care of him

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4.2.3.   On *polarity* subjunctive

Let's consider now the optative and dubitative subjunctive—i.e., *polarity* subjunctive—as for instance the one appearing in examples (49)-(50) above.

Even in these cases, the choice of the subjunctive is coherent with the fact that the event should *not* be located with respect to the speaker's coordinate—i.e., with respect to the actual world. Compare the following sentences:

(64) Ti prende un colpo!
      A stroke gets(PRES IND) you!

(65) Ti prenda un colpo!
      A stroke get(PRES SUBJ) you!

Neither sentence is an assertion. The first one is an exclamatory structure, and the second one is an optative one. For the native speaker of Italian, it is clear that the first sentence is appropriate in a context where there is a *real* situation of alarm. For instance, a context in which the speaker wants to warn the hearer with respect to some danger in the environment that might cause him a damage. The second one, is the expression of a wish, uttered for instance by an angry speaker, but not (necessary) in relation to any actual situation in which a damage might occur to the hearer.

In this perspective, the subjunctive is not *vacuous* from a semantic point of view, in that it excludes the speaker and her coordinate from the structure of the sentence, and consequently from its interpretation.

Both for the indicative and the subjunctive, the interpretive characteristics—at least the ones I'm discussing here—are just a function of the syntactic structure and the way it is read off at the interface. With an indicative verbal form, the speaker's coordinate is obligatorily represented in C, with the subjunctive it is represented only when the higher predicate is headed by a communication verb.

(iii)   Se Gianni viene e è/ *sia/ *fosse malato, lo curiamo.

         If Gianni comes and is(IND/PRES SUBJ/ PAST SUBJ) sick, we take(PRES IND) care of him

(iv)   Se Gianni viene e *è/ *sia/ fosse malato, lo cureremmo.

         If Gianni comes and is(IND/PRES SUBJ/ PAST SUBJ) sick, we take(PRES COND) care of him

I.e., in Italian, an apodosis with a conditional verbal form only licenses a past subjunctive protasis.

Consider in this respect the alternation between indicative and subjunctive with *saying* verbs:

(66) Gianni ha detto *(che) Maria è partita.
      Gianni said that Maria left(IND)

(67) Gianni ha detto *(che) partissero al più presto.
      Gianni said that they leave(PAST SUBJ) as soon as possible
      'Gianni ordered that they leave as soon as possible'

In this case, the embedded verb determines a different semantic interpretation of the whole sentence, by virtue of the fact that it is a subjunctive. As I pointed out above, however, CD in this case is not available and DAR effects seem to be detectable. Consequently, it looks likely that the high complementizer C is realized in (67) as well, analogously to (66).

The only difference between the two sentences, therefore, seems to be that the verbal form in (66) instantiates a relational tense, whereas this is not the case in (67). In the present analysis, this might be the reason for the shifting of the meaning in the latter case. The embedded event must not be located with respect to other ones—i.e. the superordinate event and the utterance event—but only *interpreted* according to the subject's perspective and the speaker's perspective, following the syntactic procedure described in section 3. As a matter of fact, the same interpretation obtains with an embedded infinitive:

(68) Gianni ha detto di partire.
      Gianni said to leave
      'Gianni order that people leave'

In this respect, therefore, the interpretation of an embedded subjunctive parallels the one assigned to the infinitive, in that the infinitive as well is not instantiating a temporal relation.[34]

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[34]. For a further analysis of these contexts, I refer the reader to Portner and Zanuttini (2004 and 2005).

4.2.4. Mood attraction

Let's consider now a last set of phenomena having to due with multiple embedding of the complement clause. Interestingly, in this case, both an indicative and a subjunctive are available:

(69)   Gianni crede che Maria abbia detto che Paolo è/ ?sia intelligente.
       Gianni believes that Maria said (SUBJ) that Paolo is(IND/?SUBJ) intelligent

This phenomenon might be called *mood-attraction*, given that the mood of the deepest embedded clause is not determined by the immediately superordinate verb—*saying* verbs in Italian trigger the indicative—but by the verb higher up in the structure, *crede* (believes).[35]

   The embedded subjunctive *sia* might be judged more marginal with respect to the indicative. It is beyond doubt, however, that is it much better in that context, than in simple embedded structures, where the superordinate verb appears in the indicative:

(70)   Gianni ha detto che Maria è /*sia intelligente.
       Gianni said(IND) that Maria is(IND/ *SUBJ) intelligent

Consider that CD is impossible and that the DAR is enforced:

(71)   Gianni crede che Paolo abbia detto *(che) sia incinta.
       Gianni believes that Paolo said (SUBJ) that she is(SUBJ) pregnant

The pregnancy must hold both at the time of Paolo saying that P and at the time of the utterance. Therefore, it must be concluded that the speaker's coordinate is represented in the most embedded clause. The subjunctive is licensed by virtue of the fact that the most embedded clause can be considered as part of the content of a cognitive state. This way a MOOD-P can be projected in the embedded clause. The licensing of the subjunctive tense occurs as in the *ipotizzare* cases discussed in section 2 above. Consequently, in this case, both the subject's coordinate and the speaker's one are represented in the embedded clause, even when the verb appears in the subjunctive. The presence of the subjunctive is therefore licensed by a specific configuration, arising as an effect of the movement of (features of) the verb.

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[35]. On mood attraction phenomena and the distribution of long distance anaphors, see Giorgi (1983).

More significantly, it seems to me that mood attraction might also work in the opposite direction—namely, permitting an indicative where usually a subjunctive would appear. Consider for instance the following example:

(72)   ?Gianni ha detto che Paolo credeva *(che) Maria è incinta.
Gianni said that Paolo believed that Maria is(PRES IND) pregnant

The interpretation of (72) is a DAR one and CD is impossible. Marginally, therefore, the high CP projection can appear in this case, licensing an indicative and the speaker's coordinate.

4.2.5.   Embedded interrogatives

Consider also the following distribution in Italian if the indicative and the subjunctive in indirect interrogative clauses:

(73)   Gianni mi ha domandato se Maria è incinta.
Gianni asked me if Maria is(IND) pregant

(74)   Gianni si domandava se Maria fosse/ *sia incinta.
Lit:Gianni asked himself if Maria was(PAST SUBJ)/ *is(PRES SUBJ) pregnant
'Gianni wondered whether Maria was pregnant'

Interestingly, the indicative is permitted when there is a communicative act and the interpretation is accordingly a DAR one. Consider in fact the following example:

(75)   #Due anni fa Gianni mi ha domandato se Maria è incinta.
Two years ago, Gianni asked me if Maria is pregnant

The reasons of the oddness of (75) are the same ones discussed in section 2 with respect to sentences embedded under *dire* (say).

On the contrary, sentence (74) does not need to be a communicative act and therefore the subjunctive is licensed, following the Latin-like *consecutio*. Coherently with this choice, no DAR effect arises.

4.2.6. Further evidence: the case of German

In German there are two forms of subjunctive: Konjunctiv I and Koniunktiv II. The distiction between the two forms, contrary to Italian, does not seem to be expressible in terms of tense agreement. Consider for instance the following examples:[36]

(76) Thomas has gesagt, dass Sabine krank sei.
      Thomas said that Sabine be-KonjI sick

(77) Thomas hat gesagt, dass Sabine krank wäre.
      Thomas said that Sabine be-KonjII sick

According to native informants, the embedded state must be interpreted in both sentences as simultaneous with the event of saying of the main clause. Note also that in this case there is a subjunctive under a verb of saying. The indicative is also possible, as shown by the following example:

(78) Thomas hat gesagt, dass Sabine krank ist.
      Thomas said that Sabine is(ind) sick

In (78) the DAR is enforced, analogously to Italian. Furthermore, with verbs of *belief*—German *glauben*—the subjunctive is also admitted:

(79) Thomas glaubt, dass Sabine krank sei.
      Thomas believed that Sabine is(**subj**) sick

Schlenker (2004) also observes that Konjunktiv I cannot be used when the thought is attributed to the speaker:

(80) *Ich glaube, dass Sabine krank sei.
      I believe that Sabine is(subj) sick

He proposes an analysis of the German subjunctive system. Capitalizing on the observation that Konjunktive I clauses appear as asserted by someone, he suggests that

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[36]. I thank Walter Schweikert for these data. All misusages or misunderstandings of this evidence are uniquely my own fault.

this form is actually an *indicative in disguise*, exhibiting the additional requirement that in the contexts where it appears the speaker must be excluded from the Context set.

I fully agree with the conclusions Schlenker draws with respect to the description of the phenomenon. However, it seems to me that the approach illustrated here might provide an advantage: according to my analysis there is no need to claim that Konjunktiv I is an *indicative*, though disguised. If Schlenker's conclusions are correct, in fact, from the hypothesis I discussed that the speaker's coordinate *must not* be represented it follows that a *subjunctive* verbal form will be required, and therefore that German is not anomalous in this respect. This is a welcome conclusion, given that Konjunktiv I does not share with the indicative other relevant properties. Recall for instance, that differently from the indicative, it does not enforce the DAR, and does not convey any independent temporal value, as illustrated by the examples above. Consider also the following sentence:

(81) Thomas hat vor zwei Jahren gesagt, Sabine sei/wäre schwanger.
       Thomas said two years ago that Sabine is pregnant

Both *sei* (K-I) and *wäre* (K-II) are available, and no DAR effect is detected.

The difference between Konjunktiv I and Konjunktiv II might be that the former is (preferably) used in case there is a communicative act involved, whereas the second is (preferably) used in contexts which exclude the speaker's coordinate, but are not necessarily communication ones. The distinction however between these forms is not clear-cut and judgments vary considerably from speaker to speaker, but it seems to me that the proposal I'm arguing for opens a way for a better understanding of these phenomena.[37]

5. Some conclusive remarks

The point argued for in this paper can be summarized as follows: in DAR languages the main semantic and syntactic difference between indicative and subjunctive is constituted by the fact that in the former both the speaker's coordinate and the subject's —bearer-of-attitude—ones are represented. In the latter, on the contrary, the speaker's

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[37]. Beside Konjunktiv I and II, there is also a subjunctive compound form— *würden + infinitive*—which replaces the other subjunctive forms when they morphologically overlap with the indicative.

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coordinate is not necessarily represented. In Italian complement clauses, the distribution of the two moods seems to correlate with communicative/ non-communicative meaning of the superordinate verb. Let me add a few remarks on this point.

A relevant question concerns non-DAR languages. If the proposal advanced in this paper is at least partially correct, what can be said about them? It cannot be claimed that the indicative/ subjunctive divide is to serve the DAR/ non-DAR interpretation of embedded clauses, given that such distinction is not relevant in these languages. This question is too wide to be exhaustively answered in a single paper. A couple of considerations are in order, however.

The first one is that in these languages there is a verbal form which goes under the *name* of subjunctive, but which might actually be *something else* with respect to the form appearing in DAR languages, or at least it might have another set of properties. As a matter of fact, it is typologically different. In Greek, Romanian and Russian, for instance, it is marked only by means of a special complementizer and lacks a characteristic verbal inflection. Moreover, these languages do not have an independent infinitival form. Consequently, the functional partitioning among the subordinate moods *cannot* be the same in DAR and non-DAR languages, given that a single form must play the role that in DAR languages is played by two distinct ones.

Secondly, and perhaps more importantly, it might be claimed that in non-DAR languages the speaker's coordinate is indeed represented in the embedded clause, even if it does not serve the function it does in DAR languages—namely, the temporal interpretation. This point is discussed extensively in Giorgi (2005) with respect to the interpretation of long distance anaphor in Chinese—a language lacking DAR effects, but showing the intervention of the speaker's coordinate in another domain.

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The Two Forms of the Adjective in Korean

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1. Introduction

In Kang (2005) I discussed non-predicative adjectives like *ceon* 'former' in Korean arguing against the analysis that denies the existence of adjectives in Korean, given that they have been placed under the rubric of "attributive determinatives or adnominal modifiers" in the traditional grammar of Korean: limited in number, only used in attributive position (cf. Kim 2002). However I've proposed that these adjectives should be considered as attributive adjectives that have a direct modification source in the nominal phrase. In this paper, furthermore, I will show that they have other indirect modification counterparts, assuming the two typologies of the adjectives proposed by Cinque (2005b).

The paper is organized as follows: In section 2, I will give a short overview of the properties of Korean attributive adjectives which led some traditional Korean linguists to consider them as nouns. Section 3 shows that Korean attributive adjectives have their morphological counterparts and Section 4 discusses the distinction between adverbial and subject-oriented interpretations, attributive and predicative adjectives, assuming the proposal of Cinque (1994). In section 5, I will propose that some affixes are responsible for adjectival modification in the noun phrase in Korean. Section 6 demonstrates the contrasts between two types of adjectival modification in the NP, based on the Cinque (2005b)'s proposal for two origins of adjectives in the extended nominal projection.

2. Some properties of Korean attributive adjectives: the traditional criteria

Traditionally, attributive adjectives have been distinguished in two groups, depending on their ability to take the adverbial suffix, as illustrated in (1) (cf. Sohn 1999, Mok 2002, among others)

(1)   a. **sun*-lo
         pure-ly
      b. *cwu*-lo
         principal-ly
      c. *chak*-(u)lo
         book-with

This shows that *cwu* 'principal' in (1b) can be inflected with the adverbial suffix *-lo* like the noun in (1c), contrary to *sun* 'pure' in (1a). According to this criteria, the lexical elements pertaining to the category of non-predicative adjectives as in (1a) are *say* 'new', *hen* 'old, used', *yeys* 'old, antique', while *hyen* 'present', *ceon* 'precedent', *cwucencek* 'alleged' do not belong to this category. In fact, they are often classified as nouns, even if both are used only attributively as in (2).[1]

(2)   a. ku   *sun*   sakykkwun
         that pure swindle
         '*Lit*.: that pure swindle'
      b. *sakykkwun-i   *sun*-i-ta.
         swindle-NOM   pure-COP-DCL
         '*Lit*.: a swindle is pure'
      c. ku *cen*   taytongreyng
         that former president
         'that former president'
      d. *ku   taytongreyng-i   *cen*-i-ta.
         that   president-NOM   former-COP-DCL
         '*Lit*.: that president is a former'

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[1]. Abbreviations used in glosses: NOM 'nominative', ACC 'accusative', PST 'past tense', PRES 'present tense', PASS 'passive marker', AFF 'affix', COP 'copular', DCL 'declarative', GEN 'genitive', TOP 'topic maker', PLU 'plural', COM 'complementizer', REL 'relative clause marker'.

However, this criterion is not fundamental in order to distinguish the two categories, since the adjective *say* 'new', considered as a non-predicative adjective, can be inflected with the adverbial suffix *–lo,* while *hyen* 'present' is not able to bear this suffix even if considered a noun.[2]

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[2]. The adjective *present* in English, can appear both in prenominal position and in postnominal position with a different meaning:

(i)   a. the *present* editors   (Cinque 2005b,11)

        b. the editors *present*

Present in prenominal position possesses only a temporal meaning whereas in postnominal position it has only a locative value. The corresponding relative clause with *present* in predicate position has only one meaning, that of *present* in postnominal position, i.e., the locative one (see Cinque 2005b,11). The examples corresponding to (i) in Korean are realized with two different adjectives; one has a temporal meaning and the other has a locative value, both placed in prenominal position:

(ii)   a. *hyen*   peyncipcatul

            present   editors

            'the present editors'

        b. *peyncipcatul-i   hyen*-ta.

            Editors-NOM   present-DCL

            '*Lit*.: the editors are present (temporal value)'

        c. *chamsekhan*   peyncipcatul

            present   editors

            'the editors present'

        d. peyncipcatul-i   *chamsekha*-ta.

            Editors-NOM   present-DCL

            'The editors are present'

This is similar to the case of '*live* and *alive*' in English, since *live* can be used in prenominal position as an attributive adjective, whereas *alive* only in postnominal position as a predicative one:

(iii)   a. The *live*/**alive* animals   (Ibid.,11)

        b. The animals **live*/*alive* (cf. the animals which are **live/alive*)

(3) a. *say*-lo   ciun   cip
    new-ly   constructed house
    'a house constructed newly'

    b. *hyen-lo
    present-ly
    'presently'

Secondly, these adjectives have been considered to be prefixes (cf. Yu 1997, Lee 2004).[3] Since they cannot be used alone, they are always in adjacent position to the

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Also the Korean corresponding adjectives *nal* 'live' e *salaissnun* 'alive' show the same pattern to the previous case:

(iv) a. *nal*   cymsungtul
    live   animals
    'the live animals'

    b. *salaissnun*   cymsungtul
    alive   animals
    'the animals alive'

[3]. In fact, Lee (2004,3-11) inserts some lexical elements to the inside of the non-predicative adjectives in Korean such as *woy* 'only', *peyng* 'ordinary', *am* 'female', *sus* 'male'. Other material cannot be intervened between these elements and the noun:

(i) a. nay chakhan *woy*   ttal
    my good   only   daughter

    b. *nay *woy*   chakhan   ttal
    my   only   good   daughter
    'my good only daughter'

(ii) a. kwunmeynhan   *peyng*   koysu
    diligent   ordinary   professor

    b. *peyng   kwunmeynhan   koysu
    ordinary   diligent   professor
    'a/the diligent ordinary professor'

nouns that follow them. However, this analysis does not seem to be correct, because other elements can be preceded by these attributive adjectives, for example, an individual-level adjectives:

(iii) a. sanawun *sus*   saca
         ferocious male   lion

    b. *sus   sanawun   saca
        male   ferocious lion
        'a/the ferocious male lion'

Kang (2005,7 fn.9) suggests that the attributive adjectives cannot be followed by the non-intersective adjectives, considering them like a prefix, and for this reason the phrase (iv.b) is considered ungrammatical:

(iv) a. *wytayhan cen*   tatongryung
         great   former president

    b. *cen   *wytayhan* tatongryung
        former great   president
        '??a/the great former president'

However I think that this analysis is not correct. Indeed, (iv.b) is not ungrammatical. Therefore the hierarchy (v) for Korean adjectives proposed by Kang (2005) is not correct:

(v)   intersective adjectives > non-intersective adjectives > non-predicative adjectives > N

One may claim that the basic order is (iv.b) and the adjective *wytayhan* 'great' in (iv.a) is in higher position in the SpecFocus. This would mean that the adjective *wytayhan* 'great' in (iv.a) is not more non-intersective adjective. Indeed, in (iv.a), *wytayhan* 'great' can be arranged with the past morpheme -*ess*, contrary to that in (iv.b):

(vi) a. *wytayha-ess-ten cen*   tatongryung
         great-PST-REL   former president

    b. *cen*   *wytayhan*/(*-*ess-ten*)   tatongryung
        former   great / (-PST-REL)   president
        '*Lit*.: a/the former president that has been a great'

(4)   a. ?say *ppalgan* cha   (cf. *ppalgan* say cha)

      new   red   car

      'a/the new red car'

    b. ?say *kun*   cha   (cf. *kun* say cha)

      new   big   car

      'a/the new big car'

Therefore, it would seem to be more coherent to consider all adjectives mentioned above as attributive ones like in other languages such as Italian and English.

3. Introductory observations: another form of some attributive adjectives

Another property of Korean non-predicative adjectives is that some of them have another form, depending on their typology of modification. For instance, there are two forms of the adjective corresponding to *new* in English: *say* and *sayroun*. These two forms can appear prenominally, but the only one which can be found in predicative position is a *say-ro-un*, in certain contexts. See the following example (the semantic difference between these two forms is shown in the English glosses):

(5)   a. *say*   cha

      new   car

      'a new car; that has just been produced'

    b. *say-rou-n*   cha

       new   car

      'a new car; that it is a newer model with respect to the previous one'

    c. i   cha-ka *design-eyse*   cen   kes   pota *say/*say-rop*-ta

      this car-NOM design-in   former one more   new-DCL

      'This car is new with respect to the previous one in the design'

In (5b) and (5c), *say-ro-u-n* and say-*rop* are identical. It is only for phonetic reasons that the consonant -*p* is transformed into the vowel -*u* and then -*n* is added in attributive position. The example (5c) shows that only s*ayroun* can appear in predicative position. Because of this, *sayroun* in (5b) could be considered as an indirect modification

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adjective deriving from a relative clause, contrary to *say* which has a direct modification source, since this form cannot appear in predicative position.[4]

However, it is more complicated to determine the origin of an adjective from its form, for example, in the case of adjectives like *chwucengcek* 'alleged', *sun* 'pure', *cwu* 'principal' which have another form: *chwucengcek-i-n*,[5] *sun-cen-ha-n* 'mere, *lit*.: 'pure and complete',[6] *dansun-ha-n* 'simple', *lit*.: 'only and pure', *cwuyo-ha-n* 'principal', *lit*.: 'principal and important' respectively.[7]

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[4]. A similar example for the adjective *new* can be found in Serbian/Croatian/Bosnian. These languages have two types of adjectives: short-form and long-form adjectives. Long-form adjectives have a direct modification origin, but short-form adjectives have a relative clause origin (indirect modification) since syntactically both types can appear prenominally as in (i), but in predicate position, only the short-form adjectives can appear, as in (ii). (in Cinque 2005b,18):

(i) nov/ novi   kaput

     new (short)/new (long) coat

     'a/the new coat'

(ii) Njegov kaput je nov/*novi

     his   coat   is new (short)/*new (long)

[5]. This form is formulated by adding the Korean copular –*i* and the attributive adjective marker –*n* to the basic form.

[6]. -*ha* is a affix e –*n* is an attributive maker.

[7]. According to Alexiadou (2005,5), if a language has two adjectival patterns, such adjectives are banned from one of these patterns, as illustrated in (i):

(i) a. *o ipurgos o   proin   *Greek*

        the former   the minister

   b. *z   bylyn   rozmawialan slawnyn aktorem   *Polish*

        with   former   talked   famous   actor

   c. *qian-de   zongtong   *Chinese*

        former-DE   president

Across languages adjectives such as *alleged*, *former*, *mere* cannot appear in predicative position (also see Cinque (2005b)).

Consider two forms of these adjectives:

(6) a. *chwucengcek/chwucengcek-i-n* cangkowan
        alleged/alleged-COP-N   minister
        'a/the alleged minister'
    b. *ku   cangkowan-un *chwucengcek/chwcengcek-i*-ta
        that   minister-TOP   alleged/alleged-COP-DCL
        Lit.: 'that minister is alleged'

(7) a. *sun/dansun-ha-n*   wuyen
        pure/simple-AFF-N coincidence
        'a pure coincidence'
    b. *wuyen-un   *sun/dansun-ha*-ta
        coincidence-TOP   pure/simple-AFF-DCL
        Lit.: 'a/the coincidence is pure'

Even if these adjectives have different forms, their typologies of modification do not vary, since both forms only appear in attributive position. How could the differences between the forms of these adjectives be defined? In the next section I will continue to characterize their syntactic and semantic properties, introducing the distinction between attributive adjectives and predicative adjectives formulated by Cinque (1994), and between two sources of adjectival modifications in the extended nominal phrase proposed by Cinque (2005b).

4. Distinction between two types of adjectives

4.1. Attributive: adverbial vs. subject-oriented

First of all, let me consider the adjective *chwucengcek* and *chwcengcek-i-n*, both corresponding to *alleged* in English.[8] In the same way, also the adjective *yamancek* 'brutal' can have another form: *yamancek-i-n*. Both can appear in prenominal position:

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[8]. In fact, Kim (2002, 35 fn.10) notes that modal adjectives (e.g., *alleged*) in Korean are absent and illustrates this with the following example:

(8) *yamancek/yamancek-i-n* kongkeyk

brutal/brutal-COP-N aggression

'a/the brutal aggression'

In order to explain this phenomenon, we can introduce the adjective *brutale* 'brutal' in Italian, which can appear before as well as after the noun, but not after the complement as in (9).

(9) a. La loro *brutale* aggressione all'Albania   (*subject-oriented*)

b. La loro aggressione *brutale* all'Albania   (*manner*)

c. *La loro aggressione all'Albania *brutale*

'Their brutal aggression against Albania'

(Cinque 1994:88-89)

(i)   [salinca-lo hyemuy(-lul)   pat]-nun   salam

murder-as suspicion (-ACC) received-REL   person

'a person alleged to be a murder' (*Lit*.: 'a murderer who received suspicion')

According to Kim, the adjective corresponding to *alleged* in (i) is a relative clause with a clausal predicate inside. However, we can also say as in (ii).

(ii)   chwucengcek salinca

alleged   murder

'a/the alleged murder'

The difference between (i) and (ii) can be detected if we compare them with the two uses of *alleged* in (iii).

(iii) a. The *alleged* murderer was deported.   (Cinque 2005b,45)

b. The murderer *alleged* to have killed his own parents was deported.

Alleged in prenominal position in (iii)a has a non-intersective value, but in postnominal position with a phrasal complement, it becomes intersective (see Cinque 2005b,45 for the further discussion). The same is true for Korean.

According to Cinque, the prenominal and postnominal positions of attributive adjectives receive two different interpretations: the postnominal position receives a strict "manner" interpretation like (9b), whereas the prenominal one has a "subject oriented" interpretation as in (9a). Cinque proposes the partial structure containing a speaker-oriented adjective as in (10).

(10) a. La probabile (*speaker-or.*) goffa (*subject-or.*) reazione immediata (*manner*)
    alla tua lettera
    'The probable clumsy reaction immediate to your letter'
 b. [$_{XP}$ AP speaker-or. _ [$_{XP}$ AP subject-or. _ [$_{ZP}$ AP manner/thematic _ [$_{NP}$ N…]]]]
    (Ibid.,92)

Assuming the distinction between manner adjectives and subject-oriented adjectives, let me consider *yamancek* and *yamancek-i-n* 'brutal' in Korean.[9] Both forms can appear between the subjective genitive and the noun as in (11). But their interpretations are different, in that the one in (11a) receive the manner value, whereas the one in (11b) receive subject oriented value.

(11) a. kutul-uy   *yamancek* kongkeyk
      they -GEN brutal   aggression
 b. kutul-uy   *yamancek-i-n* kongkeyk
      they -GEN brutal-COP-N   aggression
      'Their brutal aggression'

In addition, they do not appear in the left peripheral position of NP, since they cannot modify the nominal head:[10]

(12) a. *yamancek* kutul-uy   kongkeyk
      brutal   they -GEN   aggression
 b. *yamancek-i-n*   kutul-uy   kongkeyk
      brutal-COP-N   they -GEN aggression
      'Their brutal aggression'

---

[10]. In (11), it is not important that *yamancek* and *yamancek-i-n* 'brutal' modify *kutuluy* 'loro'.

This distinction between subject-oriented and manner interpretation for the two forms of the adjective *brutal* in Korean, is supported by the fact that the mutual order between these two types of adjectives follows that of Italian. That is, the manner adjective *yamancek* 'brutal' can only follow the subject oriented adjective such as *erisekun* 'stupid'. The examples (14) are parallel to (13) in Italian:

(13) a. *L'aggressione *stupida brutale/italiana* all'Albania
        the aggression stupid   brutal/Italian   against Albania
     b. La *stupida* aggressione *brutale/italiana* all'Albania
        the stupid aggression   brutal/Italian   against Albania
        'The stupid brutal Italian aggression against Albania'
        (Ibid.,91)

(14) a. Albania-eytayhan kuyul-uy   *erisekun yamancek* kongkeyk
        Albania-against   they-GEN stupid   brutal   aggression
        'The stupid brutal Italian aggression against Albania'
     b. *Albania-eytayhan kutul-uy   *yamancek erisekun*   kongkeyk
        Albania-against   they-GEN brutal   stupid   aggression
        'The stupid brutal Italian aggression against Albania'

This evidence suggests that in Korean, the manner adjectives and the subject oriented adjectives are distinguished morphologically. Moreover the speaker oriented adjectives cannot be preceded by subject oriented adjectives in the way illustrated in example (15). Therefore, the hierarchy between these adjectives would be that of Cinque in (10b):

(15) a. *yesangkanunghan   eykeyun* panwung
        probable   clumsy reaction
        'the probable clumsy reaction'
     b. **eykeyun   yesangkanunghan*   panwung
        clumsy   probable   reaction
        'the probable clumsy reaction'
     c. ne-uy   peynci-eytayhan *yesangkanunghan erisekun cwkkakcek*-(*-*i-n*)
        you-GEN letter-to   probable   clumsy immediate-(COP-N)
        pangung
        reaction
        'The probable clumsy immediate reaction to your letter'

(16) [XP AP speaker-or. _ [YP AP subject-or. _ [ZP APmanner/thematic _ [NP N …]]]]

4.2. Predicative

According to Cinque (1994,92), the attributive adjectives in the Romance languages precede a noun or appear between the noun and its complement, not after the complement (cf. 9c). However, they become grammatical if there is a sharp intonational break between the complement and the AP, with the AP bearing stress (17a), or coordinated (17b), or modified by a specifier (17c) or a complement (17d):

(17) a. La loro aggressione all'Albania, BRUTALE
      b. La loro aggressione all'Albania, improvvisa e brutale
      c. La loro aggressione all'Albania, assai poco brutale
      d. La loro aggressione all'Albania, brutale nei suoi effetti
          (Ibid.,92)

Assuming this analysis, let me consider the adjective *yamancek*, *yamancek-in* which both correspond to *brutal* in English. The constructions in (18) are parallel to those in (17).

(18) a. *YAMANCEK-*(*I-N*), kutul-uy   Albania-eytayhan kongkeyk
          brutal-COP-N   they-GEN Albania-against   aggression
          Lit.: 'Their aggression against Albania, BRUTAL'
      b. *yamncek-*(*i*)-ko *kapcaksure-n* kutul-uy   Albania-eytayhan kongkeyk
          brutal-COP-and unexpected-N they-GEN Albania-against   aggression
          Lit.: 'Their aggression against Albania, brutal and unexpected'
      c. maywu *yamancek-*(*i-n*) kutul-uy   Albania-eytayhan kongkeyk
          very   brutal-COP-N   they-GEN Albania-against   aggression
          Lit.: 'Their aggression against Albania, very little brutal'
      d. hwoykwoa-eyse *yamancek-*(*i-n*) kutul-uy   Albania-eytayhan kongkeyk
          effects   -in   brutal-COP-N   they-GEN Albania-against   aggression
          Lit.: 'Their aggression against Albania, brutal in its effects'

This demonstrates the contrast between the two forms of the adjective *brutal* in Korean. When it is preceded by a pause and emphasized in the left peripheral position (18a),

coordinated (18b), or modified by a specifier (18c) or a complement (18d), it only becomes grammatical with the adjective containing the copula -*i*. For the attributive adjectives, not only the distinction between adverbial and subject-oriented value, but also the distinction between attributive and predicative is of a morphological nature.[11]

Therefore we would say that *yamancek* 'brutal' can be adverbial or attributive, and that *yamancek-i-n*, which contains the copula -*i*, can be subject-oriented or predicative. And this analysis could be applied to other adjectives such as *sun* 'pure' and *cwu* 'principal' that both have another form added –*ha*: *sun-cen-ha-n*, *dansun-ha-n*, and *cwuyo-ha-n* respectively.

In Cinque (2005b,43), some adjectives that are found exclusively in prenominal position can appear after a complement in predicative position if they are coordinated with other adjectives:

(19) a. *una coincidenza *pura*   (cf. una *pura* coincidenza)
         a   coincidence pure
       'a pure coincidence'

---

[11]. This is limited to the adjectives that have the suffix –*cek*. Adjectives that do not have the suffix -*cek*, for example *yengakhan* 'clever' and *suncynhan* 'naïve', are subject to interpretations determined by their structural positions (ii), as in the Italian phrase (i):

(i) a. L'*astuta* risposta *ingenua* di Gianni   (Crisma 1996,65)
         the clever answer   naïve   of John
         'John's clever naïve answer'
     b. L'*ingenua* risposta *astuta* di Gianni
         The naïve   answer   clever   of John
         'John's naïve clever answer'

(ii) a. John-uy   *yengakhan suncynhan* taytap
         John-GEN clever   naïve   answer
         'John's clever naïve answer'
     b. John-uy   *suncynhan yengakhan*   taytap
         John-GEN   naïve   clever   answer
         'John's naïve clever answer'

b. una coincidenza *pura e semplice*

   a   coincidence pure and simple

   'a pure and simple coincidence'

According to Cinque, when coordinated, the adjectives count as "heavy" and can thus Access the Spec of a higher FocP, ending up in postnominal position.

Assuming this analysis of Cinque's, we can apply it to the adjectives in Korean. The adjectives *sun* 'pure' and *cwu* 'principal' for themselves cannot be coordinated with other adjectives, similar to the fact that only the form containing the copula *-i*, *yamancek-i-n,* can be coordinated with other adjectives such as *yamancek-i-ko kapcakswuren* 'brutal and unexpected' (cf. 18b). Similarly, the forms of compounds *dan-sun* 'only and pure' and *cwu-yo* 'principal and important' can bear a affix as *–ha*, that has the same function of the copula *-i*, contrary to *sun* 'pure' and *cwu* 'principal'.

However, if there is an intonational break and an emphasis in left peripheral position (20), or a modification by a specifier (21), only the forms with *–ha* can appear:

(20) a. **SUN/DAN-SUN-HA-N*,   ku   wuyen

          pure/only and pure-HA-N that coincidence

          Lit.: 'that coincidence, only and pure'

     b. **CWU/CWU-YO-HA-N*,   ku   dongki

          principal/principal and important-HA-N that   motive

          Lit.: 'that motive, principal and important'

(21) a. nemwu   **sun/dan-sun-ha-n*   wuyen

          very much pure/only and pure-HA-N coincidence

          Lit.: 'a/the coincidence, very much only and pure'

     b. nemwu   **cwu/cwuyo-ha-n*   dongki

          very much principal and important-HA-N motive

          Lit.: 'a/the motive, very much principal and important'

5. Implication: two types of affix

5.1. Direct modification: *-CEK*

In the previous section, I have shown the presence of the adverbial adjectives in Korean: *chwucengcek* 'alleged', *yamancek* 'brutal'. These adjectives have the morphological similarity, that is, they have the suffix *-cek*, which is obligatorily added to the elements that precede the nouns:

(22)　a. *chwuceng-cek/*chwuceng* cangkwon
　　　　alleged/allegation　　　 minister
　　　　'a/the alleged minister'
　　 b. *yaman-cek/*yaman*　kongkeyk
　　　　brutal/brutality　　　 aggression
　　　　'a/the brutal aggression'

In effects, there are some adjectives that share this suffix *–cek*, as shown in (23):[12]

(23)　a. *kwahak-*(cek)* selmyung[13]
　　　　science-CEK　　 explanation
　　　　'a/the scientific explanation'

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[12]. Beside these adjectives, there are lots of elements that have the suffix *–cek*:

naycaycek kwoenwuy 'the inherent authority',　　　*kancepcek* iyk 'the indirect advantage',

kaykowancek cynsyl 'the objective truth',　　　*sangsupcek* wumcuca 'the habitual drinker',

pwulpepcek saep 'the illegal business',　　　*cekkukcek* chyryo 'the active cure',

eyktongcek hym 'the dynamic energy',　　　w*oycek* moswup 'the external appearance',

camcaycek wuyky 'the potential danger',　　　*caycengek cywuen* 'the financial aid',

poswucek taywu 'the conservative behaviour',　　　*cynpocek* cengchy 'the progressive politics',

ceykeycek heynsang 'the systematic phenomenon',　　picengkwucek sonnim 'the occasional client',

inwuycek cocak 'the artificial manipulation',　　　*cengkycek* wuntong 'the regular motion',

etc.(from the great dictionary of standard Korean 2000)

[13]. Without *-cek*, the noun *kwahak* 'science' would be a internal argument of a head noun *selmyung* 'explanation'.

   b. *cwusang-* *(cek)* sayngkak
     abstraction-CEK idea
     'a/the abstract idea'

   c. *kensel-*(cek*) mannam
     construction-CEK encounter
     'a/the constructive encounter'

The adjectives of the example (23) cannot appear in predicative position, as seen in the example (24).

(24) a. *selmyung-i   *kwahak-cek*-i-ta
       explanation-NOM science-CEK-COP-DCL
       'a/the explanation is scientific'

     b. *sayngkak-i   chwsang-cek-i-ta
       idea-NOM   abstraction-CEK-COP-DCL
       'a/the idea is abstract'

     c. *mannam-i   *kensel-cek*-i-ta
       encounter-NOM construction-CEK-COP-DCL
       'a/the encounter is constructive'

As I have suggested before with respect to the adjective *yaman-cek* 'brutal', the adjectives in (24) are adverbial or non-predicative, since they cannot appear in a predicative position. Furthermore, they cannot have a FOCUS feature (25a), nor can they be found in a left peripheral position with the pause emphasized (25b). Moreover they cannot be coordinated with other adjectives (25c), and in case they are followed by a specifier (25d) or a complement (25e), they also become ungrammatical:

(25) a. *ku-uy *kwahák-cek*   selmyung
       he-GEN science-CEK   explanation
       'His scientific explanation'

     b. *KWAHAK-CEK   ku-uy   selmyung
       science-CEK   he-GEN explanation
       Lit.: 'His explanation, SCIENTIFIC'

     c. *ku-uy *kwahakcek*-ko   *sylcaycek* selmyung
       he-Gen science-CEK-and logical   explanation
       Lit.: 'The explanation, scientific and logical'

    d. *maywu *chwsang-cek*   sayngkak

       very   abstraction-CEK idea

       Lit.: 'The idea, very abstract'

    e. *keylkwoa-meyneyse *kenselcek*   mannam

       effects-in   construction-CEK encounter

       Lit.: 'The encounter, constructive in its effects'

Therefore, summarising the properties of the adjectives with the suffix *–cek*:

1. They have an adverbial interpretation.
2. They are not able to bear the focus feature.
3. They cannot appear in the left peripheral position, even if there is an intonational break and they bear stress.
4. They cannot be modified by a specifier or a complement.
5. They can only be attributive.
6. They have a direct modification source.

5.2. Indirect modification: *-I and -HA*

5.2.1. *-I*

All the adjectives with *–cek* can have other forms containing the copula *-i* in attributive position, such as the adjective *chwucengcek, chwucengcek-i-n* 'alleged'. Therefore also the adjectives in (23) such as *kwahakcek* 'scientific', *cwusancek* 'abstract' and *kenselcek* 'constructive', have another form with the copula *-i* in attributive position (26). Despite the presence of the copular *–i*, they do not appear predicatively as shown in (27):

(26) a. kwahakcek-(*i-n*)   selmyung

       scientific-COP-N   explanation

       'a/the scientific explanation'

    b. cwusangcek-(*i-n*) sayngkak

       abstract-COP-N   idea

       'a/the abstract idea'

    c. kenselcek-(*i-n*)   mannam

       construction-COP-N encounter

       'a/the constructive encounter'

(27) a. *selmyung-i   *kwahakcek-i*-ta
        explanation-NOM   scientific-COP-DCL
        'a/the explanation is scientific'

   b. *sayngkak-i   *chwsangcek-i*-ta
      idea-NOM   abstract-COP-DCL
      'a/the idea is abstract'

   c. *mannam-i   *kenselcek*-i-ta
      encounter-NOM constructive-COP-DCL
      'a/the constructive encounter'

This would suggest that the adjectives with the copula *-i* are not derived from relative clauses, since their predicative use turns out to be ungrammatical. However, they can have a subject-oriented interpretation, contrary to the forms without the copular *–i* as apparent from the semantic contrast of the adjective *yamancek, yamancek-i-n* 'brutal' seen in 3.1. In other words, the distinction between adverbial adjectives and subject-oriented ones in Korean, is morphological. For this reason, the adjectives in (27) can appear in predicative position, having a subject-oriented value:

(28) a. ku-uy   selmyung-un   *kwahakcek*-i-ess-ta
        he-GEN explanation-TOP scientific-COP-PST-DCL
        Lit.: 'His explanation has been scientific'

   b. Ku-uy   sayngkak-un   chwsangcek-i-ess-ta
      he-Gen idea-TOP   abstact-COP-PST-DCL
      'His idea has been abstract'

   c. Kutul-uy   mannam-un   *kensel-cek*-i-ess-ta
      they-GEN encounter-TOP constructive-COP-PST-DCL
      'Their encounter has been constructive'

Moreover, this type of adjective would be predicative, given their possibility of bearing elements that render them heavy: focus, (29a), coordination, (29b), pause and emphasis, (29c), and finally modification by a specifier, (29d), or a complement, (29e):

(29) a. ku-uy *kwahakcek-i-n*   selmyung
        he-GEN scientific-COP-N explanation
        'His scientific explanation'

    b. *kwahakcek-i*-ko nonrycek-*i-n*   ku-uy   selmyung
       scientific-COP-and logical-COP-N   he-GEN explanation
       Lit.: 'His explanation, scientific and logical'

    c. *KWAHAKCEK-I-N ku-uy   selmyung
       scientific-COP-N   he-GEN explanation
       Lit.: 'His explanation, SCIENTIFIC'

    d. ku-uy   maywu *chwsangcek-i-n* sayngkak
       he-GEN very   abstract-COP-N idea
       Lit.: 'His idea, very abstract'

    e. keylkwoa-meyneyse *kenselcek-i-n*   mannam
       effects-in   constructive-COP-N encounter
       Lit.: 'The constructive encounter in effects'

This shows the contrast between the adjectives which share the suffix *-cek* with or without the copular *–i*. In the next section, I would like to characterize the properties of the affix *–ha*.

5.2.2. *-HA*

Let us consider the status of *–ha*, which is present in adjectives such as *dansun-ha-n*/*suncen-ha-n* and *cwuyo-ha-n* (derived from the adjectives *sun* 'pure' and *cwu* 'principal' respectively). First of all, the affix *-ha* is in complementary distribution with the copular *-i*:

(30) a. *dansun-**ha**/***i*-ta
       simple (only and pure)-HA-DCL
       Lit.: 'is simple'

     b. *yamancek-**i**/****ha**-ta
       brutal-COP-DCL
       Lit.: 'is brutal'

This suggests that *–ha* has the same function as the copular affix *–i*. Indeed, there are some adjectives such as *kinkup*/*kinkup-ha-n* 'urgent', *yumyeng*/*yumyeng-ha-n*

'famous'.[14] In attributive position, the presence of *–ha* is optional, as in (31). In predicative position, on the other hand, *–ha* is obligatory, as shown in (32).[15]

(31) a. kinkwup-(*ha-n*)   sanghwang
       urgent-HA-N   situation
       'a/the urgent situation'
    b. yumyeng-(*ha-n*) paywu
       famous-HA-N   actor
       'a/the famous actor'

(32) a. ku sanghwang-un   kinkwup-*(*ha*)-ta
       that situation-TOP urgent-HA-DCL
       'That urgent situation'
    b. ku paywu-nun   yumyeng-*(*ha*)-ta.
       that actor-TOP famous-HA-DCL
       'That actor is famous'

One characteristic of the affix *–ha* is that it makes the adjective predicative. This means that the coordination, focus, the modification by a specifier and emphasis are admitted with adjectives containing *–ha*:

(33) a. ku   kinkwup-*há-n* sanghwang
       that   urgent-HA-N situation
       'a/the urgent situation'
    b. KINKWUP-*(HA-N)   ku sanghwang
       urgent-HA-N   that situation
       '*Lit*.: a/the situation, URGENT'
    c. Ku   maywu yumyeng-*(*ha-n*) paywu
       that very   famous-HA-N   actor
       'that very famous actor'

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[14]. Originally, this idea has been proposed by Mok (2002,15).

[15]. This type of adjectives are *cwungyo/cwungyo-ha-n* 'important', *ketay/ketatay-ha-n* 'enormous', *kangryek/kangrye-ha-n* 'strong', etc.

This contrast between the adjectives with or without *–ha* could be supported by the fact that the positions of generation of the two forms of the adjective *famous* in Korean could be revealed through their relative ordering with respect to another adjective (for example, *celmun* 'young'):

(34) a. ku-nun   maywu *celmun yumyung*-(*ha-n)   cakka-i-ta.
       he-TOP very   young   famous-HA-N   writer-COP-DCL
       'He is a very young famous writer'

    b. ku-nun   maywu *yumyung-*(ha-n) celmun*   cakka-i-ta.
       he-TOP very   famous-HA-N   young   writer-COP-DCL
       'He is a very famous young writer'

This example demonstrates that the adjective with *–ha*, *yumyeng-ha-n* 'famous' can only appear in the higher position relative to the adjective *celmun* 'young', contrary to its counterpart without *–ha,* as in (34a). On the other hand, in the lower position relative to the adjective *celmun* 'young', only the form without-*ha* can appear.

To summarize, in section 5.2, I have argued that the adjectives which occur with the copular *–i* or the affix *–ha* can be predicative and also have an indirect modification origin.

6. Contrasts between two types of modification

In the present section, I would like to discuss some evidence supporting the conclusion that Korean adjectives are of two types giving rise to two types of interpretations. I will illustrate the contrasts between stage-level and individual-level, between absolute and relative, between specificity-inducing and non-specificity-inducing with reference to the theory of the two origins of adjectival modification proposed in Cinque (2005b).

6.1. Individual-level vs. stage-level

In Larson (2000b) and Cinque (2005b), adjectives that have a direct modification origin are taken to possess a characteristic or enduring (individual-level) property, whereas those that have an indirect modification origin are taken to manifest a temporary (stage-level) property. According to Cinque, this difference between the two origins of the

adjectives is systematic in the Germanic and Romance languages: that is, it depends on their pre- and postnominal position, as illustrated in (35) and (36):

(35) a. The *visible* stars include Aldebaran and Sirius.   (ambiguous)
      b. The stars *visible* include Aldebaran and Sirius.   (S-level)

(36) a. Le *invisibili* stelle di Andromeda sono molto distanti.   (I-level)
          'A's stars, which are generally invisible, are very far'
      b. Le stelle *invisibili* di Andromeda sono molto distanti.   (ambiguous)
          'A's stars, which are generally invisible, are very far'   (I-level)
          or
          'A's stars, which are generally visible, but which happen to be invisible
          now…'   (S-level)
          (Cinque 2005b,4-5)

This shows that in the prenominal position English adjectives introduce ambiguity between individual-level and stage-level as in (35a), while in the postnominal position they are not ambiguous, they denote only stage-level property as in (35b). And in Italian, contrary to English, adjectives in prenominal positioncan have only an individual-level interpretation (36a), while in the postnominal position both readings are available (36b).

In the case of Korean, the corresponding adjective *kasicek* 'visible', which contains –*cek*, is a direct modification marker for adjectives. Therefore, an individual-level reading is available in (37a), while the temporal property or the stage-level value can be expressed by another form; *kasicek-i-n* 'visible' containing the copula -*i*, as shown in (37).[16]

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[16]. There is another possibility to express both individual-level and stage-level reading with the adjective *poinun* 'visible', containing the present tense marker -*nun*. This adjective *poinun* 'visible' would be identical to the reduced relative clause with the temporary property as in (i.b), while the enduring property expressed with a support of an adverbial *hangsang* 'always' as in (i.c):

(i) a. Tosekwoan-eyse *kongpuha*-**nun**   haksayng
         library-in   student-PRES   student
         'A/the student who is studying in the library'

(37) a. Andromeda-nun k*asicek* pyel-i-ta.   (I-level)
         Aldebaran-TOP   visible   stras-COP-DCL
         'The Aldebaran is a visible star'

      b. Andromeda-nun *kasicek-i-n*   pyel-i-ta*.*   (S-level)
         Aldebaran-TOP   visible-COP-N star-COP-DCL
         'The Aldebaran is a star, which is visible'

In addition, these two types of adjective *visible* in Korean respect the order "S-level > I-level > N" or "indirect modification > direct modification > N" as in (38b). And *pikasycek-i-n* 'invisibile', the type of S-level adjective, can only be followed by *modun* 'every' through a focus (or emphasis) movement as in (38c):[17]

(38) a. *modun *kasicek pikasycek-i-n*   peyl-tul
         every   visible   invisible-COP-N stars-PLU
         'every visible star invisible'

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      b. (hanwl-ey) *po-i-**nun***   peyl-tul
         sky-in   see-PASS-PRES star-PLU
         'The stars which are seen in the sky now'

      c. **hangsang** *po-i-**nun***   peyl-tul
         always   see-PASS-PRES star-PLU
         'The stars which are always seen'

[17]. It is also possible to see the order "S-level > I-level > N" with the adjective *poinun* 'visible', derived from the reduced relative clauses:

(i) a. (cikum) *an*-po-i-nun   hangsang po-i-nun   peyl-tul
         now   not-see-PASS-PRES   always   see-PASS-PRES star-PLU
         'The stars that are visible always, invisible'

     b. *hangsang poinun   an-po-i-nun   peyl-tul
         always   see-PASS-PRES not-see-PASS-PRES   star-PLU
         Lit.: 'The stars that are invisible, always invisible'

With regard to the order between the relative clauses, see Larson and Takahashi (2004), also Cinque (2005b).

    b. modun *pikasicek-i-n*   *kasicek* peyl-tul
        every   invisible-COP-N visibile stars-PLU
        'every visible stars invisible'

    c. *pikasicek-*(i-n)* modun   peyl-tul
        invisible-COP-N every   stars-PLU
        'every visible stars, INVISIBLE'

6.2. Absolute vs. relative

In Cinque (Ibid.,16), an adjective like *enormous* in English is ambiguous between relative absolute as in (39): 'an elephant which was an enormous thing, in absolute terms' (in absolute terms) or 'an elephant which was enormous with respect to other individuals of the same class':

(39) (She saw) an elephant which was enormous

The adjective that corresponds to *enormous* in Korean is *ketay-ha-n* and it can also introduce ambiguity between these two types of interpretations, as in the example (40a), however its counterpart without –*ha*: *ketay* 'enormous', can have only absolute value as in (40b), similarly to the analysis of Cinque. That is, the adjectives that have a direct modification source, can have only one absolute value:

(40) a. kuney-nun *ketay-ha-n*   kokkyri-lul po-ass-ta.   (ambiguous)
          She-Top   enormous-HA-N elephant-ACC see-PST-DCL
          'She saw an elephant which was enormous'
      b. kuney-nun *ketay*   kokkyri-lul   po-ass-ta.   (absolute)
          She-Top   enormous elephant-ACC see-PST-DCL
          'She saw an elephant which was enormous thing'

6.3. Specificity-inducing vs. non-specificity–inducing

Also in Cinque (Ibid.,8-9), the adjectives with origin of indirect modification possess ambiguous interpretations between specific and not-specific, as in the example (41), on

the other hand, those with origin of direct modification can have only a specific interpretation, as in (41b):[18]

(41) a. Mi hanno detto che alla festa interverrà un attore *famoso*   (ambiguous)
          'They told me that a certain famous actor will come to the party'
          'They told me that some famous actor or other will come to the party'
      b. Mi hanno detto che alla festa interverrà un *famoso* attore   (specific)
          'They told me that a certain famous actor will come to the party'

This property that distinguishes between the origins of the adjectival modifications can also be found in Korean in the contrast between the types of adjectives with or without –*ha*, for an adjective *yumyeng*/*yumyeng-ha-n* 'famous':[19]

(42) a. etten *yumeng-ha-n* paywu-ka party-ey on-ta-ko   tul-ess-ta.
          cetain famous-HA-N actor-Nom party-to   come-DCL-COM hear-PST-DCL
                                                                   (ambiguous)
          'I heard that a certain famous actor will come to the party'
          'I heard that some famous actor or other will come to the party'
      b. etten *yumeng* paywu-ka   party-ey on-ta-ko   tul-ess-ta.
          certain famous actor-Nom   party-to come-DCL-COM hear-PST-DCL
                                                                   (specific)
          'I heard that a certain famous actor will come to the party'

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[18]. According to Cinque, the prenominal position of the adjective renders an indefinite DP specific, which implies the existence of a particular actor that will come to the party, whether or not the speaker knows his identity.

[19]. This property can be found also with the adjectives *ius*/*ius-ha-n* 'nearby':

(i) John-un *ius-ha-n*   cyp-ul   panghwaha-ko sypehan-ta   (ambiguous)
    J.-Top   neaby-HA-N   house-ACC   burn-to   want-DCL
    a: 'John wants to burn some specific house which is near his'   (specific)
    b: 'John wants to burn some house or other among those which are near his'   (non-specific)

(ii) John-un *ius*   cyp-ul   panghwaha-ko sypeha-n-ta   (specific)
     J.-Top   neaby-HA-N   house-ACC   burn-to   want-DCL
     'John wants to burn some specific house which is near his'

7. Concluding remarks

Differently from other types adjectives (i.e., the qualitative adjectives), these non-predicative adjectives have not been considered to be a part of the adjectives that are present in the traditional grammar of Korean.

In this paper, however, in reviewing the Korean non-predicative adjectives and their counterparts containing the copular *–i* and the affix *-ha*, I've argued that they can be distinguished between adverbial and subject-oriented, attributive and predicative, origin of direct modification and that of indirect modification with regard to the possibility to supply explanations more deepened on the category of the adjectives and the adjectival modifications in the nouns phrase in Korean, based on the proposals of Cinque (1994) and Cinque (2005b).

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On the Order of the Prenominal Participles in Bulgarian

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This paper examines the distribution of Bulgarian participles in prenominal position. The discussion centers around two main arguments. First, it is argued that participial expressions postmodified by adverbs are real verbal participles. We provide data that, in Bulgarian, these participles can occur in prenominal position. The second goal is to show that when co-occurring in prenominal position, participles exhibit certain ordering restrictions, namely, stage-level participles precede individual-level participles. These ordering restrictions conform to what is argued in Larson and Takahashi (in press) and Cinque (2005), who suggest that the adnominal modification area contains two layers—an individual-level layer, closer to the noun, including not only all attributive-only adjectives but also part of the indirect modification adjectives, and a stage-level layer, situated higher up and including the rest of the indirect modification area.

1. Introduction

In languages like English, participial expressions[1] can occur in prenominal position either unmodified or premodified by an adverbial. It has been claimed that the English prenominal participial expressions are not verbal participles but adjectives. Languages like Bulgarian, however, which do not exclude postmodified participial expressions in prenominal position, seem to show, first, that the prenominal position is not reserved

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[1]. We use the term participial expression to refer to all kinds of participle-looking words. We reserve the term participle for the real verbal participles.

only for adjectives and, second, that verbal participles occurring in prenominal position display certain ordering restrictions, as predicted by Larson and Takahashi (in press) and Cinque's (2005) theory of adnominal modification.

Unlike the premodified participial expressions, the postmodified ones seem to display verbal and not adjectival properties. In English, postmodified participial expressions cannot be found in front of the noun but appear only in postnominal position. We will provide evidence that postmodified participial expressions, both in English and in Bulgarian, exhibit verbal and not adjectival properties. Occurring in prenominal position in Bulgarian, postmodified participles can combine with transitive participles followed by an object (of which we are sure that they are real verbal participles[2]). We will show that prenominal participial expressions obey certain ordering restrictions in front of the noun, namely, the stage-level participle must precede the individual-level participle. Neither two stage-level, nor two individual-level participles can form a grammatical noun phrase in Bulgarian.

The paper is organized as follows. In section 2 we introduce the type of participial expressions used in prenominal position in Bulgarian. In section 3 we provide evidence from Bulgarian and English that the postmodified participial expressions are verbal participles and do not have adjectival properties. In section 4 we provide examples in support of Cinque's and Larson and Takahashi's prediction that if two participles occur in prenominal position, it is necessarily the case that the stage-level participle precedes the individual-level participle.

2. Bulgarian prenominal participial expressions

It has been suggested in the literature (Bresnan 1982, 1995) that all prenominal participle-looking words should be considered adjectives. Laczko (2001), however, also working within the Lexical-Functional Grammar, as Bresnan, provides data from Hungarian showing that verbal participles *do* occur in front of the noun. We are also going to advocate this claim. As far as the English prenominal participial expressions are concerned, since only unmodified and premodified participial expressions can occur in front of the noun, we will assume that they are not adjectival but simply ambiguous between the adjectival and the verbal reading and for this reason it is impossible to

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[2]. It has been claimed by Wasow (1977) that participles taking a direct object are real verbal participles.

isolate their verbal characteristics. In Bulgarian, however, we can find transitive[3] and postmodified participial expressions prenominally. We are going to argue that the last two types of participial expressions are real verbal participles and not adjectives, thus showing that, the prenominal position is not reserved only for adjectival expressions. We will then present data from English which show that postmodified participial expressions behave as verbal participles also in this language the only difference being that, in English, postmodified participles can be found only in postnominal position (for independent reasons). After having shown that Bulgarian makes use of two syntactic types of verbal participles in prenominal position—participles taking a direct object complement and postmodified participles—we will concentrate on the order these participles exhibit when co-occurring in front of the noun.

Bulgarian has the following three types of participial expressions occurring in prenominal position—passive participles (traditionally called past passive participles), past perfect participles (traditionally called past active participles) and what can be called progressive participles or present participles (traditionally named present active participles).

(1)   Otvoreniat vchera magazin   (Passive participle)
       Opened-the yesterday shop
       'The shop that opened yesterday'

(2)   Pristignaliat vchera turgovets   (Past perfect participle)
       Arrived-the yesterday merchant
       'The merchant who arrived yesterday'

(3)   Izuchavashtiat fizika student   (Present participle)
       Studying-the physics student
       'The student who is studying physics'

The passive participle form is quite common across languages and is widely discussed in the literature. As to the perfect participle, in many languages it has the same form as the passive participle (English, Italian, German, etc.). Bulgarian and Slovenian, for example, have a separate form for this participle, distinct from the form for the passive

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3.   We refer to participles taking a direct object as transitive participles.

participle, as reported by Marvin (2002). The progressive participle is not uncommon across languages.

An important peculiarity of the Bulgarian perfect and progressive participles is that they can take a direct object also in prenominal position, as shown bellow.

(4) Zashtitiloto sestra si momche   (Perfect)
     Defended-the sister his boy
     'The boy who defended his sister'

(5) Chetiashtiat doklada professor   (Progressive)
     Reading-the report-the professor
     'The professor who is reading the report'

There is a group of verbs in Bulgarian which obligatorily require a direct object complement.

(6) Skrivam *(tsennite predmeti)
     Hide precious-the objects
     'Hide the precious objects'

(7) Nabezhdavam *(priatelkata si)
     Accuse (falsely) friend-the my
     'Accuse (falsely) my friend'

The participles deriving from such verbs also require a direct object complement (of course we exclude the group of passive participles, which cannot have a direct object complement).

(8) Izprazniliat * (kasata) sluzhitel   (Perfect)
     Emptied-the cash-box-the man
     'The man who emptied the cash box'

(9) Vlacheshtata *(chergata) zhena   (Progressive)
     Hauling-the rug-the woman
     'The woman hauling the rug'

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There are verbs which, apart from being obligatorily transitive, could also be used as intransitive (unaccusative or unergative) verbs:

(10) a. Izkliuchiliat naprezhenieto mehanizum   (Perfect - Transitive)
          Switched off the tension-the mechanism
          'The mechanism that switched off the tension'
      b. Izkliuchiliat mehanizum   (Perfect - Unaccusative)
          Swiched off the mechanis
          'The mechanism that switched off'

(11) a. Izpulniavashtiat ariata tenor   (Progressive - Transitive)
          Performing-the area-the tenor
          'The tenor singing this area'
      b. Izpulniavashtiat tenor   (Progressive - Unergative)
          Performing-the tenor
          'The performing tenor'

We would like to keep apart the cases in which a verb is realized as transitive and those in which it is intransitive. We will attribute this phenomenon to the lexical ambiguity of the verb.

  Another group of participles are those deriving from verbs which are unambiguously intransitive.

(12) Padnaliat snoshti sniag   (Perfect - Unaccusative)
      Fallen-the yesterday night snow
      'The snow that fell down yesterday'

As was mentioned above, those participial expressions that preserve the direct object of the verb will be considered verbal participles. The "bare" or unmodified participial forms, we will consider ambiguous between the participial and the adjectival reading. We will suggest the same about the premodified participial forms. As to the postmodified participial expressions, we will try to show that they exhibit verbal and not adjectival properties.

3. Tests showing the verbal character of the postmodified participial expressions

In this section, we use a number of very well-known tests for distinguishing between participles and adjectives, in order to show that the postmodified participial expressions share common properties with verbs and not with adjectives. We present data from Bulgarian and from English.

3.1. Bulgarian

As was stated in the introduction, we will focus mainly on the prenominal use of the participial expressions in Bulgarian. Many authors (among them Wasow 1977 and Bresnan 1982, 1995), analyzing mainly data from English, claim that the participle-looking words found in front of the noun are nothing else but adjectives. There are also opponents to this idea. Laczkó (2000, 2001) provides data from Hungarian showing that verbal participial forms *are* allowed in prenominal position. In this subsection, we are going to provide further evidence in support of this claim. Particularly, we will argue in favour of the verbal status of those Bulgarian participial expressions which are postmodified by adverbs[4].

The degree quantifier.
One of the tests for adjectivality is the compatibility of an expression with the degree quantifier. Since the latter combines only with adjectives and never with verbs, whatever participle-looking expression is compatible with it, it must be considered an adjective (of course, this test applies only to expressions which are gradable.)
The example below shows that some unmodified participial expressions are compatible with the degree quantifier.

(13) Nai-nadrastkanata tetradka e tazi na Petia.   (Unmodified participial expression)
       Most scribbled-the notebook is that of Petia.
       'Petia has the most scribbled notebook'

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[4]. We consider relevant only those adverbs which can never be used with adjectives. Therefore, we will restrict ourselves to using only manner adverbs like *carefully* and *politely* and their Bulgarian analogues.

Bulgarian transitive participles (which are verbal participles) are never compatible with the degree modifier.

(14) *Nai-nadraskaloto tetradkata si momche.
       Most scribbled-the notebook-the his boy

As we see below, the same holds true for the post-modified participial expressions. Examples (15)-(17) show that unmodified participial expressions can be compatible either with the degree quantifier or with a post-modifying adverb, but never with both of them at the same time.

(15) Po-natocheniat nozh rezhe po-dobre.
       More grinded-the knife cuts better
       'The more grinded knife cuts better'

(16) Natocheniat vnimatelno nozh se postavia varhu…
       Grinded-the carefully knife should be placed upon the…
       'The carefully grinded knife should be placed upon the…'

(17) *Po-natocheniat vnimatelno nozh se postavia varhu…
       More grinded-the carefully knife should be placed upon the…

If an expression is compatible both with the degree quantifier and with a postmodifying adverb but never with both of them at the same time, there must be a difference in the grammatical status of these two combinations. The tests applied below seem to further support this conclusion.

Complements of some verbs.
Another test used in the literature is the possibility of an English adjective to appear as a complement of verbs like *seem, remain, look, sound, act and become.* The examples are taken from Wasow (1977).

(18) John looked eager to win.

(19) John remained happy.

It seems that the Bulgarian analogue of the verb *remain—ostavam* requires an adjectival complement as well.

The examples from Bulgarian show that premodified and unmodified participial expressions can occur in this position but participles taking a direct object complement and postmodified participial expressions cannot. We see here that, as we suggested above, the premodified participial expressions behave like adjectives.

Unmodified participial expression

(20) Trite ostanali nepochisteni sled partito pomeshtenia

Three-the remained uncleaned after party-the rooms

'The three rooms that remained uncleaned after the party'

Premodified participial expression

(21) Ostanalite vnimatelno podredeni vurhu biuroto dokumenti [5]

Remained-the carefully ordered on bureau-the documents.

'The documents that remained carefully ordered on the bureau'

(22) Ostanaloto vnimatelno razpechatano sled proverkata pismo.[6]

Remained-the carefully unsealed after examination-the letter

'The letter that remained carefully unsealed after the examination'

Transitive participles

(23) *Ostanaliat podrezhdasht dokumentite sluzhitel.

Remained-the ordering documents-the attendant

'The attendant that remained ordering the documents'

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[5]. Exampels (21) and (22) sound a bit odd because of the slight semantic incompatibility of the adverb "carefully", which we use in order to be consistent, and the verb *ostavam/remain*. We aim at showing that, in this environment, an adverb in postposition with respect to the participle sounds worse than an adverb in preposition with respect to the participle. We see in (27) that, in a predicative use, the same premodified participle sounds better (since it is easier to insert the context).

[6]. See footnote 5.

Postmodified participial expression

(24)   ???*Ostanalite podredeni vnimatelno varhu biuroto dokumenti
       Remained-the ordered carefully on bureau-the documents
       'The documents that remained carefully ordered on the bureau'

(The relevant meaning of the participle *ostanalite* has to be distinguished from the meanings: "remained at that place" and "the rest")

(25)   *Ostanaloto razpechatano vnimatelno sled proverkata pismo
       Remained-the unsealed carefully after examination-the letter
       'The letter that remained carefully unsealed after the examination'

Predicative use:

Unmodified participial expression

(26)   Knigata ostana neprochetena.
       Book-the remained unread
       'The book remained unread'

Premodified participial expression

(27)   Dori sled obiska dokumentite na biuroto i ostanaha vnimatelno podredeni.
       Even after perquisition-the documents-the on bureau-the her remained carefully ordered
       'Even after the perquisition, the documents on her bureau remained carefully ordered'

Transitive participle

(28)   *Sluzhiteliat ostana podrezhdasht dokumentite.
       Attendant-the remained ordering documents-the
       'The attendant remained ordering the documents'

Post-modified participle

(29)   *Dokumentite na biuroto i ostanaha podredeni vnimatelno.
       Documents-the on bureau-the her remained ordered carefully
       'The documents on her bureau remained carefully ordered'

Concessional relative phrases with 'however'.
Bresnan (1995), claims that only adjectives, and not verbs, can head concessional relative phrases beginning with 'however'.
however AP vs. *however* VP: *however supportive of her daughter she may have been* vs. *however supporting her daughter she may have been…*
(Bresnan, 1995)

Indeed, neither the Bulgarian analogues of the English concessional phrases with *however* can be headed by a verb. Thus, we can make the prediction that only unmodified and premodified participial expressions but not postmodified ones can head concessional phrases like *kolkoto i…da …/however....* The examples below show that this expectation seems to be correct.

Unmodified participial expressions
(30)   Kolkoto i nadraskana da e tetradkata, pak shte mi svurshi rabota.
          However and scribbled DA is notebook-the still will to me serve
          'However scribbled the notebook is, it could serve me'

Premodified participial expressions
(31)   Kolkoto I vnimatelno podbrani da sa sustavkite …
          However and carefully selected DA are ingredients…
          'However carefully selected the ingredients…'

Post-modified participial expression
(32)   *Kolkoto i nadraskana nevnimatelno da e tetradkata, pak shte mi svurshi rabota.
          However and scribbled carelessly DA is notebook-the still will to me serve
          'However carelessly scribbled the notebook is, it could serve me'

Transitive participle
(33)   *Kolkoto I podbral sustavkite da e…
          However and selected (masc.) ingredients DA is …

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In prenominal position:

Unmodified participial expression

(34) Kolkoto i nadraskana tetradka da ima Ivan…

However and scribbled notebook DA has Ivan…

'However scribbled Ivan's notebook…'

Premodified participial expression

(35) Kolkoto I vnimatelno podbrani sustavki da izpolzvat…

However and carefully selected   ingredients they use…

'No matter how carefully selected ingredients they use…'

Postmodified participle

(36) *Kolkoto i podbrani vnimatelno sustavki da izpolzvat...

However and selected   carefully ingredients they use

'No matter how carefully selected ingredients they use…'

The examples above clearly show that the postmodified participial expressions cannot fill the slot of the adjectives. The premodified and the unmodified ones, on the other hand, qualify as adjectives.

In the next subsection, we will see that Bulgarian is not the only language in which the postmodified participles display verbal participles. English seems to pattern with Bulgarian in this respect. We present below some tests in support of this view.

3.2. English[7]

According to the literature, the negative *un-* prefix can only attach to adjectives. It never attaches to verbs. (The negative prefix under consideration here is not to be confused with the verbal reversative prefix attaching to verbs as in *undo*).

(37) unaccepted   *to unaccept

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[7]. I thank Steven Franks for the very helpful observations, opinions and suggestions concerning the subsection on English participles.

(38)   unquestioned   *to unquestion

Since there are no verbal forms corresponding to the negative participial forms in (38) and (39), these forms are considered adjectival. What is of interest for us here is that passives like these can be pre-modified but not post-modified by adverbs. (The examples were pointed out to me by Megan Linke,[8] p. c.)

(39)   The invitations**, politely unaccepted**, lay strewn upon the table.

(40)   *The invitations, **unaccepted politely**, lay strewn upon the table.

(41)   The king's argument, **respectfully unquestioned**, rang throughout the room.

(42)   *The king's argument, **unquestioned respectfully**, rang throughout the room.

The fact that adjectival passives cannot be postmodified by adverbs points to the conclusion that, also in English, the postmodification of participial expressions is characteristic only of the verbal participles and not of the adjectival forms.

Our claim is further confirmed by the following observation. Only pre-modified and not post-modified participial expressions can appear after the verb *seem*. A widespread assumption is that *seem* can be followed only by adjectives and never by verbal expressions. It has not been noticed, however, at least as far as I know, that postmodified and premodified participial expressions differ in this respect. We present the data below. (The data was pointed out to me by Megan Linke, p. c.)

(43)   The floor has not been waxed and the curtains are still dirty, but the silver, at least, seems **carefully polished**.

(44)   *The floor has not been waxed and the curtains are still dirty, but the silver, at least, seems **polished carefully**.

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[8]. I would like to thank Megan Linke for the various examples she pointed out to me, for the pleasant discussions and for her helpful comments on my data.

(45) The red lentils still have pieces of dirt and stone in them, but the green ones seem **carefully sorted**.

(46) *The red lentils still have pieces of dirt and stone in them, but the green ones seem **sorted carefully**.

(47) The present seems **carefully wrapped up**.

(48) *The present seems **wrapped up carefully**.

(49) The room seems **carefully cleaned**.

(50) *The room seems **cleaned carefully**.

(51) The issue seems **carefully explained.** (in a suitable context it sounds fine)

(52) *The issue seems **explained carefully**.

Another way to test the verbal character of the postmodified participial expressions is to see whether they can head concessional phrases with *however*. Unmodified participial expressions clearly can head such a phrase, as we show below.

(53) However **polished** the floor was, it didn't seem completely clean.

The same holds true for the premodified participial expressions:

(54) However **carefully polished** the floor was, it didn't seem completely clean.

It is, however, completely impossible to place a postmodified participial expression in this environment.

(55) *However **polished carefully** the floor was, it didn't seem completely clean.

However seems to be compatible with other adjectival participial forms like the un-modified ones. This is shown below. (The examples below were pointed out to me by Megan Linke, p. c.)

(56) A very promising extension, **however untouched**, is that of defining strategies that decide which presentation forms of the selectors to use, or even defining strategies that define such a strategy depending of e. g. the speed of the underlying hardware, the size of targeted display, etc., as indicated on p. 58.
http://www.cs.kuleuven.ac.be/publicaties/doctoraten/cw/CW2001_1.pdf

(57) People have a psychological sense that a used object is worth much less, **however untouched** it is.
http://www.palminfocenter.com/view_story.asp?ID=4323

So far, we have provided evidence that postmodified participial expressions display verbal properties in behaving differently with respect to the premodified and the unmodified participial expressions. As to the last two types, we assume that they are rather ambiguous between the participial and the adjectival reading. The adverb in preposition, unlike the adverb in postposition, is not a signal of the verbal character of the participle.

    We have already seen above that premodified participial expressions do not pattern with verbal participles. We present below some more examples from Bulgarian in support of this claim.

(58) a. Dobre slozhen chovek
          Well-built person (= has a fine physique)
    b. *Slozhen dobre chovek
          Built-well person

(59) a. Silno zamursena dreha
          Strongly daubed piece of clothing
    b. *Zamursena silno dreha
          Daubed strongly piece of clothing
          'The strongly daubed piece of clothing'

What the examples above show is that, with premodified participles, it is possible to form fixed expressions. The meaning which emerges in these examples is not a real combination of the meaning of the verb and that of the participle-looking word. In examples like (59), the participial expression does not convey the real meaning of the verb it derives from. What has happened is that the verb has been adjectivalized. As we can see, once we place the adverb in postposition, the original meaning of the verb reemerges and the example no longer sounds acceptable. This observation comes in support of the claim that the premodified participial expressions can be adjectival while the postmodified ones are only verbal. We mentioned, however, that the premodified participial expressions are actually ambiguous, which means that they can also be verbal. In other words, the premodifying adverb does not necessarily signal the verbal status of the expression it modifies but it does not necessarily signal its adjectival status either. This can be seen in the following example, in which the real verbal participles can also be premodified by an adverb.

(60)   Vnimatelno obrabotiliat dannite sluzhitel
       Carefully processed-the data-the attendant
       'The attendant who carefully processed the data'

4. The order of the prenominal participles

We have seen so far that, apart from the transitive participles, there is another group of participial expressions which behave as verbal elements. In this section, we will take it for granted that the postmodified participial expressions are verbal participles and will try to see how two verbal participles combine in prenominal position in Bulgarian[9]. What we will notice is that not all orders between the prenominal participles are allowed. We will try to explain this phenomenon in terms of Cinque's (2005) theory of adnominal modification.

We provide below some examples of two participles occurring in prenominal position.

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[9]. It seems impossible to place two transitive participles in prenominal position in Bulgarian. The examples sound too heavy and a long pause between the two participles is required. One transitive and one postmodified participle, however, can co-occur in front of the noun.

(61) Vkliucheniat vnimatelno izmervasht naprezhenieto ured pokaza, che …
Swiched on-the carefully measuring voltage-the device showed that…
'The carefully switched on voltage measuring device showed that…'

(62) Nanesenoto   vnimatelno   raztvariashto   maznini   veshtestvo,   ne   dopuska
pronikvaneto na…
Impasted-the carefully solving fat substance not allows penetration-the of…
'The carefully impasted, fat solving substance does not allow the penetration of…'

Notice that once we change the places of the participles, the examples become ungrammatical.

(63) *Izmervashtiat naprezhenieto vkliuchen vnimatelno ured
Measuring-the voltage-the swiched on carefully device
'The device that measures the voltage that has been carefully switched on'

(64) *Raztvatiashtoto maznini naneseno vnimatelno veshtestvo...
Solving-the   fat   impasted carefully   substance
'The carefully impasted substance that solves fat'

Examples like (64) and (65) suggest that not all orders between the participles in prenominal position are allowed. How to account for this phenomenon?

One component of the semantic meaning of these participles is particularly relevant to our discussion. Notice that the participles which come first in each of the examples express a telic event, an action which has been performed once. The participles coming in second position, instead, express either a quality of the entity or an activity habitually performed by that entity. We would like to express this difference in terms of the stage-level/individual-level distinction. We could assume that the participles expressing a telic event are stage-level participles and the ones expressing an activity are individual-level participles. With this distinction in mind we could turn to the theory developed by Cinque (2005) and Larson and Takahash (in press), about the order of the prenominal reduced relative clauses.

Discussing data from Japanese, Korean, Chinese and Turkish, Larson and Takahashi (in press) suggest that the adnominal modification area is divided into two large layers—an individual-level layer, closer to the noun, governed by a generic operator and

a stage-level layer, higher than the previous one and governed by an existential operator. Cinque (2005) develops a theory of adnominal modification, adopting this analysis and predicting that if the noun phrase contains more than one participles in prenominal position, there would be one participle belonging to the stage-level layer and one to the individual-level layer. This is, actually, what the Bulgarian data seem to show. Apart from the impossibility to obtain the inverted order: individual-level > stage-level, we can notice also the impossibility to place two individual-level or two stage-level participles in the same phrase. This is show in the following examples.

Compare the correct (62) with the not so well-sounding (66).

(65)   ???Izkliucheniat vnimatelno izmeril naprezhenieto ured…
          Switched off-the carefully measured (perfect participle) voltage-the device…
          'The device that has measured the voltage, that has been switched off…'

In example (65), two telic event participles are used. Therefore the phrase no longer sounds good. One could try to save the example by leaving a very long pause between the two participles but, still, it does not sound better.

Equally bad are examples containing two individual-level participles.

(66)   *Izsledvashtiat Iupiter izuchavasht astronomia uchen…
          Examinig-the Jobe studying astronomy scientist…
          'The scientist studying chemistry who studies Jobe…'

The examples above suggest that participles seem to follow a certain order in prenominal position[10]. The order of the prenominal participles is shown on the tree-diagram in (67).

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[10]. It is generally not so easy to place two verbal participles in prenominal position in Bulgarian. What we claim is that it is possible and easier in the cases in which the higher participle displays stage-level properties and the participles following it displays individual-level properties.

(67)
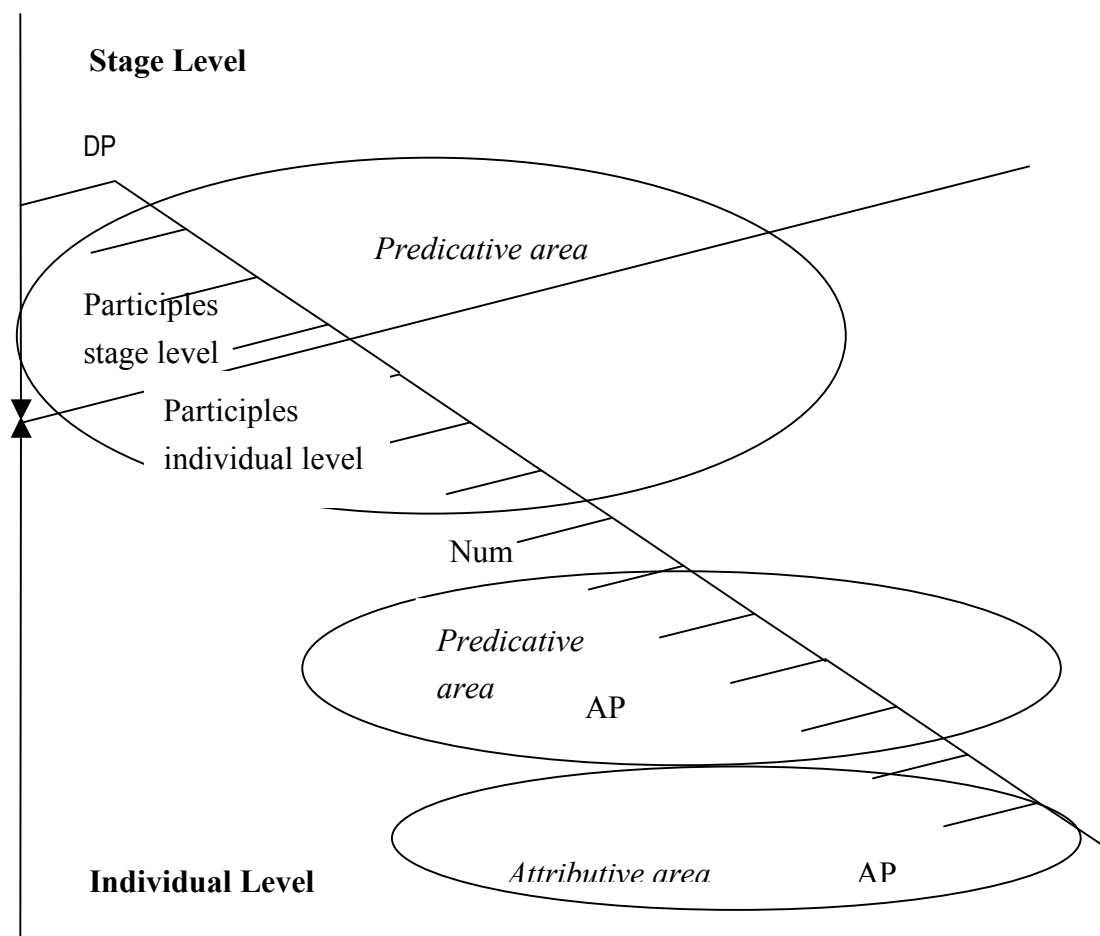
5. Conclusion

In this paper, we have provided data suggesting that verbal participles can really appear in prenominal position. We argued against the assumption that all prenominal participle-looking words are adjectives and suggested, instead, that the prenominal participial expressions in English are rather ambiguous between the participial and the adjectival reading. It is not that real participles cannot occur in prenominal position in English, as has been argued in the literature. What we suggest is that, English, for independent reasons, does not allow for right modification of prenominal elements. Since the unmodified and the premodified participial expressions are ambiguous the verbal character of these elements is not so visible. Bulgarian, however, as well as Hungarian, as shown by Laczkó (2001), do not display any ban on verbal participial elements in

prenominal position. These languages clearly show that verbal participles *can* occur in front of the noun.

Another interesting observation was that postmodified participial expressions actually do not pattern with the premodified and the unmodified ones. Both in Bulgarian and in English, these elements display verbal properties. The two languages differ only in terms of the position these participles occupy with respect to the noun—in Bulgarian they can be prenominal while in English they can only be postnominal.

The conclusions concerning the verbal status of the postmodified participial expressions served as a possibility to explore the co-occurrence of two participles in prenominal position. We have seen that it is possible to combine one transitive participle and one postmodified participle in front of the noun in Bulgarian. We have also observed that two participles can co-occur in prenominal position only if they obey the following semantic restriction: the higher participle has to display stage-level properties and the lower participle has to display individual-level properties, a restriction discussed in the works of Larson and Takahashi (in press) and Cinque (2005).

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Verbless Exclamatives across Romance:
Standard Expectations and Tentative Evaluations

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This article develops an analysis of verbless exclamative clauses in Romance; in this type of reduced clause the predicative complement precedes the subject and is separated from it by an intonational break, while the missing verb is interpreted as a copula. After the discussion of some peculiar properties of evaluative predicates, the crosslinguistic interpretive hallmarks of verbless exclamatives are described on the basis of data from Italian, Spanish and French. It will be argued that the absence of a *wh*-modifier in this structure corresponds to the speaker's intention to establish a relation between the subject and an evaluative predicate. The fact that the property expressed by the predicate must belong to the *individual*-level category follows from its being presented as an intrinsic feature of the subject. Moreover, the fact that comparatives and relative superlatives are generally excluded from verbless exclamatives witnesses that no comparison with other entities is allowed, as this would restrict the validity of the evaluation.[1]

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1. Introduction

The illocutionary function of the exclamative clause is to present a propositional content—or a part of it—as somehow unexpected or noteworthy. The act of exclamation can affect the event as a whole, like in (1a), or focus on a single costituent displaced in initial position, like in (1b):

(1)   a. Gianni ha superato numerosi esami!
         'John passed many exams!'
     b. Quanti esami ha superato Gianni!
         'How many exams John passed!'

In this article I will focus on some syntactic and semantic properties of a particular type of exclamative clause attested in Romance and exemplified in (2a). It is a kind of reduced clause where the missing verb is interpreted as a silent copula; the predicative complement linearly precedes the subject and is separated from it by a slight intonational break, rendered graphically by means of a comma:

(2)   a. Noioso, il tuo amico!
         'Boring, your friend!'
     b. Che noioso che è il tuo amico!
         'How boring your friend is!'
     c. Il tuo amico è (proprio) noioso!
         'Your friend is (really) boring!'

From an interpretive point of view, (2a) corresponds superficially to a canonical exclamative focussing on a predicative complement introduced by *che*, like in (2b). The linear order of the elements entering the predicative relation is inverted with respect to the order found in the declarative copular clause (2c).[2]

    The article is organized as follows: in section 2 some relevant properties of evaluative predicates are presented; section 3 and section 4 are devoted to the discussion of some crosslinguistic properties of verbless exclamatives; section 5 aims at

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[2]. The linear order found in (2a) is generally analyzed as deriving from the preposing of the predicate to a structural position higher than the one occupied by the subject (cf. Vinet (1991) and Hernanz and Suñer (1999)); that conclusion is forced adopting Kayne's (1994) antisymmetric framework.

highlighting the relevance of the presence *vs* absence of the *wh*-item in triggering the relevant interpretation; finally, in section 6 some of the previously described properties are shown to follow from the proposed analysis.

2. Evaluative predicates

Milner (1978) identifies a class of adjectives and nouns—labelled here *evalutative*—which are primarily, though not exclusively, used as predicates in structures like (2a).

2.1. Evaluative adjectives

Milner (1978) distinguishes two classes of adjectives.

The first class includes *referential* adjectives that are neutral from the affective-expressive point of view and cannot be used in exclamative contexts. For instance, it is commonly assumed that the virtual reference of the colour adjective *red* is formed by the class of entities endowed with the common property of 'being red'; therefore, a proposition like (3a) is interpreted as stating that the element X belongs to the set of red elements, while its negative form (3b) is strictly symmetrical as it indicates that X does not belong to that set. Moreover, these adjectives can be used restrictively to isolate a subclass of elements from within a larger set (the current interpretation of definite DPs, like (3c)):

(3)   a. X is *red*
      b. X is not *red*
      c. The *red* books

The second class includes *evaluative* adjectives (like *divine*, *wonderful*, *marvellous*, or, negatively, *horrible*, *tremendous*, *abominable*) which have a strong *affective* connotation and are appropriate in exclamatives. The sentence in (4), where one of these adjectives is used as attribute, cannot be interpreted as stating that X belongs to the set of *wonderful* entities:

(4)   X is *wonderful*

As a consequence, utterances in which an evaluative adjective is attributed to an entity functioning as subject cannot be assigned a truth value.[3]

According to Milner, the interpretive peculiarities of this second class of adjectives are particularly evident in negative contexts and quotation contexts. Evaluative adjectives are not easily used in negative sentences:

(5)   a. # Ce vin n'est pas extraordinaire.
          'This wine is not extraordinary'
      b. # La perspective n'est pas excitante.
          'The perspective is not exciting'

In (5) the presence of negation favours an interpretation in which the entity functioning as subject of the clause is assigned the opposite property; the context remains evalutative, but the orientation is inverted, so that the interpretation becomes *de*valuative. To the extent that these sentences are acceptable, they convey an ironical shade of meaning, and their interpretation is widened with respect to the one which would derive from the literal meaning.[4]

If used in quotation contexts, these adjectives entail the speaker's agreement on their evaluative function. The sentence in (6a) is therefore contradictory; by introducing an operator which restores the distance between the speaker and the evaluative term—like inverted commas—the value of the term is neutralized, and the coherence of the discourse is restored (cf. (6b-c)):

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[3]. Notice that the adjectives belonging to this second class coincide with (a subset of) the adjectives which are defined *predicative* (as opposed to *referential*) in Giorgi and Longobardi (1990).

[4]. Conversely, in sentences containing devaluative adjectives, the presence of negation induces an interpretation of positive evaluation:

(i) a. Il vino che abbiamo comprato non è cattivo.
        'The wine we bought is not bad'
    b. Il suo comportamento non è stato sgradevole.
        'His behaviour was not rude'

(6) a. # Bien que ce film superbe passe depuis longtemps, Jean m'a dit qu'il n'avait
    pas vu l'abominable 'Amarcord'.

   b. Bien que ce film "superbe" passe depuis longtemps, Jean m'a dit qu'il n'avait
    pas vu l'abominable 'Amarcord'.

   c. Bien que ce film superbe passe depuis longtemps, Jean m'a dit qu'il n'avait
    pas vu l' "abominable" 'Amarcord'.

    'Although that wonderful film has been around for a long time, John told me
    that he had not seen the horrible *Amarcord*'

Finally, there does not seem to be—beyond a simple and naive bipartition between laudatory and devaluative adjectives—a clearly expressible difference among the various evaluative adjectives; this semantic continuity has the effect that the substitution of a term by another does not substantially change the evalutative force of the utterance.

2.2. Evaluative nouns

Milner introduces a parallel distinction between *noms ordinaires* and *noms de qualité*; what Milner defines as *noms de qualité* are actually nominalized adjectives or nouns which are connected morphologically and semantically to an adjectival basis.

 While ordinary nouns have a classificatory function, like referential adjectives, *evalutative* nouns can also have other uses. First, they can be employed anaphorically, in contexts where their reference is determined by a nominal antecedent:

(7) Jean a fermé la porte; l'idiot avait froid.
   'John closed the door; the idiot was cold'

Moreover, in predicative contexts they may have an unavoidable pragmatic effect; (8a) is not parallel to (8b), as it is necessarily interpreted as an insult:

(8) a. Tu es un imbécile.
    'You are an imbecile'

   b. Tu es un professeur.
    'You are a professor'

The peculiarity of evalutative nouns is again clear in quotation contexts. According to Milner, in (9a), under the *de dicto* reading *ce salaud de Paul* is reported literally as pronounced by Jean, while under the *de re* reading *ce salaud de* is introduced by the speaker as a personal comment. However, under the first reading, there is not the further ambiguity found with ordinary nouns, as in this case the speaker necessarily shares Jean's judgement; this is clear by the contradictory nature of (9b), given the addition:

(9)   a. Jean m'a dit que ce salaud de Paul était arrivé en retard hier.

        b. # Bien que ce garçon charmant soit en général à l'heure, Jean m'a dit que ce salaud de Paul était arrivé en retard hier.

           '(Although that gentle boy is generally punctual,) John told me that Paul, that rascal, had arrived late yesterday'

This witnesses the impossibility of using an evalutative noun without expressing its intrinsically affective component.

Finally, as long as their performative property is preserved, evalutative nouns are reciprocally substitutable without a significant change in the interpretation of the clause.[5]

3. Crosslinguistic properties of verbless exclamatives

3.1. Italian

As pointed out by Benincà (1995), the preposed predicative complement in Italian can be an adjective or a whole DP, optionally introduced by *che*, like in (10), or a noun, obligatorily introduced by *che*, like in (11):

(10)   a. (Che) triste, questa storia!

          '(How) sad, this story!'

        b. (Che) storia triste / triste storia, quella che mi racconti!

           '(What a) sad story / story sad, the one you're telling me!'

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[5]. Consider for example predicates like *cretino, idiota, imbecille, scemo, stupido* in Italian.

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(11) a. Che divertimento, questo gioco!
          'What fun, this game!'
      b. Che imbroglione, il tuo collega!
          'What a cheat, your colleague!'

The interpretation of these sentences tends to be temporally bound to the utterance time, like in (12), which can be taken to express a generic present in statements of general validity, like in (13):[6]

(12) a. (Che) avvincente, (che è) questo romanzo!
          '(How) enthralling, this novel (is)!'
      b. (Che) invadente, (che è) il tuo amico!
          '(How) intrusive, your friend (is)!'

(13) a. (Che) seccante, (che è) perdere una coincidenza!
          '(How) annoying (it is), missing a connection!'
      b. (Che) rilassante, (che è) passare una giornata al mare!
          '(How) relaxing (it is), spending one day on the beach!'

As expected, in this structure adjectives and nouns of the evaluative class are often used:[7]

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[6]. However, as Benincà points out, the background knowledge shared by speaker and addressee may allow for a temporal interpretation different from the present indicative, like in the following examples:

(i) a. Che gentile, (che è stato) il tuo amico!
         'How kind, your friend (has been)!'
     b. Che lunga, (che è stata) la commedia (ieri sera)!
         'How long, the play (has been last night)!'

[7]. Non graduable adjectives, like relational adjectives, are instead excluded:

(i) a. *Cranica, questa scatola!
         'Cranial, this box!'
     b. *Fotografica, la macchina che hanno comprato!
         'Photographic, the device they have bought!'

(14) a. Straordinario, questo vino!
          'Extraordinary, this wine!'
      b. Geniale, questa idea!
          'Brilliant, this idea!'
      c. Eccitante, la prospettiva che mi descrivi!
          'Exciting, the perspective you are describing to me!'

(15) a. Che pigrone, il tuo gatto!
          'How lazy, your cat!'
      b. Un genietto, quel bambino!
          'A little genius, that child!'

(16) Un vero idiota, Gianni, (ad accettare quella proposta)!
      'A real idiot, John, (to accept that proposal)!'

An infinitival clause can appear as subject, like in (13) above, or as predicate, like in (17):

(17) a. Assolutamente da vedere, quel film!
          'Absolutely to be seen, that film!'
      b. Da bocciare senza rimorsi, quello studente!
          'To be failed remorselessly, that student!'

In this case the infinitive is preceded by the preposition *da* and has a deontic interpretation.

3.2. Spanish

The structure under analysis has been described for Spanish by Hernanz and Suñer (1999), who underline that these sentences have a deictic temporal interpretation—referring to the speaker and the utterance time—as they are generally uttered as a

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  c. *Tedesca, quell'invasione dell'Austria!
      'German, that invasion of Austria!'

reaction to a given situation or as a reply to someone's words. The preposed predicate can be adjectival or nominal.

Adjectival predicates can appear alone or modified by the emphatic article *un*, by the *wh*-item *que* or by lexical elements favouring an evaluative reading:

(18) a. ¡Simpático, tu amigo!
          'Nice, your friend!'
     b. ¡Genial, tu nuevo apartamento!
          'Fantastic, your new flat!'

(19) a. ¡Un listillo, tu primo!
          'A cunning person, your cousin!'
     b. ¡Qué guapo, tu hijo!
          'How handsome, your son!'

(20) a. ¡Valiente miedica, este amigo tuyo!
          'Valuable chicken, this friend of yours!'
     b. ¡Muy ricos, estos calamares!
          'Very rich, these squids!'

When the preposed predicate is a noun, it must be accompanied by a quantificational element, like the emphatic article *un* or the exclamative marker *qué*:

(21) a. ¡Un tirano, tu jefe!
          'A tyrant, your boss!'
     b. *¡Un bocazas, el capitán Haddock!*
          'A foul-mouthed person, the capitan Haddock!'
     c. ¡Qué insensatez confiar nuestra seguridad a la protección de una potencia extranjera!
          'What a nonsense to entrust our security to the protection of a foreign country!'

Ungrammatical examples become acceptable through the insertion of evaluative modifiers to the nominal predicate:

(22) a. *¡Una soprano, la Callas!

       'A soprano, the Callas!'

   b. ¡Toda una soprano, la Callas!

       All a soprano, the Callas

       'An excellent soprano, Callas!'

(23) a. *¡Un lingüista, Chomsky!

       'A linguist, Chomsky!'

   b. ¡Un lingüista excepcional, Chomsky!

       'An exceptional linguist, Chomsky!'

(24) a. *¡Una mesa, este mueble!

       'A table, this piece of furniture!'

   b. ¡Una señora mesa, este mueble!

       A lady table, this piece-of-furniture

       'An excellent table, this piece of furniture!'

Predicates not expressing an evaluation—in particular relational adjectives and adjectives denoting objective properties—are instead excluded.[8]

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[8]. As witnessed by the following examples (the ones in (ii) are taken from Hernanz (2001)):

(i) a. *¡Eléctrica, tu máquina de afeitar!

     'Electric, your meat slicer!'

  b. *¡Mineral, esta agua!

     'Mineral, this water!'

(ii) a. *¡Románicas, las iglesias de Segovia!

     'Romanic, the churches of Segovia!'

  b. *¡Jurásico, este parque!

     'Jurassic, this park!'

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3.3. French

French verbless exclamatives have been described by Vinet (1991), who observes that the predicate—be it adjectival or nominal—must express a personal evaluation of the speaker, pointing out a noteworthy state of things:

(25) a. Formidable, cette viande!
     'Fantastic, this dish!'
  b. Etonnante, cette histoire!
     'Astonishing, this story!'

(26) a. Un génie, ce petit!
     'A genius, this child!'
  b. Un imbécile, ce Rodolphe!
     'An imbecile, this Rodolphe!'

Vinet also points out that nouns indicating a function or a profession are generally unacceptable as they note a fact rather than express a personal judgement; however, as we have seen above for Spanish, even these nouns become acceptable if accompanied by an adjective or a relative clause expressing a form of appreciation:

(27) a. *Une linguiste, cette femme!
     'A linguist, this woman!'
  b. Une linguiste étrange, cette femme!
     'A strange linguist, this woman!'

(28) a. *Le directeur, ce type!
     'The director, this guy!'
  b. Le directeur qu'il nous fallait, ce type!
     'The director that we needed, this guy!'

An ungrammatical structure can be made acceptable also through the addition of a degree modifier:[9]

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[9]. Again, we do not find adjectives which cannot be used predicatively, as shown by (i), or classifying adjectives describing objectively a state of things, like in (ii):

(29) a. *Clair, cette eau!

'Clear, this water!'

b. Beaucoup trop claire, cette eau!

'Much too clear, this water!'

Again, the predicate can be a deontic infinitival clause used with an adjectival function:

(30) a. A surveiller, cet jeune homme!

'To be watched, this young man!'

b. A suivre, cette affaire!

'To be followed up, this business!'

Vinet correctly observes that the silent verb can be interpreted not only as *be*, but also as *have*; however, even in this case an evaluative interpretation must be induced through the insertion of appropriate lexical items:

(31) a. (Elle a) la réplique vive, cette femme!

'(She has) a quick retort, this woman!'

b. (Il a) un dynamisme incroyable, ce type!

'(He has) an incredible dynamism, this guy!'

c. Un nez extraordinaire, ce Cléopâtre!

'An extraordinary nose, this Cleopatra!'

(i) a. *Solaire, ce système!

'Solar, this system!'

b. *Présumé, ce voleur!

'Presumed, this thief!'

(ii) a. *Marocaine, cette guerre contre l'Algerie!

'Moroccan, this war against Algeria!'

b. *Cassé, ce verre!

'Broken, this glass!'

c. *Dénombrable, cet ensemble!

'Enumerable, this set!'

Adopting Benveniste's (1966) and Kayne's (1989) analysis of *avoir* as an abstract form of *être*, it is expected that the auxiliary *have* —*qua* copular verb—can remain phonetically unrealized in some contexts.

4. Two further interesting properties

4.1. The I-level vs S-level distinction

Vinet (1991) underlines that in French only predicates expressing permanent or inherent properties can occur in a verbless exclamative, and not predicates referring to a temporary situation; the two types reflect the distinction between *individual*-level and *stage*-level predicates first proposed by Kratzer (1995). The predicate can acquire a character of permanence—thereby making the sentence acceptable—through the insertion of a lexical element which—functioning as aspectual marker—triggers a generic interpretation:

(32) a. *Disponible, ce papa!
          'Available, this dad!'
      b. Jamais disponible, ce papa!
          'Never available, this dad!'

(33) a. *Les memes, ces mecs!
          'The same, these guys!'
      b. Tous les memes, ces mecs!
          'All the same, these guys!'

Similarly, Hernanz and Suñer (1999) point out for Spanish that the predicate must express properties not undergoing change or evolution, so that no stage-level predicates are admitted; still, the insertion of elements which can modify or limit the transitory character of the predicate can make the sequence grammatical:

(34) a. *¡Cansado, tu jefe!
          'Tired, your boss!'
      b. ¡Eternamente cansado, tu jefe!
          'Eternally tired, your boss!'

(35) a. *¡Averiado, el maldito ascensor!
    'Out of order, the damned lift!'

  b. ¡Siempre averiado, el maldito ascensor!
    'Always out of order, the damned lift!'

The same restriction seems to hold for Italian, where non evaluative predicates can appear provided an adequate lexical item is added that turns the stage-level predicate into a permanent (i.e., individual-level) property:

(36) a. *Di corsa, i giovani di oggi!
    'In a hurry, nowadays young people!'

  b. Tutti di corsa, i giovani di oggi!
    'All in a hurry, nowadays young people!'

(37) a. *Spento, questo computer!
    'Turned off, this computer!'

  b. Sempre spento, questo computer!
    'Always turned off, this computer!'

Graduable and evaluative adjectives can generally be interpreted as inherent properties of the subject, in particular if there are lexical elements favouring that interpretation, like in (38b):

(38) a. Gentile, Carlo!
     'Kind, Carlo!'

  b. Sempre gentile con tutti, Carlo!
    'Always kind to everybody, Carlo!'

  c. Gentile, Carlo, ad accompagnarti a casa!
    'Kind, Carlo, to accompany you home!'

They can however be interpreted as properties contingent on a given situation as well, especially if the context is made explicit, like in (38c).

4.2. A restriction on degree

As it could be expected in an evaluative context, the adjectival predicate can appear in the (absolute) superlative form:

(39) a. Simpaticissimo, tuo cugino!
       'Nicest, your cousin!'
    b. Molto gustosa, questa minestra!
       'Very tasty, this soup!'

Rather surprisingly though, if the adjective is in the relative superlative or in the comparative form, there is a considerable degradation in the grammaticality:

(40) a. ??Il più simpatico (dei tuoi parenti), tuo cugino!
       'The nicest (among your relatives), your cousin!'
    b. ??Più simpatico (di Gianni), tuo cugino!
       'Nicer (than John), your cousin!'

According to Hernanz and Suñer (1999), the fact that verbless exclamatives are interpreted on the basis of contextual factors has as a consequence that the degree quantification of the predicate must be grammatically fixed (otherwise it would not be appropriately limited). The superlative is therefore grammatical because in this case it is possible to fix the right degree of the relevant property; this conclusion is supported by the fact that adjectives which are normally not admitted in this structure can appear in the absolute superlative form or preceded by adverbs functioning as degree quantifiers which contribute an affective component:[10]

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[10]. According to the authors, this is true also of relative superlatives, as witnessed by the following examples:

(i) a. ¡De lo más interesante que he visto, esta película!
       'The most interesting that I have seen, this film!'
    b. ¡La mejor del verano, esta novela!
       'The best of the summer, this novel!'

(41) a. *¡Limpias, las copas!
          'Clean, the glasses!'
      b. ¡Limpísimas, las copas!
          'Cleanest, the glasses!'

(42) a. *¡Pequeñas, las iglesias de Segovia!
          'Small, the churches of Segovia!'
      b. ¡Super pequeñas, las iglesias de Segovia!
          'Super small, the churches of Segovia!'

(43) a. *¡Largo, el discurso del decano!
          'Long, the speech of the dean!'
      b. ¡Espantosamente largo, el discurso del decano!
          'Awfully long, the speech of the dean!'

The ungrammaticality produced by the comparative is explained by the hypothesis that it does not permit to fix the right degree of the property expressed by the predicate:

(44) a. *¡Más interesante, esta película!
          'More interesting, this film!'
      b. *¡Mejor, esta novela!
          'Better, this novel!'

As for French, as we have seen above, the adjectives most often used in this structure are the evaluative ones:[11]

However, for some speakers the relative superlative does not yield fully grammatical structures when the subject is not heavy enough:

(ii) a. (?)?¡El más interesante de tus libros, este! / [ok] este trabajo!
         'The most interesting of your books, this (work)!'
     b. (?)?¡El más simpático de tus compañeros, Juan! / [ok] este chico sevillano!
         'The nicest of your friends, Juan / this guy from Sevilla!'

[11]. They can be possibly modified by intensifiers like *si* and *tellement*, as pointed out by Vinet (1991):

(45) a. Admirable, son film!
     'Admirable, his movie!'
   b. Incroyable, ce spectacle!
     'Incredible, this show!'

However, the restriction on comparatives and relative superlatives holds for French as well:

(46) a. ??Plus interessant, cet article!
     'More interesting, this article!'
   b. ??Plus long, ce roman!
     'Longer, this novel!'

(47) a. *Le plus intéressant, cet article!
     'The most interesting, this article!'
   b. *Le plus long, ce roman!
     'The longest, this novel!'

In the next section I will try to determine the role played by the *wh*-modifier in verbless exclamatives.

5. On the role of the *wh*-item

Hernanz (2001) correctly underlines that the structure under analysis reveals the existence of an—a priori unexpected—correlation between the semantic properties of evaluative adjectives and the syntactic behaviour of *wh*-elements, as both these types of elements can introduce a verbless exclamative:

(i) a. Si merveilleuse, cette Hélène!
     'So marvellous, this Helene!'
   b. Tellement adorable, cet enfant!
     'So adorable, this child!'

(48) a. ¡Fantástica, esta película!
          'Fantastic, this film!'
      b. ¡Qué fantástica, esta película!
          'How fantastic, this film!'

According to the author, the well-formedness of (48) is due to semantic factors; more precisely, it is the evaluative character of the predicate that licenses its presence in initial position in these constructions, as witnessed more clearly by (49):

(49) a. ¡Increíble/impresionante, esta historia!
          'Incredible/upsetting, this story!'
      b. ¡Sorprendente/terrible, el discurso del decano!
          'Surprising/terrible, the speech of the dean!'
      c. ¡Fantásticas/maravillosas, las iglesias de Segovia!
          'Wonderful, the churches of Segovia!'

Hernanz assumes that evalutative terms encode semantically what in other cases is expressed through explicit morphological markings; their syntactic behaviour in verbless exclamatives is therefore motivated by the same factors which underlie the preposing of constituents endowed with an exclamative feature codified by the *wh*-element *qué*:[12]

(50) a. ¡Qué largo, el discurso del decano!
          'How long, the speech of the dean!'
      b. ¡Qué pequeña, la iglesia de tu pueblo!
          'How small, the church of your village!'
      c. ¡Qué limpias, las copas!
          'How clean, the glasses!'

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[12]. So, according to Hernanz, the fact that the predicate occurs in initial position has the same explanation in (49) and (50), the only difference being that in (50) the relevant feature manifests itself in the morpheme *-qu-* of *qué*, while in (49) it is induced by the affective character of the evaluative term. This view is rejected by Alonso-Cortés (1999), who claims that the simple preposing of the predicate in (49) is not sufficient to express an evalutation or a quantification; therefore the examples in (49), unlike the ones in (50), cannot be considered exclamative clauses.

In Italian, if the predicate is an adjective, the introductory *wh*-element *che* can be dropped; the (exclamative) illocutionary force of (51b) can be expressed without resorting to the overt realization of a *wh*-feature, and the interpretive properties and function of the *wh*-item seem to be taken over by the adjective:

(51) a. Che interessante, questo libro!
          'How interesting, this book!'
      b. Interessante, questo libro!
          'Interesting, this book!'

As for French, unlike Italian and Spanish, it does not allow the preposed adjective to be preceded either by *que* or by other interrogative elements, as pointed out by Vinet (1991):[13]

(52) a. *Qu'étonnante, cette histoire!
          'How astonishing, this story!'
      b. *Comme merveilleux, cet enfant!
          'How wonderful, this child!'

Obenauer (1994) identifies a basic semantic property of exclamative *wh*-phrases: differently from what happens in *wh*-interrogatives, in *wh*-exclamatives the value of the variable is determined, and situated outside the pertinent domain. This view has been further developed by Portner and Zanuttini (2000), who identify—among others—the two following properties of exclamatives: (a) *factivity*, i.e. the fact that exclamatives presuppose their propositional content; (b) *scalar implicature*, i.e. the fact that exclamatives indicate that some entity has a property which falls at the extreme end of some contextually given scale of properties; this *extreme quality* may give rise to the feeling that the fact expressed is surprising or noteworthy in some way.

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[13]. The same holds for nominal predicates:

(i) a. *Combien un genie, ce Charlie!
         'How genial, this Charlie!'
     b. *Ce qu'un excellent artiste, ce Renoir!
         'What an excellent artist, this Renoir!'

Looking closer at the minimal pair in (51), it is easy to recognize that the difference between (51a) and (51b) does not simply lie in the phonetic (non)-realization of the *wh*-item, as the two sentences are not synonymous; more precisely, in (51a) the scalar implicature effect is much stronger than in (51b); in this sense, (51a) is closer to (53) than (51b):[14]

(53) Interessantissimo, questo libro!
      'Very interesting, this book!'

In (53), the *extremeness* of the predicate is expressed by the prototypical morphological template of high degree, the superlative, thereby triggering the scalar implicature effect induced in (51a) by the *wh*-item. This effect is minimally present in (51b), where it is due to the mere presence of an evaluative predicate, which is compatible with the scalar component of the semantics of exclamatives. Indeed, what characterizes (51a)—as opposed to (51b)—is the fact that the speaker shares with the addressee a previous common evalutation of the relevant property, that is, they share a generic appreciation and agree on the fact that the article is interesting to some extent; simply, the speaker intends to express an emphatic confirmation of this. Differently, in (51b), by using the bare adjective, the speaker introduces a property of the subject, involving the addressee into a first evalutation, that the addressee may not share.

If the predicate is a bare noun, the omission of *che* requires either the insertion of semantically emptied adjectives like *bel(lo)-gran(de)* or the presence of the indefinite article:

(54) a. Che/Gran divertimento, guardare la TV!
         'What/Great fun, watching the TV!'
      b. Un divertimento, guardare la TV!
         'A fun, watching the TV!'

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14. The hypothesis that the *wh*-item and the superlative perform the same function in this structure gains support from the fact that *che* is not compatible with an adjective in the superlative degree:

(i) *Che interessantissimo, questo libro!
     'How very interesting, this book!'

(55) a. Che/Bello spreco, usare questa carta!

      'What/Nice waste, using this paper!'

    b. Uno spreco, usare questa carta!

      'A waste, using this paper!'

It is tempting to assert that the relation between (54a)/(55a) and (54b)/(55b)reflects the one between (51a) and (51b), with the adjectives *gran* and *bel* performing the same function as *che.*[15]

    The present analysis predicts the oddity of examples like (56b)—as opposed to the full grammaticality of (57b)—where the context suggests that there must be a shared background of evaluation between speaker and hearer:

(56) a. Che simpatica, la ragazza che abbiamo conosciuto tre anni fa in Grecia!

    b. # Simpatica, la ragazza che abbiamo conosciuto tre anni fa in Grecia!

      '(How) nice, the girl we met in Greeceland three years ago!'

(57) a. Che gentile, la ragazza che abbiamo conosciuto ieri sera; come si chiama?

    b. Gentile, la ragazza che abbiamo conosciuto ieri sera; come si chiama?

      '(How) nice, the girl we met last night; what is her name?'

The hypothesis that the similarity between (51a) and (51b) is only superficial is confirmed by the fact that the two examples can be paraphrased—with the overt realization of the copula—as (58a) and (59a) respectively; interestingly, in the two cases the copula surfaces on different sides of the preposed predicate:

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[15]. This is confirmed by the fact that (54) and (55) can be rephrased as follows:

(i) a. (Che) divertente, guardare la TV!

     '(How) amusing, watching the TV!'

   b. (Che) antieconomico, usare questa carta!

     '(How) uneconomical, using this paper!'

Incidentally, this also shows that the semantic contribution of the nominal predicate can be reduced to the one of the corresponding adjective (though the reverse is not always true).

(58) a. [Che interessante], (che è) questo libro!

        'How interesting, (that is) this book!'

    b. Questo libro è [molto interessante]!

        'This book is very interesting!'

(59) a. [(E') interessante], questo libro!

        '(Is) interesting, this book!'

    b. Questo libro [è interessante]!

        'This book is interesting!'

This suggests that the basic copular structures from which the two examples derive are (58b) and (59b) respectively, i.e., that the preposed predicate does not include the (empty) copula in the former case, but that it does in the latter. So in (59a), unlike in (58a), what is highlighted and brought to the attention of the addressee through preposing is precisely the cluster formed by (unrealized) copula and predicate, hence, ultimately, the relation which is being established between subject and predicate.[16]

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[16]. As for the exact landing site of the preposed predicate, I will leave a detailed investigation of this issue for future research, limiting myself to suggesting that it could be identified with the specifier position of *FocusP*; on the idea that this position can be activated in exclamatives the reader is referred to Gutiérrez-Rexach (2001) and Munaro (2005b). That the pragmatic function of the structure with the bare adjective is to submit the relation between subject and predicate to the attention of the addressee encouraging his approval is confirmed by the fact that only in this case a tag like *vero* can be added to the verbless exclamative:

(i) a. Interessante, questo libro, (vero?)

    b. Che interessante, questo libro, (# vero?)

       '(How) interesting, this book, (isn't it?)'

This contrast might be interpreted as suggesting that (ia), unlike (ib), is not a real exclamative, as claimed by Alonso-Cortés (1999).

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6. Deriving the relevant properties

In the previous section it has been argued that in a verbless exclamative in which the predicate is not modified by a *wh*-item the speaker is simply interested in stating an relation between the entity functioning as subject and an evaluative predicate; this entails that there is no real commitment of the speaker as to the degree in which the relevant property is present, and that such property is situated at a point just above the standard one in a contextually given scale of default expectations. This approach seems to provide an account for both the facts described in section 4 above.

First, the act of evalutation realized through a verbless exclamative without realization of a *wh*-item presents the property expressed by the predicate as an intrinsic feature of the subject; we therefore expect such property to be a permanent one, that is, to be of the *individual*-level type, as witnessed by the oddity of (60b) as opposed to the full grammaticality of (60a), where the *wh*-item is realized:

(60) a. Che sporco, quel tavolo!
　　　 b. # Sporco, quel tavolo!
　　　　 '(How) dirty, that table!'

Second, given that the relevant property is presented as an intrinsic feature of the subject, we can also predict that no comparison with other entities is allowed, as this would restrict the validity of the evaluation to a transitory situation; this may account for the fact that comparatives (and—less uniformly—relative superlatives) are generally excluded from verbless exclamatives.

The analysis proposed here sheds new light on the contribution of the *wh*-item in the clause typing strategy of exclamatives; in particular, it reveals that, unlike what is commonly assumed, despite the superficial similarity of the two structures in (51), the exact interpretation of verbless exclamatives is driven by the presence *vs* absence of a *wh*-modifier to the preposed predicate.

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Doubling as Economy

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1. Introduction

In this article I deal with doubling and address the general question of a syntactic treatment of this phenomenon, which seems to be extremely widespread in non standard languages. Before discussing the empirical domain under investigation, it is necessary to provide a definition, as "doubling" is a label used to mark empirical fields which potentially lend themselves to very different syntactic analyses. Here I intend to focus on cases of doubling in which the two (or more) "doubles" are morphologically distinct, although they clearly form a unit from the semantic point of view; for instance if an argument is doubled, there are not two arguments in the clause, but the two items are interpreted as a single one, the same is true for wh-doubling, which is not an instance of multiple questions, but there is only one variable at LF; negative doubling is an instance of negative concord, so it does not yield a double negation interpretation. . Doubling has been seen in the recent literature on traces, which considers them as copies of the same item, as a strong argument in favour of the idea that a moved element can be spelled out either in the higher position to which it moves (the head of the chain, in more traditional terms) or in the lower position from which it has moved (the tail of the chain), or even in the intermediate positions in the case of cyclic movement. General constraints on avoidance of superfluous information then require spelling out of only one copy of the two (or more) created by the movement procedure. If this requirement is circumvented, and both copies are spelled out, doubling arises. This predicts that, given that both copies are identical, the two forms spelled out will be identical as well. The type of doubling I am interested in here is in fact a problem for a theory like that as because the two (or more) "copies" are not identical, one always being a single word and more

functional (in the sense that it never contains a lexical category and cannot expand to an XP containing a specifier or complements) than the other.

This type of doubling, as we will see, is rather difficult to analyze in terms of copying. I propose here that it should be analyzed along the lines of Uriagereka (1995), Kayne (1994) and Belletti (2005), who propose that the two elements involved originate inside the a single unit which is then split by movement.

Belletti deals with cases like left dislocation and focalization in standard Italian and shows that DP-doubling can be performed either by a clitic or by a tonic pronoun or by a quantifier, yielding the following possible constructions:

(1) [[X°] XP]

(2) [[Pron+focus/topic] [XP]]

(3) [[QP] [XP]]

As can be easily seen, all these constructions contain a lexical and a functional element. Here I will concentrate myself on cases that include clitics as doublers, namely constructions that can be analyzed as in (1) and illustrate the theoretical point on the basis of three doubling phenomena: subject DP doubling, wh-doubling and negative concord.

Doubling is also more generally interesting from the point of view of our theory of economy in language design: if economy is seen in a simplistic way as "nothing superfluous should be allowed" why is doubling so widespread? Indeed, a phenomenon like doubling should not exist at all, and in fact it is often banned from normative grammarians in their language planning as something redundant. Given that we assume that language is indeed the most economic device possible given the way our brain and our conceptual maps are construed, we are forced to assume that somehow languages which display doubling are not less economic that languages that do not and that doubling also corresponds to an economic procedure of some sort. In fact, what I will propose here is that doubling is so widespread in non standard languages (i.e. languages which are not subject to the pressure of language planning and normative regulation) because it can indeed be seen as a economic strategy occurring when a given XP must check more than one functional feature in the syntax, therefore instead of moving a whole complex to two projections to check two (or more) features, the complex XP can be split in two (or more) parts, each part checking one feature.

Moreover, although movement has been most recently defined as "second merge" (or internal merge), and as such is not more costly than merge, clitic doubling can still be conceived as an economic strategy, as the "second merge" of a smaller portion of material is anyhow more economic than "second merging" a bigger chunk of structure. Seen in this way the two alternative views to doubling as "spell out of two (or more) copies" or as a single XP being split in its components strongly recalls the long debate on whether clitics originate in the functional position they occur after spell out or whether they are moved to that position. In this work I take the Kaynian view to clitics, and propose a movement analysis of doubling.

What I will not tackle in this work is the parametric problem, namely the reason why some languages allow (or even require) doubling while others do not. I will limit myself to assume that the difference cannot lie in any special structure, in the sense that no special "big DP" is necessary to obtain doubling; rather, the mechanism of doubling has to do with the amount of pied piping allowed. In other words, doubling does not require projecting any special structure, as functional categories and their layering must be universal; it is the possibility of splitting the XP and avoid to copy it whole that must be involved in languages allowing doubling.

Before starting with a presentation of the empirical domain I will use to prove my point, I briefly point out a methodological issue. Given the way data from a lot of dialects are used, this article constitutes an attempt to use implicational scales (which are generally very often exploited in typological work, much less in generative studies) for syntactic analysis and as such to introduce a new type of experiment which is not simply based on isolated grammaticality judgements or on the simple comparison among languages but is finally a set of comparisons of sets of grammaticality judgements.

In section 2 I present the case of subject clitic doubling and discuss the analysis I use developing a theory of movement for doubling. In section 3 I analyze cases of wh-doubling showing that it is the amount of functional structure that matters in doubling, not the lexical portion of the XP doubled. In section 4 I discuss cases of negation doubling and show that even a purely functional category as negation can be doubled. Section 5 contains some more general theoretical considerations and concludes the article.

2. DP doubling and feature stripping

In this section I report and enlarge some observations that I made in Poletto (2000) concerning the doubling of subjects. The empirical generalizations I present are now based on a data base of approximately 150 dialects.[1] Looking across dialects, it is possible to establish an implicational scale of those elements that are always doubled if others are as well. So, for instance, there are dialects where only tonic pronouns are doubled, others where DPs and tonic pronouns are doubled, but no dialect where DPs are doubled while tonic pronouns are not. The implicational scale can be represented as a set of generalizations as follows:

(4)   a. If DPs are doubled in a given dialect, tonic pronouns are also doubled;
       b. If QPs are doubled, both DPs and tonic pronouns are doubled as well;
       c. If variables in wh-contexts as relative, interrogative and cleft structures are
           doubled, then doubling is always obligatory with all other types of subjects.

Or as a scale proper:

(5)   Pronouns   DPs   QPs   variables
       → doubling

This means that there are dialects where only tonic pronouns are obligatorily doubled (I leave here left dislocation aside), while all other types of subjects are not, as shown in (6):

(6)   **Ti *(te)** parli massa e **luri *(i)** parla massa poco   *Arsiero* (VI)
       You you speak too-much and they they speak too little

The second stage of the scale in (5) is represented by those dialects in which tonic pronouns and DPs are obligatorily doubled, but not quantifiers and variables:[2]

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[2]. This system is widespread in the Trentino dialects and in Romagna and Emilia as well.

(7) a. Nisogn (*el) me capess   *Lecco*

      Nobody (he) me understands

   b. El bagai *(**el**) mangia el pom

      The boy (he) eats the apple

   c. Lee *(**la**) leeuc un liber de storia

      She she reads a book of history

The third stage is the one in which tonic pronouns, DPs and quantifiers are doubled but not variables: [3]

(8) a. El fio **el** mangia l pom   *Milano*

      The boy he eats an apple

   b. Un quidun **el** riverà in ritart

      A somebody he will-arrive late

   c. I don che **0** neten i scal in andà via

      The women that clean the stairs have gone away

The last stage is the one in which doubling is obligatory with all types of subjects, and is also quite widespread, especially in Piedmont and Friul, but in Lombardy as well.

(9) a. Al pi **al** mangia al pom   *alanno (Eastern Lombard)*

      The boy **he** eats an apple

   b. Vargu al rierà n ritardo

      A somebody **he** will-arrive late

   c. Le fomne che **le** neta le scale e e ndade via

      The women that **they** clean the stairs have gone away

This type of data is rarely taken into account, because "tendencies" are not easily built in a generative grammar; however, tendencies are interesting as they reveals, in this case, that elements that are more definite are more frequently doubled than elements that are less definite. This is not surprising given that fact that the doubler is a clitic, which is by itself definite and is therefore obviously "more compatible" with other definite elements. However, in many dialects the clitic is also compatible with

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[3]. This type of system is widespread in Lombardy, in the East as well as in the Western and Northern varieties.

quantifiers and wh-variables, therefore it must have somehow lost its definiteness property. This is, though, only a very imprecise observation, as shown by the following facts. Differences in the possibilities of doubling are found inside the class of tonic pronouns, second person pronouns are more frequently doubled than third person pronouns:

(10) a. TI te magni sempre   *Venezia*
          YOU you always eat
      b. *TI magni sempre
          You always eat
      c. Nane (el) magna
          N. (he) eats
      d. Nisun (*el) magna
          Nobody (he) eats

Given that all pronouns are definite, the explanation provided above cannot be correct. Moreover, the same is true for quantifiers: universal quantifiers are more easily doubled than existential or negative quantifiers, as shown in (11):

(11) a. Bisogna che tuti i faga citu   *Bellinzona (CH)*
          It is necessari that everybody they make silence
      b. Quaidun telefunarà al prufessur
          Somebody will-phone the teacher

How can we explain a) the implicational scale in (5) and b) the differences internal to each class? I propose that the reason why the implicational scale works this way and not, for instance, the other way round has only partially to do with definiteness; doubling occurs more frequently with those elements that have more functional information. Tonic pronouns are only in some dialects (for instance Friulian) marked for case, while they are all marked in the NIDs with a left peripheral feature (either Focus or Topic), as they can only be used as Topic or Focus, otherwise a clitic form is the only possibility and they have a (set of) person features. DPs do not have morphological marking for person or case in Romance, but they clearly have more features than quantifiers, because they all are endowed with display gender. Quantifiers have a number feature, which is reflected in the morphology of the quantifier itself and in the subject clitic doubling it, as the following examples show:

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(12) a. Tuc **i** panseva   *Albosaggia (Lombard N.)*
       Everybody they thought..
    b. Vargù **al** ruarà tardi
       Somebody he will-arrive late

(13) a. Tuti **i** pensau che…   *Arzeno (Liguria)*
       Everybody theu thought that …
    b. Quarchedun **u** telefunià au prufesu
       Somebody he will-phone the teacher

Universal quantifiers are generally doubled by a plural clitic, while existential (and negative) quantifiers are doubled by a singular clitic. If we assume that plural is the only marked feature and singular simply originates as no marking for number, we can also explain the distinction between universal quantifiers and existential quantifiers. Moreover, it is well known that universal quantifiers are more easily left dislocated than existential and negative quantifiers, because they can be more easily interpreted as [+specific]. One could assume that specificity is also reflected in the syntax, or that universal quantifiers can be more easily interpreted as specific because they have a number feature. In any case, the distinction between universal and existential quantifiers has to be drawn in terms of features.

The type of elements that have fewer features are wh-traces, which do not display case, person, gender or number; in fact, they are at the end of the scale.

The same type of reasoning can be applied inside the class of tonic pronouns, as the second person pronoun must be more complex in its feature composition than third person, which is generally assumed to be the default case (see Benincà and Poletto (2005) on the feature composition of person pronouns): therefore, second person pronouns must have at least an [addressee] feature and a [+deictic] one, while third person pronouns are non-deictic and have no [addressee] or [speaker] in their feature composition.

Once we assume that it is the number of features that matters in doubling phenomena, how are we going to account for the probabilistic flavour of the implicational scale in (5)?

Let us start by assuming that DPs morphologically marked for features like [addressee], [deictic] [gender], or [plural] have a syntactic projection corresponding to these features in their internal structure. This internal projection has features which must be checked

against the corresponding projection in the IP layer[4], therefore the DP has to move to the Specifier of the projection in the IP.

In other words, not only Nominative case undergoes the probe-goal procedure, also other features of a DP have to checked in the syntax in the relevant node in the IP. In order to be checked in the IP, they have to be present in the internal structure of the DP itself with the relevant value.

Suppose that a DP has more than one feature, say F1 and F2,[5] to check, the checking can proceed through the simple Agree rule, and no movement is found in the syntax or re-merge the whole DP twice in the Spec of F1 and then F2 or separately check F1 through a (clitic) piece of the DP, the one carrying F1, and F2 through the other (XP) piece, which carries the F2 feature. The more features there are to check, the more it becomes probable that instead of remerging the whole DP only the subpart containing the relevant information is stripped from the DP and remerged.

The mechanism ensuring that only the relevant functional projection of the DP is moved is the following: Kayne and Uriagereka in their work propose that the DP is located in the Specifier position of the clitic. Here I will push this idea further and argue that the stripping of the relevant portion of functional structure from the DP is preceded by movement of the DP to the specifier of the clitic. Therefore, I propose that languages with doubling do not have any special "big or complex DP" similar to the one in (1), but exactly the same type of DPs other languages have. The only difference is that stripping away part of the DP is preceded by internal movement of the lower portion of the DP to a higher position internal to the DP. If head movement does not exist, and a clitic also moves as a remnant, the lower DP in (14) moves to the Specifier of a projection immediately above KP containing the clitic, as in (14)-(15). This process creates the remnant KP in (15) containing only the clitic, which is then moved to the appropriate position in the IP layer.

(14) [[KP [K° cl] [DP]]

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[4]. The assumption that the IP structure contains a NumberP is quite widespread (see among others Shlonsky (1990), Poletto (2000) and Manzini and Savoia (2005)). That person features also have their own projection (either split in their basic components as speaker, addressee etc. or as a single PersP) is proposed by authors like Zanuttini (2006), Bianchi (2004), Sigurdsson (2005).

[5]. A case we will see further on is for instance left dislocation, where the DP checks case as well as Topic features.

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(15) $[[_{XP} DP [_{X°} [_{KP} [_{K°} cl] [\text{DP}]]$

The DP which has first moved to SpecXP creating the remnant KP can then be moved independently from SpecXP to a Spec position in the IP or CP layer if it has further features to check.

This doubling strategy is at least as economic as re-merging the whole complex DP inside the higher functional position in the IP layer; if a shorter movement is more economic than a longer one for memory reasons then doubling is even more economic than pied piping the whole complex XP to a higher position. In other words, doubling has to be seen as the opposite of pied piping with the addition of movement internal to the DP to create the two pieces (in the above case KP and DP) one of which is then moved while the other stays put.

This analysis predicts that the two doubles are never identical: one contains only a functional part, the higher one, while the other contains the lower portion of the DP internal structure including the lexical head.

Suppose for example that you need to check the Nominative case feature in AgrS (or SpecT if the more minimalist view is taken): the element that can do that is the one corresponding to the highest functional layer of the DP, realized as a clitic, which has a morphological distinction for case:

(16) To nono el vien
    Your grandfather he comes

(17) I ga visto to nono
    They have seen your grandfather

(18) (To nono), i lo ga visto (to nono)
    (Your grandfather) they ihm have seen (your grandfather)

As shown in (16) and (17) the DP *to nono* has no distinction in terms of case features; the distinction is provided by the subject clitic *el* (or by the object clitic in case of dislocation of the object). Note that cases like (16) are a counterexample to what seems otherwise a pretty strong generalization, namely that the "functional" double is located higher than the bigger double containing also the lexical head noun. In this case the DP "to nono" is located higher in the structure than its clitic counterpart *el*. The reason why this is so is the following: the procedure of stripping away a functional portion from a

XP is to check functional features, which are always located higher in the structure than the argumental position where the whole XP is merged. Therefore, in the most common case the functional double is higher than its lexical double. However, if the remaining portion of the XP still has features to check nothing prevents it from moving independently to check the other feature and end up in a higher node with respect to its functional double. This is exactly what happens in (16) where the lexical DP still has an EPP feature to check in subject position; the result of this checking turns out to be that the DP is higher than the clitic.[6] In fact, subject DPs can occur in different positions in Italian dialects, as well as in standard Italian, while the clitic double has a fixed position (as all clitics): DP subjects can be postverbal (presumably in the SpecvP) position or preverbal (in SpecT) or left or right dislocated, while subject clitics cannot. .

More generally, contrary to an analysis based on copying, this analysis predicts that the two doubles are always different and that the features expressed by one are not expressed by the other part, as they have been stripped away. The same is true for left peripheral features like Topic: left dislocation obligatorily requires a clitic pronoun for subjects, objects and datives in the NIDs. A lot of work has been done on whether Left Dislocation is indeed movement or not, but very little is found in the literature on the reason why a resumptive clitic is there: in this view, the clitic is the part of the DP carrying the left peripheral feature.

An apparent counterexample is provided by number and gender: when doubling occurs, these features are expressed both on the DP and on the clitic. Note, however, that number and gender in Romance spread throughout the DP to all adjectives as well as quantifiers and possessives. I propose that the real number feature corresponding the the NumbP internal to the DP is expressed by the clitic and that what is found on the DP is simply an agreeing form, the same that is also found in adjectives and modifiers of the Noun, which do not have an independent NumP, but must agree in gender and number with the head noun.[7]

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[6]. As we will see below the part of the DP which moves to the SpecT position is not the entire Case projection (KP according to Giusti (1993)) but the lower portion of the DP once the KP has been moved out.

[7]. Notice that there are languages in which even Case can spread as an agreeing morphology from the DP to the NP, the *n* morpheme of the dative plural and the *s* of the genitive and masculine singular in German are residues of this process.

   If this hypothesis is correct, doubling does not depend on the lexical portion of the DP structure but on the functional portion, hence on how many features have to be checked in the functional structure: the more there are, the more probable stripping becomes.
Suppose for instance that the internal structure of an XP is built in the following way:

(19) [FP1 [FP2 [FP3 [Lex. Cat.]]]]

The procedure of splitting will take away a proper subset of functional projections, moreover it will strip away functional layers starting from the highest one (see Cardinaletti and Starke (1999) for a similar idea in deriving clitic, weak and tonic pronouns). Therefore, either F1 is split and moved (hence copied) onto a projection in the IP or CP area of the clause, or F1 and F2, but never F2 alone or F2 and F3 leaving F1 behind.
   Suppose further that copying from a given position can apply only once: it is possible to move cyclically, hence copy the same XP more than once (in fact indefinitely) but this can be done only once per position, and cyclic movement entails copying from one position to a higher only once, so that copying only considers the highest instance of an XP in order to copy it further up in the structure, not the lower one(s).
In the case of doubling, once a functional layer internal to the XP which undergoes the procedure, for instance F1, has been copied onto the head or the specifier of an FP in the IP/CP domain, it is no longer possible to copy it once again from the original position, hence it becomes invisible to the theory of movement and the only FP that can be copied, hence moved is FP2.
   The idea that doubling is indeed an economic procedure because it splits a complex XP via movement of the lower part to a higher position internal to the DP and then movement of DP projection containing the relevant functional feature to the IP for checking can be used in order to explain Left Dislocation constructions as well. We noticed that in general the lower portion of the internal structure of the original XP, which has not been copied, can stay in situ and only in the case of subject doubling do we find a case in which the DP moves independently as it has a further EPP feature to check. This hypothesis accounts for the implicational scales we have examined for DP doubling (and wh-doubling, see below): the more functional features a given XP has to check the more probable the splitting and stripping procedure is bound to occur. If doubling amounts to partial movement of an XP, the portion of functional layer(s) that can be stripped away has to be the highest one of the XP internal structure. As we have

seen, a remnant movement analysis ensures that it is not possible to split and strip intermediate portions of the internal structure of the XP.

If the idea is correct, we should never find doubling of intermediate pieces of functional structure, the functional double must always contain a proper sub-tree of the whole XP an precisely the highest one. This prediction seems to be borne out in the cases we have seen above, but it clearly requires further testing.

A closer look at Left Dislocation structures provides further empirical support. As mentioned above, Left Dislocation is one of those exceptions to the descriptive generalization that the functional double (the resumptive clitic) ends up in a higher position with respect to the lexical double (the DP containing the noun) on a par with subject clitic doubling.

Left Dislocation is particularly interesting in a theory of doubling because it is the first syntactic context in which doubling is manifested, as shown by the fact that all Romance languages allow or require a clitic in Left dislocations even when they do not in any other construction.

Why should this be the case? As far as I know nobody has up to now ever tried an explanation for this observation, which in fact is straightforwardly accounted for in the present analysis of doubling.

Let us assume following Giusti (1993), (2006) a.o. that Case is a high projection of the DP corresponding to the ForceP in the CP phase. If the idea of stripping is correct, we expect that if doubling applies, it will strip away the Case layer (namely KP following Giusti's terminology), being the highest functional feature requiring checking realized as an independent syntactic projection. This prediction is borne out as the clitic has in fact overt case morphology distinguishing nominative, accusative, dative and genitive, while the DP does not[8]. Once the CaseP has been stripped away from the DP, the highest projection remaining inside the DP is a left peripheral one (see Giusti (2006) and Poletto (2006) for evidence that the DP in Romance has an internal active left periphery), namely TopP.

(20) $[[_{KP} [_{K°} \text{cl}] [_{TopicP} [_{FocusP} [_{DP} [_{NP}]]]]]$

(21) $[[_{XP} [_{TopicP} [_{FocusP} [_{DP} [_{NP}]] [_{X°} [_{KP} [_{K°} \text{cl}] ~~[[_{TopicP} [_{FocusP} [_{DP} [_{NP}]~~]]$

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[8]. In the Romance languages the DP can be preceded by a preposition, but has never case on its own. I assume here Kayne's (2004) treatment prepositions as higher functional heads requiring the movement of the DP in their specifier (and subsequent movement of the preposition itself)

In the above structures we have movement of the lower Topic phrase containing the lower portion of the DP structure including the NP to the Spec of a position higher than KP. The remnant KP created by this movement only contains the clitic pronoun has to check the Case feature located in IP and is therefore moved to the projection in the high IP layer where Case is checked. The other piece of the structure, namely TopicP still has to check its feature in the Spec of a Topic projection inside the CP layer. Moving the TopicP containing DP and NP to the SpecTopic position in the CP layer, thus bypassing the position of its clitic double. Therefore, the fact that the highest layer has been stripped away from the DP leaving TopP as the highest projection, gives the TopicP internal to the DP structure the possibility to raise to the CP layer.

Hence, we conclude that considering doubling an economic procedure derives the properties of Left Dislocation, which in other analysis of doubling have received no explanation so far.

With this analysis in mind let us now consider other instances of doubling.

3. Wh doubling: the functional structure of operators

Let us now consider other cases of doubling to test whether the stripping hypothesis for non identical doubling is correct. A good candidate is wh doubling, which also occurs in various NIDs.

(22) a. S'a-lo fat che?   *Illasi*
         What has-he done what?
     b. Ndo e-lo ndat endoe?
         Where is-he gone where?

As extensively discussed in Poletto and Pollock (2004), wh-doubling is similar to DP clitic doubling because one of the two doubles has indeed clitic properties, while the other is an XP. Poletto and Pollock (2004) apply the usual tests of cliticization to the higher wh-item and show that it behaves as a pronominal clitic because it cannot be modified, coordinated, used in isolation, bear stress and moved in another position within the sentence.

Cases like (17) also display the property of DP doubling noted above, namely the two doubles do not have the same form and the (higher) clitic has a fixed position, as shown by the fact that it is not possible to reverse the order of the two wh-items:

(23) a. *Che a-lo fat sa?   *Illasi*

          What haws-he done what?

    b. *Ngont fet andà ngo?   *Monno*

          Where do-you go where?

Moreover, the distribution of wh-doubling of this type can also be described as an implicational scale similar to the one in (5):

(24) If only one *wh-* behaves like a clitic it is either *what* or *where.*

(25) Elements like *who* and *how* can also display clitic-like properties but this is less frequently the case; moreover, the presence of clitic/tonic pairs for *who* and *how* in a language implies that both *where* and *what* also behave as such.

(26) The *wh-*element corresponding to *why* never behaves as a clitic, and is always expressed by a compound

(27) What/where   who   how   *why/*which X

    → doubling

Doubling distributes according to the type of wh-pronoun: if a dialect has doubling with the wh-item 'who', it has doubling with 'what' and 'where', if it has doubling with 'how' it has it also with 'what' 'where' and who'. Doubling of this type has never been observed with 'why' and complex wh-items.

    The following examples illustrate the point: in the dialect of Illasi, the older generation admits doubling only with the wh-item "what", while the young generation (below 40 years of age) also admits doubling with the wh-items "where" and "who":

Illasi:

Old Generation
(28) *Ci a magnà ci, la me torta?

(29) *Ci alo invidà ci?

(30) Sa alo magnà che?

(31) *Ndo valo (a)ndoe?

Young Generation
(32) Ci a magnà ci, la me torta?

(33) Ci alo invidà ci?

(34) Sa alo magnà che?

(35) Ndo valo (a)ndoe?

(36) a. *Parché e-lo partio parché?
           Why is-he left why?
      b. *E-lo partio parché
           Is-he gone why?
      c. *Che elo partio che tozato?
           What is-he gone which boy?

The dialect of Bormio Superiore (in the Italian speaking part of Switzerland) also allows doubling how,. The doubling structure with a clitic counterpart is not extended to any other wh-item in any dialect of the data base:

(37) Me tal fet là cumè?   *Bormio Superiore (CH)*

(38) *Quan ta l vedat quand?

(39) *Parché ta vet via parché

As extensively discussed in Benincà and Poletto (2005), these restrictions above and the implication scale in (25) do not only apply to wh-doubling, but also to wh in situ??**9** and clitic wh-items.

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[9]. Indeed they apply to wh in situ which cooccur with subject clitic inversion, not to the type of wh in situ found in spoken French.

Examples of the same restriction with wh in situ are the following: in the dialect of Borgomanero described in Tortora (1997), the only wh that can be left in situ in a non-echo question is the wh-item corresponding to "what", and in this case the wh-item has a different form with respect to the one occurring in initial position.

(40)   a. Kus tal ʃerki?   *Borgomanerese*
           What you look-for?
           'What are you looking for?'
       b. *Tal ʃerki kus?
           You look-for what?
       c. Tal ʃerki kwe?
           You look-for what?
       d. *Kwe tal ʃerki?
           What you look-for?

In the Bellunese dialects discussed by Munaro (1999) the wh-items that can remain in situ are those corresponding to "what", "who", "where" and "how".

(41)   a. *Ché a-tu fat?   (Munaro 1997: 3.62)   *Tignes d'Alpago*
           What have.you done?
           'What have you done?'
       b. A-tu fat ché?
           Have.you done what?

(42)   a. *Chi laore-lo?
           Who works.he?
           'Who is working?'
       b. E-lo chi che laora?
           Is.he who that works?

(43)   a. Va-lo andè?
           Goes.he where?
           'Where is he going?'
       b. ??Andè va-lo?
           Where goes.he?

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(44) a. Se ciame-lo comè?
Himself.calls.he how?
'What is his name?'
b. ??Come se ciame-lo?
How himself calls.he?

(45) a. In che botega a-tu comprà sta borsa?
In which shop have.you bought this bag?
'In which shop did you buy this bag?'
b. *A-tu comprà sta borsa in che botega?
Have.you bought this bag in which shop?

No dialect that admits wh in situ cooccurring with subject clitic inversion applies this strategy to other wh-items.

In order to capture this fact, Poletto and Pollock (2004) propose that wh-doubling as well as wh in situ are related to the existence of wh-clitics, because wh-doubling has the same properties of DP-doubling and wh in situ is a silent version of wh-doubling with a null clitic realized in the higher position.[10] The property of some wh-items to become clitics is therefore a necessary condition for getting wh in situ and wh doubling: so the same dialect can either spell out the clitic part with a silent XP, or the XP part with a silent clitic or both. The following examples illustrate the point:

(46) a. (Che) fe-f fa (què) ades?   *Monno*
What do-you what, now?
b. (Ngo) fet andà (ngont)?
Where do-you go where?
c. (Ch) e-l (chi) che maja le patate?
What is-he who that eats the potatoes?

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[10]. Munaro (1999) notes that languages that develop wh-in-situ of the type described above pass through a stage of wh-doubling.

(i) Che oleu che epia metù che?
What want-you that have+subj put what?   Munaro (1999:2.28, Villabruna, IV, II 1700)

This constitutes additional empirical evidence that the two phenomena are related.

The point I intend to make here does not concern the analysis of the relation between wh in situ and wh-doubling (see Poletto and Pollock (2004) on this) but their diachronic origin. Apparently doubling starts out in the environment of non-standard questions as defined by Obenauer (1994) and (2004): as questions whose answer is outside the set of canonical answers provided by the context. Obenauer (2004) brings empirical evidence that non-standard questions involve the checking of additional functional projections located in the CP area higher than the position to which the wh-item moves in standard questions.

Therefore, doubling originates precisely when additional functional projections require checking. If we admit that in order to check a feature in the IP or CP a given XP must have the corresponding projection inside its internal structure,[11] we immediately have an explanation of the link between doubling phenomena and the presence of several features that require checking by the same element.

Concerning the link between wh-doubling and wh in situ, we could go a bit further along this line of thought and hypothesize that doubling (hence, stripping) phenomena area found as a (probably possible though not necessary) intermediate step towards the loss of movement. Stripping away and moving a smaller portion of a bigger constituent is indeed a stage towards not moving the whole XP at all (and checking features simply by virtue of the operation "Agree"). This is quite clear in the case of wh-doubling, which so neatly behaves like wh in situ, but could also be conceivable for DPs: Benincà and Poletto (2005) point out that pronominal clitics are the last residue of the Latin OV order, where an object had probably to raise to an overt Case position yielding OV rather than VO.

Given that doubling can also be covert (in the sense that either the clitic or the XP counterpart can be empty), this analysis does not predict that all languages have to undergo an overt doubling stage when they lose movement.[12]

An apparent counterexample to this account of doubling in terms of economy is provided by the observation that doubling is first found with wh-words, while one could think that it should be more frequent with complex wh-items than with wh-words, given

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[11]. This idea is not new in the literature, for instance it can be found in Cardinaletti and Starke's (1999) treatment of pronominal forms.

[12]. In the first stage of the development the in situ element is interpreted as having a null clitic companion, and then the null clitic is deleted at a later stage of development so that the in situ strategy becomes standard for all wh-items.

that complex-wh items contain a N and are therefore more complex. Recall however that doubling is not connected to the complexity of internal structure of an XP per se, but to the number of functional projections that have to be matched and checked between the XP and the sentence structure.

Wh-doubling starts out with wh-words and they are generally more prone to enter a doubling strategy because they are intrinsically pure operators with more operator features. In this sense wh-words are parallel to tonic pronoun while complex wh-phrases are parallel to DPs and they are expected to display doubling more often, as they have more features to check. This is precisely the analysis put forth in Poletto and Pollock (2004), who, basing on an idea of Katz and Postal (1964) assume that wh-words are construed as existential operators in the scope of a disjunction operator, while wh-phrases do not contain any existential operator.

In this sense, this hypothesis reverses the idea that elements like 'what' are more prone to enter doubling and become more easily clitics because the are more "void" of content, "what" has this behavior for the opposite reason, because it has more functional structure, as it has a complex internal operator structure.

4. Negative concord

In this section I describe a case of doubling of a purely functional element, namely sentential negation. Following Zanuttini (1997) I assume that in the NIDS there are four functional projections where a negative morpheme can occur:

(47) [NegP1 non [TP2 [NegP2 mia [TP2 [NegP3 nen [Asp perf. [Asp gen/progr.
      [NegP4 no]]]]]]]]

The negative markers occurring in each position in the above structure are of different etymological type, I present the properties of each type in turn:

Elements located in NegP1 are always heads and often also display clitic properties, and is always in front of the inflected verb. In all dialects it is obligatory with postverbal

negative quantifiers (sometimes also with preverbal negative quantifiers),[13] it cannot occur with true imperative forms:

(48) a, No sai   *Cencenighe Agordino*
          (I) Not know
      b, No 'l è lugà nogugn
          No the is come nobody
      c, Nisun no vien più casa mia   *Venezia*
          Nobody not comes more my home
      d. *No va
          Not go+imperative

Elements occurring in NegP2 are also often phonologically reduced, but are probably weak pronouns, not clitics. Items occurring in this position originally indicated a small quantity, (the derive from the word meaning "step" 'pa', "crumble" 'brisa', "small sandwitch" 'mina/miga/minga', it is generally located in front of the past participle. Negative concord is not obligatory but possible with postverbal negative quantifiers, it can be used with true imperative forms:

(49) a. Al sei bic   *Livigno*
          I-it know not
      b. No l'è mina vegnù   *Loreo*
          No the is not come
      c. A n è mina riva nisun
          It not is not come nobody
      d. Magnelo mina
          Eat-it not

NegP3 originates from the element meaning "nothing" and is often located lower than adverbs like "already" but higher than "always", it is always a specifier and can move to the SpecC position and be followed by a complementizer, it can occur with postverbal

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[13]. Note incidentally that the case in which the preverbal negative marker cooccurs with a preverbal negative quantifier is also a counterexample to the empirical generalization that the head is always higher than the XP, in this case the negative quantifier precedes the negative marker.

negative quantifiers (although with some restrictions) and although in several dialects it occurs in imperative clauses, in others it is substituted by a NegP4:

(50) a. A l'avia già nen volu 'ntlura   (Zanuttini (1997) 3:(29))
          He it had already not wanted then
          'Already at that time he had not wanted to'
      b. A l'ha nen dine sempre tut   (Zanuttini (1997) 3:(32))
          He he has not said-us always everything
          'He did not always tell us all'
      c. A parla nen cun gnun   (Zanuttini (1997) 3:(55))
          He speaks not with nobody

Neg4 is the same morpheme that is used for pro-sentence negation, 'no', it is always a specifier, in the dialects where it is the only negative marker, it cannot occur with postverbal negative quantifier (when used alone), it can be used in imperative forms:

(51) a. Su no   *Milano*
          (I) know not
      b. L'è rivà nisun
          It is come nobody
      c. Piof pu
          Rains more
      d. L'a mangià no
          He has eaten not
      e. Vusa no!
          Shout+imp not

The examples above show that each type of negation is found as the only sentential negative marker in several dialects, but in some dialects they can be combined with each other. The possible combinations found are the following:

a)   NegP1 is compatible with all other negation types:

(52) a. A **n** al so **brisa**   *Bologna (1)*
          I not it know not

    b. I **ne** sà **nia**   *S.Leonardo (Rr.)*

       I not know not

    c. **No** credo che podia parlar con elo **no**   *Cembra*

       Not believe that could talk to him not

b)   NegP2 is also compatible with all other types of negation, more interestingly whenever it occurs with other negative markers NegP2 always has a presuppositional value, as already noted by Zanuttini (1997).

(53) a. Fa pa nen sulì   (Zanuttini(1997:46)) *Lanzo*

       Do not not that

    b. Nol lo ga mina fato nò   *S.Anna (Ve)*

       Not-he it has not done not

c)   NegP3 and NegP4 are not found together.[14]

d)   As shown above NEgP4 can occur with NegP1 and NegP2, but whenever it does it instantiates Focus, as the intonation also attests.

Applying the analysis of doubling as checking of several functional features, we can hypothesize that negative elements can also encode presupposition and focus in addition to marking sentential negation and therefore the sentential negative marker can also have an internal structure with several FPs.[15]

    If this view is correct, we can conclude that the splitting procedure can be adopted by purely functional XPs as negation as well, so the lexical part of the constituent does not really play a role in doubling, in fact it is not even necessary for a doubling procedure to be established.

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[14]. The reason why the two negations do not cooccur has probably to do with the fact that NegP3 starts out from a lower position and than raises to NegP3 crossing the position of NegP4. NegP3 elements are in fact originally arguments, which are then turned into sentential negation by movement.

[15]. That the negative marker has internal structure is already present in Pollock (1989) where he analyses French negation 'ne…pas' as a head and a specifier internal to the NegP.

6. Conclusion

In this work I have explored the possibility of analyzing doubling as a general procedure for minimizing (re)-merge, hence a procedure, which, contrary to pied piping, moves outside the DP only the highest functional portion of an XP leaving the lower portion of the structure (including the lexical item) below. This procedure can be applied to all types of categories with more than one feature to check (including functional XPs), and in fact the literature reports cases of doubling not only of DPs and wh-items, but also of verbs and prepositions.

This accounts for the fact that doubling constructions are so pervasive in dialects: each category with at least two functional features to check in the IP or in the CP can be subject to the stripping procedure which originates doubling constructions. Moreover, this theory allows tripling, because stripping can apply more than once, and it fact cases of tripling are known:

(54) a. Nane el ze ndà iu
          N. he is gone he
     b. Nol lo ga mina fato nò   *S.Anna*
          Not-he it has not done not

(54a) is a case of tripling in the DP, where the clitic checks the case feature, the tonic pronoun the Focus feature and the lexical remnant the EPP feature in SpecT, (54b) is a case of tripling of the negative marker which checks Focus, Presupposition and the higher NegP.

    Moreover, this analysis has the advantage of not requiring any special structure like a "big DP" is needed in languages with doubling, which have exactly the same layering as languages with no doubling. This in turn means that complex XPs are not a peculiarity of doubling languages, all languages can have DPs endowed with more than one feature, only the splitting procedure, i.e. the first movement of the lower portion to a high position internal to the DP, is language-specific. But if doubling is related to the amount of pied piping a language allows, we should expect that languages disallowing doubling allow pied piping in other contexts, but it still remains unclear in which contexts this should be relevant. Moreover, is the amount of doubling/pied piping connected to other syntactic properties? Another side of the same coin is the problem of how the splitting and stripping procedure is restricted in order not to overgenerate wildly. It can clearly apply on head+XP as well as on XP+XP, but are all functional

features subject to splitting or only some? This is an empirical question that cannot be solved here, but that must be taken into account in future research if the line of thought presented here is to be pursued.

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