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On Two Sub-projections of the Nominal Extended Projection: Some Romance Evidence

<https://doi.org/10.1515/probus-2022-0005>

Published online May 9, 2022

Abstract: If cross-linguistic word order variation is a function of the movement of the head of each (sub)projection of an extended projection (in one of the possible ways movement can take place: with or without pied piping) there will be novel evidence for the correct constituencies of the clause and its major phrases. Here I will try to illustrate this by looking at two specific sub-projections of the nominal extended projection in a number of Romance languages: the sub-projection of locative adverbs and elevation and exteriority/interiority particles, and the sub-projection containing ‘other’, and ordinal and cardinal numerals.

Keywords: DP, nominal sub-projections, romance

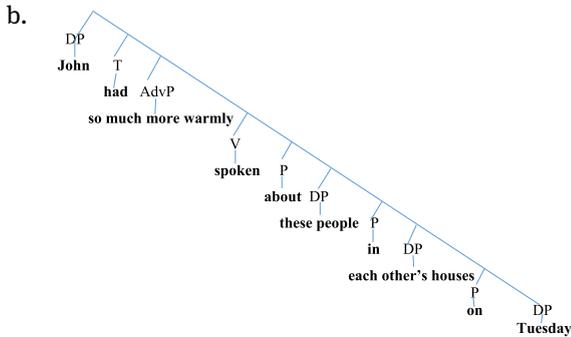
1 Introduction

In the current literature, the structure of the clause, as well as that of its major phrases (DP, AP, PP, etc.), is often taken to consist of a single extended projection, or ‘spine’, which develops rightward and downward, with heads, arguments, and modifiers branching out to the left in head or specifier positions, and complements and adjunct, if any, to the right, as shown in (1)b. for a fragment of the clause, and (2)b. for a fragment of the nominal extended projection:¹

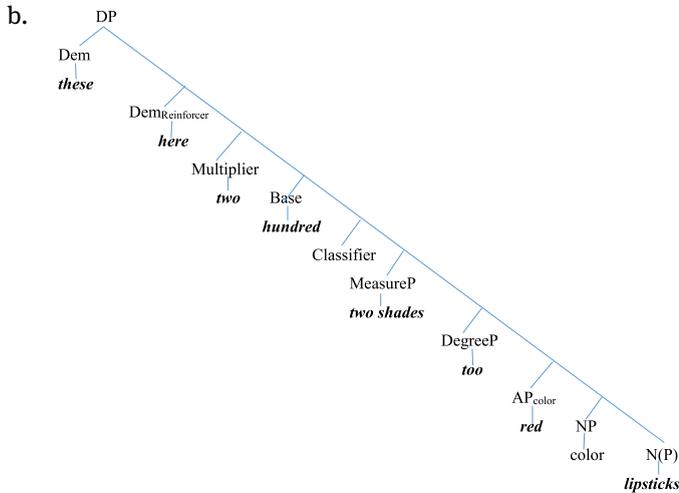
¹ I wish to thank Christopher Laenzlinger, Marie-Claude Paris, Jean-Yves Pollock and Michal Starke for their judgments on the French data reported in Section 4, as well as two anonymous reviewers for their useful observations to a preliminary version of this article. The structures necessarily appear here as linearized, given the two-dimension nature of the page, whether linear order is taken to be present in narrow syntax or only in PF. (1)b. and (2)b. are fragments of richer structures, with CP an abbreviation for a number of finer-grained projections (see Rizzi 1997; Bocci and Rizzi 2017), and TP and AspP abbreviations for a number of distinct clausal projections (Cinque 1999). For additional functional (sub-) projections of the nominal extended projection, and for the reasons to have even complements and adjuncts that appear to the right of a Head in head-initial languages merged above (and to the left of) the Head, see Cinque (2022: chapter 1).

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- (1) a. John had so much more warmly spoken about these people in each other's houses on Tuesday²



- (2) a. these here two hundred two shades too red lipsticks³

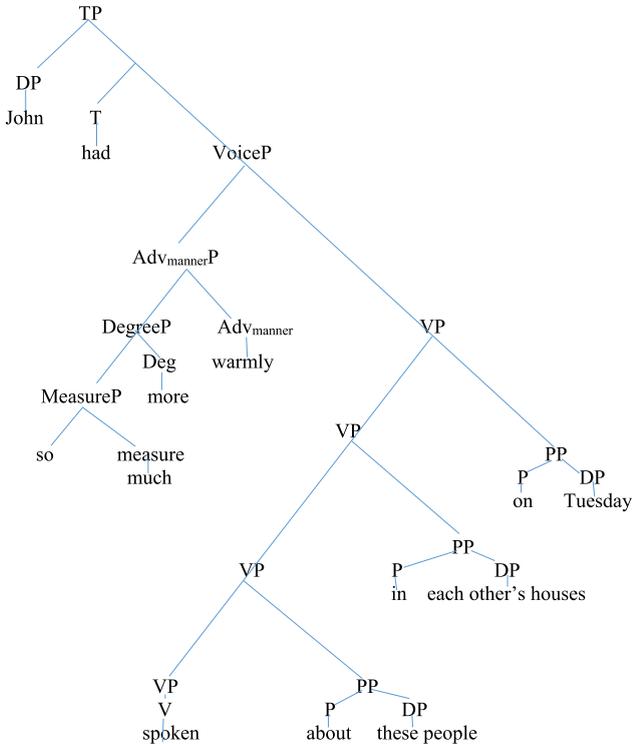


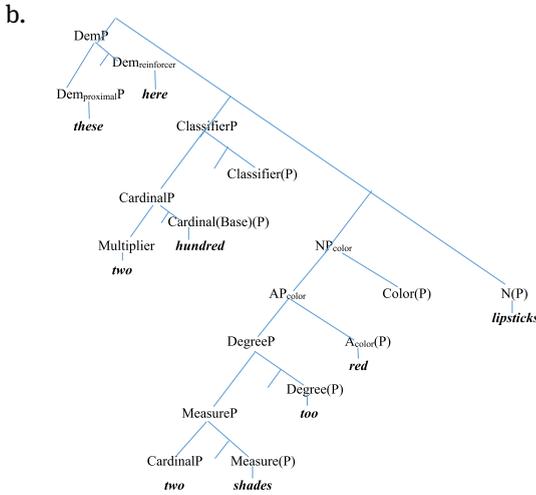
² Adapted from Pesetsky (1995: 72). It is given, in (1)b., in Pesetsky's 'cascade' format, which seems to be motivated by anaphor binding (see (1)a.), as well as pronominal binding, and the licensing of negative polarity items, which all require the binder (*these people* in (1)) to c-command the bindee (*each other* in (1)). Constituency and other tests led Pesetsky (1995) to assign a second, parallel, representation, which he called 'layered'. In Cinque (2006) I suggested a derivation which takes the 'cascade' structure to be an intermediate level of representation leading from the structure of Merge to the 'layered' one, for which see (3), the final hierarchical structure of (1)a., with a more detailed representation of its sub-projections. But also see Hinterhölzl (2009: §5.2).

³ See for example the functional sequence suggested in Cinque (2005: 328), and the much richer functional sequence suggested in Dékány (2021: §1.4 and Chapter 6).

In Cinque (2022), on the basis of the possible word orders found cross-linguistically, which are a subset of the mathematically possible ones, and the hypothesis that the possible and impossible orders can be discriminated by assuming that the elements in (1) and (2) are organized in distinct (independent) sub-projections within the macro-projection, where only the Head of each sub-projection can move, I suggested that the correct structures turn out to be more finely articulated in their constituencies, approximately as shown in (3)a. and b.:

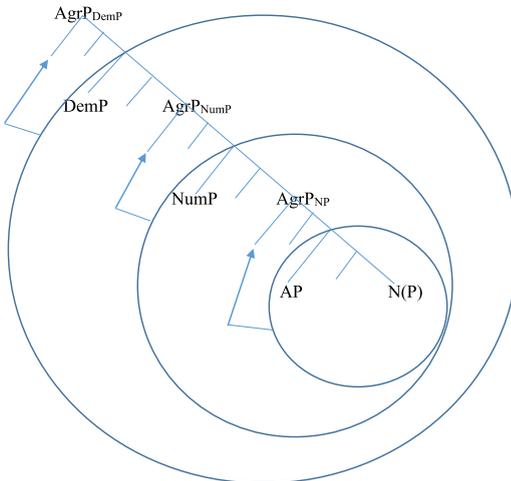
(3) a.



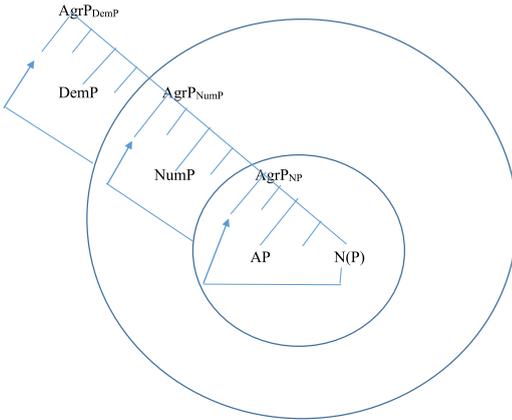


For each sub-projection the possible word orders found cross-linguistically, and only these, are a function of the movement of the Head of each sub-projection in one of the admitted ways: *pictures-of-whom* pied-piping (which does not alter the relative order of the Head and modifier(s)) (see (4)a.), or (initially vacuous) *whose-pictures* pied-piping across the modifier(s) (see (4)b.), or successive cyclic movement without pied piping (see (4)c.), for the three nominal modifiers demonstrative, (cardinal) numeral, adjective and noun (cf. Cinque 2005; 2022: §2.1). The English case in (2)a. involves the *pictures-of-whom* pied-piping mode in each sub-projection.

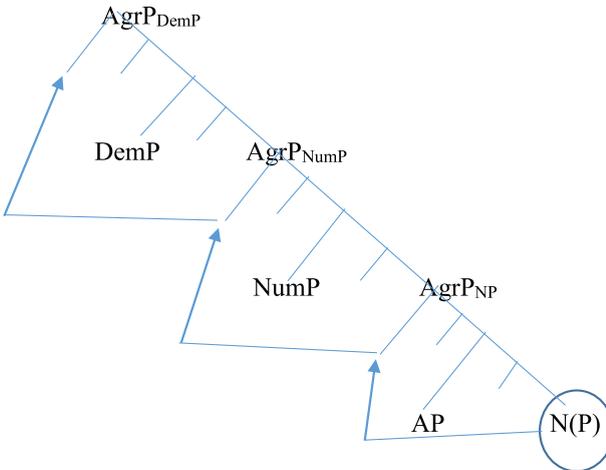
(4) a. Dem Num A N (derived via movement of the N(P) with the *pictures-of-whom* pied piping)



- b. N A Num Dem (derived via movement of the N(P) with the *whose-pictures* pied piping)



- c. N Dem Num A (derived via movement of the N(P) without pied piping)



2 The Sub-projection of Demonstrative and Demonstrative Reinforcer Across Languages

Before addressing the two sub-projections that show substantive variability in word order in Romance I devote a brief cross-linguistic survey to the demonstrative

phrase (comprising a demonstrative and a demonstrative reinforcer), as this bears on the first of the two sub-projections to be discussed.

Kayne (2004: 4.2) provides substantive evidence to analyze locative *here* and *there* in English as in (5), where capitals indicate non pronunciation (in English “*this* and *that* of *this here place* and *that there place* can be unpronounced only if *place* is” – Kayne 2005: 70):

- (5) a. [THIS [here [PLACE]]]
 b. [THAT [there [PLACE]]]

The Head of the sub-projection is an unpronounced PLACE (or THING, or PERSON, in other contexts), the only phrase which can move either by itself or by pied piping a dominating phrase, like [here [PLACE]] (Kayne 2004: §4.2–5 and fn.15).⁴

I will assume that *qui/qua* ‘here’ and *lì/là*⁵ ‘there’ enter a comparable structure: [THIS [*qui/qua* [PLACE]]], [THAT [*lì/là* [PLACE]]].

In (some varieties of) English the structure with THIS/THAT and *here/there* pronounced can function as a modifier of the extended nominal projection (cf. Bernstein 1997: 91; Kayne 2004):

- (6) [[These [here [PLACES]]] three books]

If the Head of the demonstrative sub-projection is actually [‘here’/‘there’ [PLACE]], and if, as mentioned above, the possible cross-linguistic orders are a function of the movement of the Head of each sub-projection (with the *whose-pictures* pied-piping mode across the modifier or with the *pictures-of-whom* pied-piping mode, which does not alter the relative order of the Head and modifier – N being here what pied pipes the post- or pre-nominal material), we expect to find 4 orders when the demonstrative sub-projection is combined with N. In the first, ((7)), the two Heads (N and the demonstrative reinforcer) move in unison, both with the *pictures-of-whom* pied piping.

- (7) [[[[Dem **DemReinf**]_i t_i] N]_k t_k]
- 
- The diagram shows two blue arrows indicating movement. One arrow starts at t_k and points to DemReinf. The other arrow starts at t_i and points to N.

⁴ For further evidence, from Greek and Hebrew, of a silent Head ‘place’ in locative PPs, see Terzi (2010) and Botwinik-Rotem (2008).

⁵ On the possible difference between *qui/lì* ‘here/there’ and *qua/là* ‘here/there’ in terms of punctual (bounded) reference versus vague (unbounded) reference, respectively, see Cinque (1971: §3.213), Vanelli (1995: §2.2), Tortora (2008: 276f). Spanish apparently makes a similar distinction between *aquí, allí*, and *acá, allá* (Tortora 2008: fn.9).

- a. **these here** (*three*) (*tall*) *guys* (non-standard English – cf. Bernstein 1997: 90f)⁶
- b. *Guck, uff **denne do** zwo Seide steht's.* (Rhine Franconian – Rauth and Speyer 2021: 12)⁷
Look, on Dem Adv two pages stands.it
'Look, it's on these/those two pages.'
- c. **Onu tamo mi knjigu donesi.** (Bosnian/Serbo-Croatian – Brugè 1996: 23)⁸
that there me.DAT book.ACC give
'Give me that there book.'

A second option is represented by those languages where the two Heads (N and the demonstrative reinforcer) also move in unison, but this time with the *whose-pictures* pied piping, which in this case is 'vacuous' as nothing is found below the respective Heads.⁹

6 On this construction also see Leu (2007), Rupp and Tagliamonte (2019), and references cited there.

7 The same order is found in Pennsylvania German ((i)a.), and in the Australian language Dalabon ((i)b.):

- (i) a. *seller datt mann* (Rauth and Speyer 2021: 11)
'that there man'
- b. *kanh nunda aykladj ka-h-ngabbu-n* (Cutfield 2011: 92f)
that here glasses 3sg-H-give-PRES
'those here glasses you give to me'

8 (7)c. is possible alongside (i):

- (i) *Onu tamo knjigu mi donesi* (Brugè 1996: 22)
That there book.ACC me.DAT give.
Mi in Wackernagel position can follow either *onu tamo knjigu* or *onu tamo*. Thus the contrast between (7)c. and (ii), where it cannot follow *onu novu*, shows, as Brugè notes, that *onu tamo* but not *onu novu* forms a constituent:
- (ii) **Onu novu mi knjigu donesi.*
That new me.DAT book.Acc give.

9 See Cinque (2022: §1 and §3.3) for more detailed discussion of the two types of pied piping involved in the derivation of word order across languages, where consistent *whose-pictures* pied piping underlies rigid head-initial languages and consistent *pictures-of-whom* pied piping underlies rigid head-final ones.

- (8) [N_k [**DemReinf**_i Dem t_i] t_k]
- sira nain hát iha **nebá né*** (Tetun Dili – Malayo-Polynesian)¹⁰
3p CL-human four Loc there this
'those four of them over there'
 - vaat **poo-mi popo** ga-ʔuliŋ* (Reta – Papuan – Willemsen 2020: 221)
coconut there.LOW-in that.LOW 3sg-see
'take a look at that coconut tree down there'

The next two orders mix the two types of pied piping. If the demonstrative reinforcer moves with the *pictures-of-whom* pied piping while the N moves with the (vacuous) *whose-pictures* pied piping, the resulting order is [N_k [[Dem **DemReinf**]_i t_i] t_k], exemplified by the languages in (9):

- (9) a. *con mèò **kia kìa*** (Vietnamese – Nguyen 2004: §3.1.9)
CL cat that over there
'that cat over there'
- b. *òkútù **odzù ε`enà*** (Tuki – Niger-Congo, Bantu – Biloa 2013: 348)¹¹
Cl1woman this here
'this woman here (near speaker)'

Instead, if the demonstrative reinforcer moves with the (vacuous) *whose-pictures* pied piping while the N moves with the *pictures-of-whom* pied piping, the resulting order is [[**DemReinf**_i Dem t_i] N_k t_k], exemplified by the languages in (10):

- (10) a. *Gib mir **da das** Bier* (colloquial Standard German – Rauth and Speyer 2021: 2)¹²
Lit. 'Give me there that beer.'
- b. ***ki fti** Oman* (Ferrarese – Ledgeway 2020: 456)
here these men
'these here men'
- c. ***ot** **der** guter man* (Yiddish – Jacobs 2005: 186)
Dem_{reinforcer} this good man
'this good man'

¹⁰ From Williams van Klinken, Hajek, and Nordlinger (2002: 26).

¹¹ Oniyan (Niger-Congo – Northern Atlantic) is another language with the same order (Kane 2020: 76).

¹² The same order is found in Moselle Franconian (Rauth and Speyer 2021: 2):

- (i) weil kommt **lo die** dreckig Kurwel dazeschen
now comes adv dem dirty basket between
'Now this/that damn basket is getting in the way.'

In addition to the expected four possibilities in (7) to (10) the reinforcer (with silent PLACE), the arguable complex Head of the demonstrative sub-projection, can in some languages move out of it, to a focus position, giving rise to additional orders through remnant movements (see, for example, (11) and its arguable derivation in (12)):¹³

(11) Dem Num A N A DemReinf (Italian – cf. Bernstein 1997: §3)

- a. **Questi due bei gattini neri qui**¹⁴
 these two nice kittens black here
 ‘these here two nice black kittens’

- (12) a. [DP [DemP questi [qui PLACE]] due bei gattini neri] →
 b. [DP qui_i [DemP questi [t_i PLACE]]] due bei gattini neri] →
 c. [FocusP qui_i [DP t_i [DemP questi [t_i PLACE]]]] due bei gattini neri] →
 d. [DP t_i [DemP questi [t_i PLACE]]_k due bei gattini neri]_k [FocusP qui_i t_k]

Spanish (13)a. has a parallel derivation. An alternative option, not available in Italian, is (13)b.

- (13) a. **este libro de aquí**
 this book of here
 ‘this book here’
 b. **el libro este de aquí**
 the book this of here
 ‘this book here’

Given the occurrence of an article before the demonstrative in pre-nominal position in Old Spanish ((14)a.), in one Spanish-based creole ((14)b.), and (according to Gutiérrez-Rexach 2015: 457) even in one Standard Spanish construction involving the pre-nominal high adjectives *supuesto* ‘alleged’, *llamado* ‘so-called’, and *falso* ‘fake’ ((14)c.), it is plausible to assume a pre-demonstrative silent article even in Modern Spanish ((13)a.) (and in Italian, for that matter) (Steinkrüger 2013).

- (14) a. ...*los estos dichos Pero Ferrandez & Pero Domínguez*... (Old Spanish)¹⁵
 ...the these said P.F. and P.D...
 ‘...these aforementioned P.F. and P.D...’

¹³ Movements motivated by informational requirements escape the requirement that they move within a projection of the Head (Cinque 2005: fn.23; 2022: §2.1).

¹⁴ Here the locative reinforcer is specially accented. On the possible occurrence of indirect (only predicative) adjectives after the demonstrative reinforcer, see the discussion in Cinque (2010: §6.3).

¹⁵ Traslado notarial [Colección Diplomática de León] (1360). In Santiago Domínguez Sánchez, Universidad de León (León), 1994. (Florencio del Barrio de la Rosa, pers. comm.)

- b. *el éste póno* (Zamboanga Chabacano Creole – Steinkrüger 2013)
 the this tree
 ‘specifically this tree’ or ‘this very tree’
- c. *el aquel supuesto emperador* (Gutiérrez-Rexach 2015: 457)
 the that alleged emperor
 ‘that alleged emperor’

As to the derivation of (13)b., a possibility is the one in (15) (thinking of Kayne’s 2002 analysis of prepositions):

- (15) a. [[*este aquí* PLACE] *libro*] →
 b. [*libro*_k [[*este aquí* PLACE]] t_k] →
 c. [_{FOCUSP} *aquí*_i [*libro*_k [[*este t_i* PLACE]] t_k] →
 d. [*de* [_{FOCUSP} *aquí*_i [*libro*_k [*este t_i* PLACE]]] t_k] →
 e. [[*libro*_k [*este t_i* PLACE]]] t_k] [*de* [_{FOCUSP} *aquí*_i t_j]]
 f. [el [[*libro*_k [*este t_i* PLACE]]] t_k] [*de* [_{FOCUSP} *aquí*_i t_j]]

Leaving aside *aquí*, the derivations of (14)a.-c. simply fail to raise the N after (15)a., and insert *el* above the demonstrative. In Modern Spanish (except in the special construction (14)c.) the article presumably becomes silent if contiguous to the demonstrative.

Bernstein (1997: 97) and Kayne (2004: §4.1) provide evidence that *this here book* and the like do not have a reduced relative clause source (*this that/which is here book*). For example, (reduced) relative clauses can be introduced by a determiner (*the book that/which is here; the books here*) while the demonstrative reinforcer is incompatible with a simple determiner (**the here books*).

Reduced relative clauses can be accompanied by other material (*The/that book that/which is over there; the/that book over there*) while demonstrative reinforcers cannot (**that over there book*). Also, the reinforcer precedes the numeral if there is one (see (7)a. above vs. **these three here tall guys*) while reduced relative clauses follow the numeral (*these two recently arrived letters* vs. **these recently arrived two letters*).

The first property also holds in Italian, modulo the position of the reinforcer (*questi libri qui* ‘these here books’ vs. **i libri qui* ‘the here books’, noted in Brugè 1996: 21fn.27), suggesting that the reinforcer is not a reduced relative clause in Italian either. At first sight it would seem that the second property gives an opposite result as the reinforcer can apparently be accompanied by other material, like particles of elevation, *giù, su* ‘down/up’, and of interiority/exteriority, *dentro/fuori* ‘in(side)/out(side)’ (*questi libri qui giù fuori* ‘Lit. these books here down out’).

However, the fact that here a simple determiner is equally acceptable (*i libri qui giù fuori* ‘Lit. the books here down out’) shows that *qui giù fuori* is the predicate of a reduced relative clause (*i libri ~~che sono~~ qui giù fuori* ‘Lit. the books ~~that are~~ here down out’), rather than a complex reinforcer.¹⁶

In the next section we examine this reduced relative clause sub-projection, formed by the locative adverb and the elevation and interiority/exteriority particles, as the order of these elements shows striking variation in Romance, providing at the same time interesting evidence that the Head of the sub-projection is the locative adverb.

3 The Sub-projection of Locative Adverbs and Elevation and Exteriority/Interiority Particles, with Special Reference to Romance

Elevation and exteriority/interiority distinctions are often expressed in the languages of the world together with location/direction distinctions. In English when a locative/directional adverb combines with both an elevation particle and an exteriority/interiority one the order appears to be elevation > exteriority/interiority > locative/directional adverb (*up/down in there, up/down in here, down out here, down out there*, etc.). Orders with a different arrangement of the three components are either unacceptable or highly marked. If the Head of this sub-projection is the locative adverb (I abstract here from the silent presence of PLACE making up a complex Head with ‘here’/‘there’), and if only Heads can move in one of the ways movement can take place (with the *whose-pictures* pied piping mode, or the *pictures-of-whom* pied piping mode, or without pied piping), we expect to find languages instantiating five (out of six) orders of the three elements, namely the orders given in (16)a.-e. with English glosses (and with the Head given in bold). The only order which apparently fails to be found is that in (16)f., which would involve the movement of the exteriority/interiority particle across the elevation particle not as part of a constituent containing the Head, an illegitimate move. It turns out that each of these orders is instantiated in one or another Romance variety (and some other language). Each of the orders illustrated in (16)a.-e. are given with an

¹⁶ Confirming evidence comes from the variety of English that allows *these here books* as the corresponding particles apparently cannot accompany the reinforcer: **These down in here books*. Certain languages however appear to allow for the syncretic indication of elevation in demonstratives (and demonstrative reinforcers). See Schapper (2014) on Alor-Pantar languages and (8)b. above for an example from one such language.

indication of movements that alter the order of merge (movements with the *whose-pictures* pied piping or movement without pied piping).

- (16) a. [up/down [in/out [**here/there**]]] (*dialect of Val Blenio*, English)
 b. [[**here/there**_i [in/out t_i]]_k [up/down t_k] (*dialects of Valtellina, Ladin, Bulgarian*)
 c. [[**here/there**]_i [up/down [in/out t_i]]] (*Standard Italian, Croatian*)
 d. [up/down [[**here/there**]_i [in/out t_i]] (*Piedmontese dialects, Greek*)
 e. [[in/out [**here/there**]]_i [up/down t_i]] (*Rio Platense Spanish*)
 f. *[in/out]_i [up/down t_i [**here/there**] 0

The English order seen above, which would involve repeated movement of the Head with the *pictures-of-whom* pied piping (which does not alter the order of merge) is represented in Romance by the Canton Ticino Swiss dialect of Val Blenio. See (17), cited in Prandi (2015, 128):

- (17) a. *žüföli*
 ‘Lit. down.out.there’
 b. *süföli*
 ‘up outside there’

The order (16)b. ([[**here/there**_i [in/out t_i]]_k [up/down t_k]), which is the mirror image of the English order, is instead instantiated in certain dialects of the Valtellina (northern Italy).

See (18)a, from the dialect of Grosio, and (18)b. from that of Montagna:¹⁷

- (18) a. *lafösù/lafögù* (Prandi 2007: §3)
 ‘Lit. there out up/there out down’
 b. *lafø'sy/lafø'džu* (Prandi 2015: 126).
 ‘Lit. there out up/there out down’

The fact that *lafösù* is spelled out as a single word may suggest a derivation from an (English) order (*sù fö la*) through successive movements/incorporations involving the *whose-pictures* pied piping mode (of *la* to *fö* and of *lafö* to *sù*).

¹⁷ Dialects of the Valtellina also show that indication of the ‘up/down’ (relative) viewpoint is obligatory in all directional contexts: *Sum 'nd à c' *(s')a sür à na* ‘I have gone *(up) to Surana’. Similar facts are found in Ladin, Sursilvan, Monnese, and other dialects of the Alps, with interesting extensions of the ‘in/out’ relative point of view. See Pescarini (2004).

This order is also possible in Bosàc, a Lombard dialect spoken in the province of Sondrio (cf. *làafòsù/làfógió* – <https://www.dialbosaggia.it/news/avverbi-di-luogo>), and in Badiotto, the Ladin dialect spoken in the Badia valley of northern Italy (Irsara 2009: 213f; 2010: 81). See (19), with the order ‘here/there-out-down’, alongside (20), with the order ‘there-down-out’:¹⁸

- (19) a. *vaste cafora jö?* (Irsara 2009: 213)
 Go.you here.out down?
 ‘Are you going down out here?’
 b. *lafora jö* (Irsara 2009: 215)
 ‘Lit. there-out down’

- (20) *Ĉi grüm de auti che va curajö fora!*
 What bunch of cars that go there.down out
 ‘What a lot of cars that go down out there!’

The order (16)c. ([[**here/there**]_i [up/down [in/out t_i]]]) of Standard Italian (see (21))

- (21) *lì giù fuori/laggiù fuori,*
 ‘Lit. there (precise) down out/there (vague) down out’

may instead be thought to derive from the same (English) order through raising of *lì/là* without pied piping above *giù* and *fueri*, either successive cyclically or in one fell swoop.¹⁹

18 It is also found as the unmarked order in Bulgarian. See (i):

- (i) *onazi kniga tam vetre dolo* (Iliyana Krapova, pers. comm.)
 ‘Lit. that book there inside down’

19 Czech and Croatian appear to display the same unmarked order. See (i)a.-b.:

- (i) a. (ty knížky který jsou) tam dole uvnitř (Czech – Pavel Caha, pers. comm.)
 (those books which are) there down inside
 b. tamo dolje vani (Croatian – Tomislav Sočanac, pers. comm.)
 there down out

In many languages ‘up/down’, in addition to indicating that the ground is located higher up or lower down than some viewpoint (either the speaker’s, the addressee’s, or a third party’s), can also represent the absolute viewpoint. For example, in both Italian and Nêlêmwa (Austronesian – Brill 2004) ‘up/down’ can refer to cardinal points (in Italian ‘up’ = north, ‘down’ = south; in Nêlêmwa ‘up’ = south and east, ‘down’ = north and west). In Nêlêmwa ‘up/down’ can also have a different topographic reference (‘up’ meaning ‘inland’; ‘down’ meaning ‘seaward’).

I have not found a Romance variety clearly displaying the order [up/down [[**here/there**]_i [in/out t_i]], with raising of the Head via the *whose-pictures* pied piping above the closer modifier *in/out*, and after that by the *pictures-of-whom* pied piping, although it remains to be seen if the Piedmontese dialects of Nonio, Galliate and Isola Sant'Antonio display this order, which might be suggested by the following forms from the *Sprach- und Sachatlas Italiens und der Südschweiz* (AIS) (carta 1611):²⁰

- (22) a. *žü la mfun̄t* [AIS 128] Nonio
 b. *golà infünd* [AIS 139] Galliate
 c. *zü la imfont* [AIS 159] Isola Sant'Antonio
 'Lit. down there yonder'

This order is clearly attested, apparently as the unmarked order of locative adverbs and elevation and exteriority/interiority particles, in Modern Greek. Arhonto Terzi tells me that Dimitris Michelioudakis and Nikos Angelopoulos gave her the judgments in (23), which she tends to share though she is not completely sure whether the orders in (23)c. and e. are really worse than (23)a.:

- (23) a. Ok. *afti kato eki ekso*
 they down there out
 b. **afti kato ekso eki*
 they down out there
 c. ??*afti eki ekso kato*
 they there out down
 d. **afti eki kato ekso*
 they there down out
 e. ??*afti ekso eki kato*
 they out there down
 f. **afti ekso kato eki*
 they out down there
 'they down out there'

The order in (16)e. ([[in/out [**here/there**]]_i [up/down t_i]]) with a movement that combines the *whose-pictures* and *pictures-of-whom* pied piping modes, appears to be found in Rioplatense Spanish. See (24) (Carolina Fraga, pers. comm., and Marcela Depiante, pers. comm., although Marcela Depiante has a preference for the order *allá abajo afuera*).

²⁰ The sporadic cases in Italian of *giù là fuori* 'down there out', *su là dentro* 'up there in(side)', etc., found in Internet may not be fully representative as they appear to require a slight pause after the elevation particle *giù/su*.

- (24) *los jarrones afuera allá abajo*
 ‘Lit. the vases out there down’

4 The Sub-projection Containing ‘Other’, Ordinals and Cardinals, with Special Reference to Romance

In Cinque (2015) I discussed some evidence to the effect that both the adjective ‘other’ and ordinal numerals occupy two distinct positions in the nominal extended projection, one inside a constituent comprising cardinal numerals and one in a lower position within the nominal projection.

The ‘other’ that is part of the constituent comprising ordinal and cardinal numerals, which in Italian precedes (ordinals and) cardinals, has an additive interpretation (further, same, tokens of *x*), (see (25)), while the ‘other’ that is merged lower (outside, and following, the constituent comprising the numerals) has an interpretation of alterity (further, different, types of *x*). See (26).

- (25) a. Per favore, dammi **altri cinque** minuti!
 ‘Please, give.me another five minutes!’
 b. *?Per favore, dammi **cinque altri** minuti!
- (26) a. Se sopravviveranno, saranno **due altri** individui.
 ‘If they survive, they will be two different individuals’
 b. *Se sopravviveranno, saranno **altri due** individui.

The two can co-occur in Italian (as well as in Spanish, as noted in Brugè 2017: 249 and fn.41).²¹ See the examples in (27)a. and b., drawn from Google:

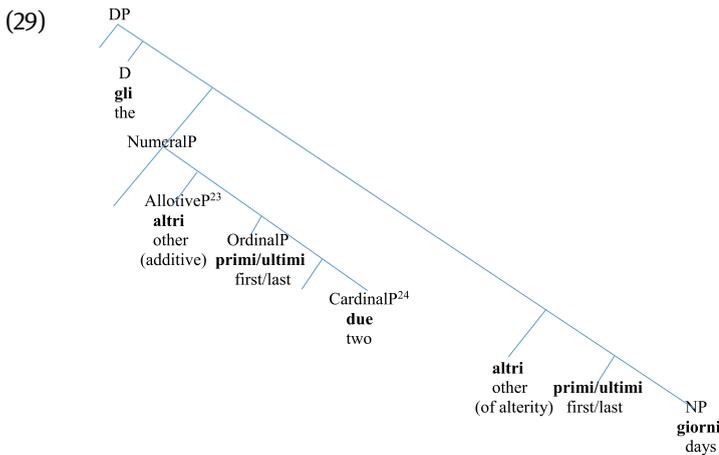
- (27) a. Gli **altri due altri** asteroidi avvistati ieri,...
 the other two other asteroids spotted yesterday
 b. ...un diputado kirchnerista y **otros dos otros** dirigentes políticos...
 ‘a kirchnerian member of parliament and another two other political leaders’

Also the two ordinals may be combined in Italian ((28)a.), as well as in Russian ((28)b.):

- (28) a. i miei **ultimi due primi** giorni di scuola
 ‘my last two first days of school’ (with a slight pause after the cardinal)
 b. **poslednie pjat’ pervyx** učitelej (Kagan and Pereltsvaig 2012: 171).
 ‘the last five first teachers’

²¹ Also see Brugè (2018) for discussion and for the literature on ‘otro’ in Spanish.

The structure that suggests itself in Italian, arguably more generally (cf. Cinque 2015: 24), is the following:²²



French, on the other hand, appears to display a different order. Togeby (1982: 279) observes that *autre* ‘other’ “suit un nom de nombre”:

²² I ignore here the silent Number/Amount heading CardinalP, argued for in Kayne (2002: §7.1.5), the ClassifierP that takes the CardinalP (with, possibly, the OrdinalP) as its specifier, and the internal structure of CardinalP, which can be quite complex, e.g. *cinque milioni cinquecento e uno* ‘Five millions five hundred and one’. For a more detailed structure and discussion see Cinque (2022: §1.1.2 and §1.2).

²³ ‘Allotive determiner/operator’ is a term used in a number of grammars to categorize the high adjective ‘other’, which appears to be found in all languages. The first left branch of NumeralP in (29), which is left empty, may contain multal/paucal quantifiers, which though in complementary distribution with cardinals appear to occupy a distinct position as they precede (additive) *altro* in Italian, while cardinals follow it in the neutral order. Compare (i) with (25)a. above:

- (i) a. I molti/pochi altri primi classificati per il titolo
the many/few other first ones classifying for the title
b. *Gli altri primi molti/pochi classificati per il titolo

²⁴ Spanish shows the same order as Italian. See Brugè’s (2018: 113) examples:

- (i) a. los otros primeros dos clasificados para el título
‘the other first two ones classifying for the title’
b. *los primeros dos otros clasificados para el título
the first two other ones classifying for the title

For the possibility that the ‘higher’ and ‘lower’ ‘other’ are instances of the same morpheme co-occurring with a silent TOKEN and a silent TYPE, respectively, see Kayne (2021).

- (30) les deux cents autres francs
 the two hundred other francs
 ‘the other two hundred francs’

The same observation is made in Van Peteghem (1999: 239): “[autre] se post-pose [...] aux numéraux, mais il s’antéposé à tous les types d’adjectifs qualificatifs”:²⁵

- (31) deux autres beaux livres
 two other nice books
 ‘another two nice books’

In (32) the ordinal that follows *autres* could belong to the same sub-projection containing *deux* and *autres* or be the ordinal merged lower down in the spine (cf. (29) above).

- (32) Les **deux autres premiers** jours d’école²⁶

The Italian order, **les autres premiers deux jours*, appears unacceptable.

If only the Head of a (sub-)projection can move, as argued in Cinque (2005, 2022), a comparison of the above examples of Italian and French provides evidence that it is the cardinal that heads the sub-projection containing the higher ordinal and ‘other’, for in French, as just seen, the cardinal appears to obligatorily cross over the ordinal and ‘other’ ([les [deux_i autres premiers t_i] membres] ‘lit. the two other first members’), while it does not in Italian, nor in English, [gli [altri primi due] membri] ‘the other first two members’.²⁷

That it is the Head of the sub-projection, the cardinal numeral, that moves above the other elements of the sub-projection appears confirmed by another contrast

²⁵ Michal Starke accepts the opposite order *autres deux* (in, say, *les autres deux jours*), in a context in which the notion of pair of days is salient.

²⁶ The sentence requires some context to sound natural; for example, in a context where one talks about the first *n* days of school, say the first five, and then, having already referred to the first three, goes on to say: “*les deux autres premiers jours d’école*”. Thanks to Michal Starke for raising this point, and also for suggesting the contexts that renders (35) below more natural.

²⁷ The ‘French’ order is not altogether barred in Italian (cf. *I due altri (primi/ultimi) giorni*), but possibly both *altri* (and *primi/ultimi*) in this phrase are the lower instances of ‘other’ and ordinals. This may be confirmed by the interpretation of *altri*, which appears to mean ‘different type of x’ and by the impossibility of combining two ordinals: **I miei due altri ultimi primi giorni di scuola* (to be compared with *I miei altri ultimi due primi giorni di scuola*). It remains to be seen if the Hebrew overall order Numeral_{Cardinal} N Adj Num_{Ordinal} Dem (Shlonsky 2004: §5) involves the lower, rather than the higher, ordinal.

between French and Italian. Unlike Italian, where a high adjective such as *prossimo* ‘next’ most naturally precedes ordinal and cardinal numerals (and follows ‘altro’, if present) (see (33)), in French the same adjective (*prochain* ‘next’) is instead found to follow ordinal and cardinal numerals (see (34)).

- (33) a. Le (altre) prossime ultime due settimane
The (other) next last two weeks
b. *Le due (altre) ultime prossime settimane
the (other) last next two weeks
- (34) a. les deux (autres) prochaines dernières semaines
the two (other) next last weeks
b. *les (autres) prochaines dernières deux semaines
the (other) next last two weeks

Also, when both the higher and the lower ordinal adjective are combined, French, as expected, positions them both after the cardinal ((35)), with a slight pause after the first ordinal (Marie-Claude Paris pers. comm. and Christopher Laenzlinger pers. comm.):²⁸

- (35) mes deux derniers premiers jours d’école
‘my last two first days of school’

Two specific sub-projections of the nominal extended projection were discussed, with data from a number of Romance languages (the sub-projection of locative adverbs and elevation and exteriority/interiority particles, and the NumeralP sub-projection containing ‘other’, and ordinal and cardinal numerals). They appear to me to provide evidence that the structure of the nominal extended projection is more finely articulated in its constituency than one might have initially expected.

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²⁸ To sound natural the phrase needs a context like the following: after the first days of school, say 5, there will be a long interval before classes resume, and reference is made there to the last two of the first 5 days.

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