

Comparisons and Contrasts |

Richard S. Kayne

Comparisons and Contrasts

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PREFACE

This collection of recent essays (arranged in order of composition) touches on questions of comparative syntax (including intralanguage comparative syntax), on questions of silent elements (relevant to both syntax and semantics), on questions concerning the relation (or competition) between syntax and morphology. In some cases, it attempts to ask questions that are not usually asked, e.g., why is it that the human language faculty has a noun-verb distinction? In all cases, more and more questions need to be asked, if we are to achieve depth of explanation.

Chapter 1 (“Some Preliminary Comparative Remarks on French and Italian Definite Articles”) studies a partial clustering within Romance of three phenomena (involving *which*-questions, superlatives, and bare plurals) that might at first glance seem unrelated. It is argued that all three are to be seen as reflecting a (differential) property of definite D.

In the case of French *lequel* (‘the which’) vs. Italian *quale* (‘which’) this is fairly straightforward. For postnominal superlatives, on the other hand, one might have thought that what was at issue in the French-Italian and cross-Romance contrasts was some property of the superlative morpheme itself, yet the comparative evidence suggests a more central role for the definite article.

For bare plurals, the absence of any visible definite D in Italian might make the approach argued for seem unlikely to be on the right track. But that consideration is overridden if it is correct to take French partitives (which do contain a visible definite article) to be a true French counterpart to Italian bare plurals.

We can readily see through French partitives that phrases that are globally interpreted as indefinites (similarly to bare plurals in Italian) can and do contain a definite

D (arguably related to the one found with definite generics). The comparative evidence discussed here suggests (in a way that recalls Cheng and Sybesma (1999, 529; 2005) on Chinese) that the same holds for Italian, even though Italian bare plurals do not give their definite D any pronunciation.

Chapter 1 shares with Longobardi (1994, 618) and Chierchia (1998, 386) the idea that Italian bare plurals/mass nouns contain an unpronounced determiner. But I have been led to think that that determiner is actually an unpronounced counterpart of the definite article, with the indefinite reading depending rather on the additional presence of an unpronounced noun NUMBER/AMOUNT (capital letters are used to indicate non-pronunciation).

The presence of a silent noun is also taken to be fundamental for an understanding of the *lequel* vs. *quale* contrast mentioned earlier, and is to be understood against the background of the wide range of silent elements discussed in Kayne (2005c) (cf. especially the entry *silence* in the index) and in other chapters of this collection.

Chapter 2 (“*Several, Few, and Many*”) attempts to demonstrate that the proper analysis of these three elements involves the hypothesis that each is a modifier of a usually unpronounced counterpart of the noun *number* (i.e., of NUMBER). In the case of *few* and *many*, there is close link to overt phrases like *a small number* or *a large number*. *Several* is more complex and arguably involves a hidden comparative structure. The relation between these elements and numerals is also discussed, as are *every* and ordinals.

That there is more to syntax than meets the eye is clear. One important way in which this holds involves the presence of elements such as NUMBER that are syntactically and interpretively active, but yet not pronounced.

That NUMBER is present in these cases is not an idiosyncratic fact about English, but is imposed by principles of the language faculty, plausibly by the following two:

- (a) The language faculty excludes the possibility that a single adjective such as *many* or *few* could simultaneously express what is expressed by the adjective *large* or *small* and what is expressed by the noun *number*.

which is to be interpreted as a special case of:

- (b) UG imposes a maximum of one interpretable syntactic feature per lexical item.

It is to be noted that the presence of NUMBER and other such silent elements simplifies the syntax/semantics mapping.

Chapter 3 (“A Note on the Syntax of Numerical Bases”) is interested in the question of how the language faculty treats the notion of numerical base. The proposals made do not require that a given language have exactly one numerical base, nor do they care what number a given language has as its base. (It may be that the choice of base and the choice of number of bases fall outside the language faculty proper.) Yet I argue that the language faculty has a very specific way of treating a numerical base (whatever its value and whether or not it is unique).

Multiplicative numerals like *three hundred* turn out to have more in common with multiplicative approximatives (like *hundreds of thousands*) than one might have thought. Each depends on the presence of a nominal suffix. In the case of multiplicative numerals, that (unpronounced) suffix is associated with the numeral base (or its power) and is probably interpreted in a way akin to *set*. A numeral base (or its power) can be multiplied by another numeral only if combined with such a nominal suffix.

Both this chapter and the previous one take approximative expressions to provide a key probe into the question of how the language faculty treats number.

The first part of chapter 4 (“On Parameters and on Principles of Pronunciation”) suggests that the restriction of parametric variation to functional elements may be tenable despite a number of apparent counterexamples.

The second part suggests that the pronunciation or not of material that has a potential pronunciation may be entirely and automatically regulated by principles that make reference to phases and to spellout. Spellout will have a ‘blind spot’ for material in the Spec of a phase. If so, then the language faculty has no need for a special operation of deletion or ellipsis.

If this chapter is on the right track, then, independently of the technical details involving phases and spellout, it must be the case that a silent element occupies a position distinct from that occupied (in a corresponding sentence) by its pronounced counterpart.

Chapter 5 (“A Short Note on *where* vs. *place*”) aims to understand the slight differences that hold between pairs like *somewhere* and *someplace*. It seems that all instances of *place* are instances of nouns. In this respect, *place* turns out to be consistently different from *where*, which is arguably more determiner-like and probably phrasal, thinking of Leu (2008b). Again, silent nouns play a role, insofar as *somewhere* almost certainly contains PLACE (though *someplace* probably does not contain WHERE).

Chapter 6 (“Expletives, Datives, and the Tension between Morphology and Syntax”) looks in part at a case in Romance that one might readily have analyzed in terms of ‘syncretism,’ yet it turns out that a more syntactic analysis ties the phenomenon in question more tightly and more fruitfully to other aspects of Romance (and universal) syntax.

This indirectly leads to reanalyzing the status of expletives such as English *there* and its Romance counterparts, and to the proposal that they are not true expletives. Rather, they originate within their so-called associate, in way that has something in common with Moro (1997) and, more so, with Sabel (2000), though the proposal I make ties expletive *there* more closely to various other instances of *there* than do these earlier works.

Expletive *there* and its closest counterparts in other languages are not expletives in Chomsky’s sense (merged directly into a sentential Spec position). They are instead instances of deictic elements originating within their associate. In some languages, e.g., Paduan, these expletives can be ‘imported’ into possessive sentences and (from *there*) into dative sentences, giving the impression in the latter case of syncretism between deictic clitic and dative clitic, but the correct, more syntactic and

less morphological, analysis is that in such languages the deictic clitic is not in any sense a dative clitic, though it co-occurs with a dative clitic that is silent.

The approach to *there* developed in this chapter allows relating the so-called definiteness effect to the blocking effect on extraction imposed (in a certain class of cases) by the definite article, as studied by Fiengo and Higginbotham (1981). It also makes it unnecessary to take the agreement in *There are books on the table* to be an instance of Agree in Chomsky's (2001) sense. Some evidence is also presented in favor of the idea that existential sentences contain a covert causer.

Chapter 7 ("Some Silent First-Person Plurals") discusses the fact that silent first-person plural pronouns are present in various Romance languages in certain special contexts. An approach based on silent elements provides an alternative (one that is more tightly tied to other aspects of syntax) to an approach based on syncretism (which might initially have seemed plausible at least for Italian *ci*).

Chapter 8 ("A Note on Auxiliary Alternations and Silent Causation"), against the background of the fact that French and Italian behave identically in a number of respects as far as auxiliary selection is concerned, addresses the question of why they do not always behave identically. Why do they differ with respect to anticausatives? More specifically, why, with, for example, *vieillir/invecchiare* ('to-age/become old(er)'), is it French that has *have* and Italian that has *be*, rather than the reverse?

This last question has not been addressed in the (extensive) literature on auxiliary selection for these languages. In this chapter, I suggest that this is not an isolated difference between the two languages and one that concerns only auxiliaries; rather, it is related to other differences having to do with causatives, passives, and past participle agreement. Expressing this relation (clustering of properties) requires attributing to anticausatives (but not to all unaccusatives) a derivation involving a silent causative/activity verb.

In chapter 9 ("Antisymmetry and the Lexicon"), I try to show that what we think of as the noun-verb distinction should not be taken to be an irreducible property of the language faculty. Instead, it can be understood as a consequence of antisymmetry, in the sense of Kayne (1994a). Properties of nouns will, from this perspective, lead to the conclusion that sentential complements, *the fact that*... structures, and derived nominals all involve relative clause structures. (Nouns have neither complements nor specifiers.)

Chapter 10 ("Why Isn't *This* a Complementizer?") has as its title a question that lends itself to being interpreted with an implicit "...as opposed to *that*," and the contrast between *this* and *that* in complementizer-like contexts (and elsewhere) constitutes one strand of this chapter. The implicit "...as opposed to *that*" conveys an assumption that *that* is a complementizer, in some cases. A second strand of this chapter questions that assumption.

A third strand takes over from chapter 9 the idea that what we think of as sentential complements (or sentential subjects or topics) are best taken to be relative clause structures, in which case the *that* that introduces sentential complements must also be a relative pronoun, not a complementizer. This allows reducing the absence of sentential complementizer *this* to the absence of relative pronoun *this*.

Putting things a bit differently, *this* is not a complementizer in part because, unlike *that*, it is necessarily associated with a person element. But there is a more

general answer to the title question: *This* is not a complementizer and *that* isn't, either. The *that* that introduces sentential complements is a relative pronoun, and sentential complements are really relative clauses, in a way that partially recalls Rosenbaum (1967). By extension, no determiner-like element that introduces a clause is ever a complementizer in the standard sense of the term. If sentential complements are in fact relatives, wh-movement is even more pervasive in syntax than Chomsky (1977) thought.

Chapter 11 ("Toward an Analysis of French Hyper-Complex Inversion" (written in collaboration with Jean-Yves Pollock)) broaches the question of the proper analysis of a very particular type of French sentence brought to attention by Morin (1985). It is argued that French hyper-complex inversion (HCI), like its better-known counterpart complex inversion (CI), is an instance of clitic doubling that lends itself to a complex DP analysis. Such an analysis, combined with an analysis of French interrogative *-t-*, yields an account of a number of salient properties of both HCI and CI. Whether an equally satisfactory account of HCI/CI could be achieved via Chomsky's (2001) Agree needs to be looked into, as does the converse question of whether a complex DP analysis could ultimately turn out to underlie all instances of (phi-feature) agreement.

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Comparisons and Contrasts

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Some Preliminary Comparative Remarks on French and Italian Definite Articles

1. Interrogatives

English has both:

- (1) Which student did you just see?

and:

- (2) What student did you just see?

In (2) the *wh*-word is the same as the one in:

- (3) What have you done?

The French counterpart of bare interrogative *what* is either *que/qu'* or *quoi*:

- (4) Qu'as-tu fait? ('what have you done')
(5) Tu as fait quoi? ('you have done what')

depending on various factors. However, neither *que/qu'* nor *quoi* can mimic *what* in (2):

- (6) *Qu'étudiant as-tu vu? ('what student have you seen')
(7) *Quoi étudiant as-tu vu?

French does have:

- (8) Quel étudiant as-tu vu? ('which student have you seen')

with a wh-word *quel* that seems (although the interpretation of (8) may cover that of (3), too) to be a relatively close counterpart of English *which* as in (1).

Of central interest to this paper is the fact that French does not allow the lexical noun to be unpronounced in sentences that are otherwise exactly like (8):¹

- (9) *Quel as-tu vu?

Similarly in the plural:

- (10) Quels étudiants as-tu vus? ('which students have you seen')
 (11) *Quels as-tu vus?

The lexical noun can remain unpronounced in French only if *quel(s)* is preceded by the definite article (written as one word with *quel*²):

- (12) Lequel as-tu vu? ('the which have you seen')
 (13) Lesquels as-tu vus?

The Italian counterparts of (8) and (10) are the following:

- (14) Quale studente hai visto? ('which student have-you seen')
 (15) Quali studenti hai visto? ('which students...')

in which Italian *quale/quali* is parallel to French *quel/quels*. Yet Italian differs from French in that Italian allows the lexical noun to be unexpressed without a definite article appearing, in contrast to (9) and (11):

- (16) Quale/quali hai visto?

¹ (9) differs from:

- (i) Quelle est-elle? ('which is it(fem.)')

in which we have a (non-subject) predicative *quelle*. (9) is representative of all cases in which *quel* is part of an argument. In (i), *quelle* is arguably not part of a DP.

The contrast:

- (ii) *Quel de ces livres est le plus intéressant? ('which of those books is the most interesting')
 (iii) Lequel de ces livres est le plus intéressant?

suggests that (iii) contains an unpronounced noun in addition to overt *livres*, as in the Turkish construction mentioned by Kornfilt (1997, 237) in which the 'extra' (pronounced) noun corresponds to a classifier-like *item* (or *person*).

² As far as I can tell, this orthographic convention is not of importance to the syntax—cf. Julien (2002).

Moreover, Italian does not allow the definite article to appear in (16), as opposed to French (12) and (13):

- (17) *Il quale hai visto? ('the which...')
 (18) *I quali hai visto? ('the which (plural)...')

We can note in passing that English is more like Italian here:

- (19) Which would you prefer?
 (20) *The which would you prefer?

On the other hand, English differs from Italian in relative clauses with *quale* or *which*:

- (21) the reason for (*the) which John...
 (22) la ragione per *(la) quale Gianni...

English relative *which* is incompatible with *the*, while Italian relative *quale* must be preceded by the definite article, here *la*.³ In relatives, French *quel* is like Italian *quale*, despite differing from it in interrogatives in the way just discussed. In relatives, French *quel* requires the definite article, as in Italian:

- (23) la raison pour laquelle Jean...
 (24) *la raison pour quelle Jean...

The question why English differs in relatives in this way from both French and Italian will not be pursued in this paper.⁴ (Nor will I pursue here the Italian-internal contrast between (17)/(18) and (22).⁵)

³ Except, as brought to my attention by Guglielmo Cinque, when predicative:

- i) Da gentiluomo quale era... ('from gentleman which he-was...')

recalling note 1.

⁴ Possibly, (21) can be linked to the fact that *the* is incompatible with plural generics in cases like (cf. Longobardi (1994, 631)):

- i) Cats are smart.

and/or to the fact that *the* is incompatible with possessives, as in:

- ii) (*the) your books

and/or to *the* being incompatible with inalienable possession in cases like (cf. Guéron (1983) and Vergnaud and Zubizarreta (1992)):

- iii) John raised the arm.

and/or to *the* being incompatible with sentential complements as in:

- iv) John erred in (*the) telling us a lie.

and/or to the fact that *the* is morphologically related to demonstratives (cf. Bernstein (2004)), and/or to Sportiche's (1995b, sect.4.2) suggestion that *the* might be a specifier.

⁵ Which recalls Kuroda (1968). The obligatoriness of the definite article with Italian relative *quale* may suggest an analysis in which *quale*+NP is the double of an unpronounced resumptive (cf. Perlmutter

Returning to the central theme of French vs. Italian, we can ask whether the contrast discussed in (9)–(18) between French *quel* and Italian *quale* in interrogatives without a pronounced lexical N (whereby *quel* requires and *quale* disallows a preceding definite article) correlates or clusters with any other difference between the two languages.

2. Superlatives

Cross-Romance comparative evidence suggests a link to postnominal superlatives. English superlatives have the superlative adjective prenominal:

- (25) You should give the smartest student an A.
- (26) *You should give the student smartest an A.

This is also true with *most*:

- (27) You should give the most intelligent student an A.
- (28) *You should give the student most intelligent an A.

Plausibly, this falls under the generalization that English adjectives are (almost) always prenominal.⁶

French and Italian share the property that their adjectives can readily be postnominal, in contrast to English:

- (29) *John has read a book interesting.
- (30) Jean a lu un livre intéressant. (French)
- (31) Gianni ha letto un libro interessante. (Italian)

Similarly with superlatives:

- (32) L'étudiant le plus intelligent est Jean. (French 'the student the most intelligent is J')
- (33) Lo studente più intelligente è Gianni. (Italian)

(1972)), yet in which NP is raised much as in Kayne (1994a, 89). (The raising of a double would be similar to Kayne (2002b).)

Indirectly relevant is the fact that Italian CLLD is possible with idiom chunks—v. Cinque (1977, 402) and Bianchi (1993).

⁶ Both with superlatives and with ordinary adjectives there are exceptions when the adjective is accompanied by a complement as in:

- i) The student most capable of solving that problem is Mary.
- ii) any student capable of solving that problem

Similarly, although for me a bit less easily, with *-est*:

- iii) (?)The student strongest in mathematics is Mary.

French and Italian also share the property of lacking a morphological distinction corresponding to *most* vs. *more*. French *plus* and Italian *più* appear both in the superlatives of (32)/(33) and in comparatives:

- (34) Marie est plus intelligente que Jean. (French ‘M is *plus* intelligent than J’)
 (35) Maria è più intelligente di Gianni. (Italian ‘M is *più* intelligent of/than G’)

However, French and Italian differ sharply in that French (32) contains a definite article *le* immediately before *plus*, whereas Italian *più* in (33) is not preceded by a definite article. In French, this definite article is obligatory with postnominal superlatives:

- (36) *L’étudiant plus intelligent est Jean.

In Italian it is impossible:

- (37) *Lo studente il più intelligente è Gianni.

The fact that French has, in postnominal superlatives, an obligatory definite article that Italian cannot have is reminiscent of the fact discussed earlier that French has, with interrogative bare *quel*, an obligatory definite article (v. (9)–(13)) that Italian *quale* cannot have (v. (16)–(18)).

That there is a significant linkage here is supported by the fact that the following cross-Romance generalization appears to hold:

- (38) If a Romance language obligatorily has an overt definite article preceding (its equivalent of) bare interrogative *quel*, then it obligatorily has a definite article preceding (its equivalent of) postnominal superlative *plus*.

3. Greek

We can (and must) now ask why this linkage should hold and how best to express it. (A specific answer will be proposed beginning in section 6.) As a first step, note that the pre-*plus* definite article in (32) is less exotic than it looks. Although in French it does not appear with non-superlative postnominal adjectives:

- (39) *l’étudiant l’intelligent (‘the student the intelligent’)

DPs that look like (39) are possible in Greek,⁷ as discussed by Alexiadou and Wilder (1998). I will attempt to adapt their analysis to French.

It may be that the preposition (*of, in* in these examples) is playing a crucial role, in a way related to Cinque’s (2005, note 34) and perhaps to the facts mentioned in Kayne (1975, chap. 3, note 82).

⁷ And in Hebrew—see Alexiadou (2003) for discussion of differences between Greek and Hebrew (and Scandinavian).

Relevant also (but coming to my attention too late to be taken into account here) is Campos and Stavrou (2004).

Alexiadou and Wilder look at the (grammatical) Greek counterpart of (39) in the following way. From the observation that Greek allows a postnominal adjective to be preceded by an ‘extra’ definite article only if that adjective can occur in predicate position (as opposed to adjectives like *former*), Alexiadou and Wilder conclude that the postnominal adjectives in question should in fact be analyzed as predicative, originating within a small clause, in effect a kind of reduced relative clause.

Their proposal adopts a raising approach to (these) relatives, approximately along the lines of Kayne (1994a, sect.8.4), in which the relative clause is a complement of D. But Alexiadou and Wilder diverge from that analysis in one crucial way (cf. in part Bianchi (1999, 49); also Zwart (2000), Zribi-Hertz (2008, note 16) and Zribi-Hertz and Glaude (2007, (32))). Whereas I had assumed that the phrase that was raised/promoted in relative clauses (to a position just below D) could never itself be a DP, Alexiadou and Wilder argue that it can be, and that that is precisely what underlies Greek having two Ds in cases like (39).

For reduced relatives, I (p. 98) had a derivation (for English cases like *the recently arrived letter*) essentially as follows (abstracting away from the head of the small clause). The small clause, which was taken to have a subject NP (or QP, but not DP), is merged with (an unpronounced) C, yielding:

- (40) C [_{sc} letter [recently arrived]]

Preposing of the predicate phrase to Spec, CP yielded:

- (41) [recently arrived]_i C [_{sc} letter t_i]

followed by merger of D:

- (42) the [[recently arrived]_i C [_{sc} letter t_i]]

This derivation produces an output in which the predicate phrase (whether participial or adjectival⁸) precedes the noun.

Alexiadou and Wilder argue that the small clause subject in this kind of derivation must be allowed to be a DP. Continuing for convenience with English morphemes (and using a simple adjective), their proposal leads to derivations (in Greek) like the following, in which the subject of the small clause is the DP ‘the student’:

- (43) C [_{sc} [the student] [intelligent]] → preposing of predicate
 [intelligent]_i C [_{sc} [the student] t_i] → merger of D
 the [[intelligent]_i C [_{sc} [the student] t_i]]

Alexiadou and Wilder then propose that the derivation shown in (43) can be extended,⁹ in the sense that the DP subject of the small clause can itself be preposed

⁸ It might be that adjectives have two possible sources, one within a relative clause and one not—see Alexiadou and Wilder (1998, 313) and Cinque (2005, note 2).

⁹ For them (p. 322), the derivation can alternatively stop at that point, yielding:

to the specifier of the higher D. Starting from and repeating the last line of (43), we have:

- (44) the $[[\text{intelligent}]_i \text{C} [\text{the student}] t_i]] \rightarrow \text{DP-preposing}$
 $[\text{the student}]_j \text{the } [[\text{intelligent}]_i \text{C} [\text{the student}] t_i]]$

The result is of course ungrammatical in English (and French, as in (39), and Italian):

- (45) *the student the intelligent

but is grammatical in Greek.

A (remnant movement) variant of the partial derivation in (44) would have the whole small clause containing ‘the student’ preposed to Spec,D (rather than just ‘the student’):

- (46) the $[[\text{intelligent}]_i \text{C} [\text{the student}] t_i]] \rightarrow \text{small clause preposing}$
 $[\text{the student}]_j \text{the } [[\text{intelligent}]_i \text{C} t_i]]$

in which case there is significant parallelism with the derivation of prenominal relatives of the Japanese and Amharic type proposed in Kayne (1994a, 93).

Both (44) and (46) attribute to (45) an initially non-obvious property, namely that it is the second definite article that is hierarchically the higher one (the one merged later)—since the first definite article is embedded within the preposed phrase containing ‘student’.

As far as the choice between (46) and (44) is concerned, the link to Japanese and Amharic favors (46). In addition, (46) has movement to Spec,D of a constituent (the small clause) that is hierarchically closer to D than what is moved in (44) (the subject of that small clause).¹⁰ This, too, favors (46), which I will from now on take to be the correct choice for the derivation of (45) in Greek.

4. French postnominal superlatives

Since the ‘extra’ definite article seen with French postnominal superlatives as in (32) recalls the Greek pattern of (45), let me in fact propose that French postnominal superlatives have a derivation similar to (43)+(46). Thus a French example such as:

- (47) le livre le plus court (‘the book the most short’)

will have a derivation containing the following steps, starting from a small clause with a full DP subject:

- i) *the intelligent the student

the equivalent of which is possible in Greek, though not in English or French, or in Italian (unless prenominal *begli* (‘beautiful—m.pl.’) is ‘be+gli’, with *gli* a (second) definite article).

¹⁰ For a notion of ‘closeness’ that does not depend on feature-checking, see Kayne (2005b, sect.5.6); also Cinque (2005).

- (48) C [_{sc} [le livre] [plus court]] → preposing of predicate
 [plus court]_i C [_{sc} [le livre] t_i] → merger of higher D
 le [[plus court]_i C [_{sc} [le livre] t_i]] → small clause preposing
 [_{sc} [le livre] t_i] le [[plus court]_i C t_j]

Again, it is the *le* immediately preceding *plus* that is the hierarchically higher D (the one merged later).¹¹

Any analysis of (47) must account for the fact that French does not allow this higher D to appear with postnominal non-superlative adjectives (as we had previously seen in (39)):

- (49) *le livre le court ('the book the short')
 (50) le livre court

What I would like to propose is that in French (and also Italian) the predicate preposing step in (48) is limited to superlatives. In effect, this amounts to saying that in French (and Italian), when the subject of the small clause in (48) has a definite article, predicate preposing is not available at all, in any general sense. The correct way to think of the first step in (48) is rather as:

- (51) C [_{sc} [le livre] [plus court]] → superlative preposing
 [plus court]_i C [_{sc} [le livre] t_i]

That French can have superlative preposing here in the absence of any more general predicate preposing should be interpreted in terms of (obligatory) pied-piping. The superlative *plus* in (51) raises across DP to Spec,C and in so doing pied-pipes the adjective. Unlike Greek in its counterpart of (43), French does not allow adjective phrases per se to raise to Spec,C in such structures—in French they only raise as a side effect of the raising of superlative *plus*.¹² The idea that superlatives in French

¹¹ This conclusion and derivation differ from Matushansky (2003), whose general hypothesis that all superlatives are associated with a noun (sometimes unpronounced—cf. also Martinon (1927, 103)) looks correct.

In (48) (and similarly for (44) or (46), in Greek) the Spec of overt *le* is itself overt, in a way incompatible with Koopman and Szabolcsi's (2000, 40) formulation of their Generalized Doubly Filled Comp Filter.

¹² As for the question why Greek allows the equivalent of (49), with a non-superlative adjective, as opposed to French and Italian, I don't have a clear proposal to make. Alexiadou and Wilder (1998, 330), citing Anagnostopoulou (1994), note that (49) in Greek has something in common with clitic doubling. That may well be a promising linkage, in particular thinking of the fact that Greek has clitic doubling with non-prepositional accusatives in a way that even Spanish (which lacks (49)) does not.

For example, it might be that in order for an ordinary AP to be able to cross 'D NP' in (43) on its way to Spec, C, the D in question (the one within the small clause subject) must have some property that accusative clitics have when they are compatible with doubling of a non-prepositional object, especially if the relevant D c-commanded the initial position of the AP (allowing D in Greek, but not in French, to act as a successful probe for AP), thinking of Sportiche (2002). (If the (adjectival) predicate in the first line of (51) is a non-superlative, the derivation will not converge.) Pursuing the implications here of Sportiche's approach to D is beyond the scope of this chapter.

(and Italian) can raise in a way that ordinary APs cannot of course recalls the fact that interrogative *wh*-phrases (in English, for example) raise in a way that ordinary DPs do not; similarly, negative phrases in some languages (very visibly in Icelandic, for example¹³) raise in a way that ordinary DPs do not. Pied-piping of the AP by *plus* is to be considered parallel to the pied-piping of NP (or QP or NumP) by the *wh*-morpheme or by the negative morpheme (cf. Hendrick (1990)).

I note in passing that there is evidence that, even in English, superlatives raise in a way that ordinary APs do not. This is not apparent in *the most interesting book*, which appears to be parallel to *the interesting book*, but it is seen, I think, in the sharp contrast between the following:

- (52) That's not the shortest/most interesting of books.
 (53) *That's not the short/interesting of books.

and also in:

- (54) (?)Of all the students, John's the one who's written the fewest number of papers this year.
 (55) John is the author of the few (*number of) papers that are good.

The adjective *few*, as seen in (55), normally cannot directly modify the overt noun *number*, but it can (to varying extents) if *few* is raised—as shown, I would claim, in (54). This raising is seen more transparently in:

- (56) (?)John has written too few a number of papers to qualify for a grant.

in which *too few* has been raised past *a*, just as *fewest* has been raised (I claim) in (54).¹⁴ In (56) *few* has clearly been pied-piped by *too*:

¹³ Cf. Kayne (1998b); on Icelandic, see also Svenonius (2000). Probably also related is the raising in French and Italian of *tout/tutto* ('everything')—Kayne (1975, chap. 1), Cinque (1995a, chap. 9).

¹⁴ For relevant discussion, see Hendrick (1990) and Kayne (2005a).

The fact that *a* cannot appear in (54):

- i) *...the fewest a number of papers...

is perhaps related to the presence of *the*, in a way that would need to be clarified. Possibly, (i) is related to:

- ii) *That's not the shortest of a book (that I've ever seen).
 iii) *?That's not the most interesting of a book.

Degree modifiers other than superlatives are not compatible with an 'extra' definite article in French:

- iv) *les hommes les trop/si riches ('the men the too/so rich')

recalling the contrast between (52) and:

- v) *the too/so/more interesting of books

Cf. also, to a lesser extent:

(57) *John has written few a number of papers.

and in (54), by extension, by *-est*. (Similarly, in (52) *short/interesting* has plausibly been pied-piped by *-est/most*.¹⁵)

Let me repeat the contrast that holds within French:

(58) le livre le plus court ('the book the most short')

(59) *le livre le court

The proposal is that this contrast is due to French having raising of *plus* (similarly to raising of *wh*) that pied-pipes the adjective *court*. This leads to the intermediate stage:

(60) [plus court]_i C [_{sc} [le livre] t_i]

seen in (51), which in turn leads to (58) via the merger of the higher D *le* and the preposing of (the small clause containing) *le livre* to Spec,*le*:

(61) [plus court]_i C [_{sc} [le livre] t_i] → merger of *le*
 le [[plus court]_i C [_{sc} [le livre] t_i]] → small clause preposing
 [_{sc} [le livre] t_i] le [[plus court]_i C t_j]

A parallel derivation for (59) is not available in French (as opposed to Greek) because, by hypothesis, the 'bare' adjective *court* cannot be raised in French in the same way that *plus court* has been in (60).

This picture of French takes *plus court* in (58) to be a constituent that excludes the definite article *le*, as shown in (61). Put another way, (58) contains no constituent of the form 'le plus'. That the definite article and the superlative morpheme do not form a constituent is supported to a certain indirect extent by English:

(62) That is a most interesting book.

vi) the most/*too/*so intelligent of the students

Possibly, in (61) *le* can be merged with a CP containing a degree phrase in its Spec only if the degree element is superlative *plus*; and similarly for English *the*.

¹⁵ Cf. also the fact that in Persian (cf. Moshiri (1988, 24)) superlatives end up prenominal, while ordinary adjectives and even comparatives are generally postnominal; also the contrast within Italian:

i) una bellissima/*bellina donna ('a most-beautiful/a-little-beautiful woman')

Plausibly parallel to (52) vs. (53) is:

ii) That's not the shortest/most interesting of his books.

iii) *That's not the short/interesting of his books.

More similar, still, to the Persian facts is the contrast:

iv) the blackest two dogs that I've ever seen

v) *the black two dogs that I saw yesterday

which at the very least shows that *most* need not occur with *the* at all.¹⁶

Closer to present concerns, there is evidence within French itself that superlative *plus* and preceding definite article need not form a constituent:¹⁷

- (63) les quatre plus belles femmes ('the four most beautiful women')
- (64) la quatrième plus belle femme ('the fourth most beautiful woman')

In these examples *plus* is not immediately preceded by a definite article. I conclude that the dissociation of *le* and *plus* shown in (61) is plausible and I take it to be correct.

In (63) and (64) the superlative is prenominal rather than postnominal. In such prenominal cases in French there cannot be a definite article directly preceding *plus* at all:

- (65) *les quatre les plus belles femmes
- (66) *la quatrième la plus belle femme

¹⁶ French lacks an exact counterpart of (62), for reasons that remain to be elucidated. As is well-known, English does not allow this with *-est*:

- i) *That is a shortest book.

In addition, there is for me a clear contrast between (62) and:

- ii) *?That is a most short book.

Similarly:

- iii) She is a most intelligent woman.
- iv) *?She is a most smart woman.

suggesting that the almost certainly related:

- v) *?She is a more smart linguist than he is.

is not simply due to 'competition' from *smarter*.

The interpretation of (62) is close to that of:

- vi) That is a very interesting book.

but the two differ sharply in various ways:

- vii) a very very/*most most interesting book
- viii) a not very/*not most interesting book
- ix) very/*most few books
- x) so very/*most interesting; such a very/*most interesting book

suggesting that (62) might be related to:

- xi) That is a book of the most interesting sort/kind.

with *most* a true superlative.

¹⁷ From Sportiche's (2002) perspective, they would not be expected to.

Left open is how to integrate Genoese *a ciù cösa bella* ('the most thing beautiful')—Toso (1997, 76).

If definite article and *plus* formed a constituent, the obligatory agreement shown by the second *la* in:

The contrast between these and (58), with a well-formed postnominal superlative and two definite articles, can be understood as follows. As we have seen, in (58) the first definite article originates as part of the subject of the small clause; the second corresponds to the higher definite article of a relative clause-like structure. At the point in the derivation of (58) (given in (48)) just after the merger of the higher definite article we have:

(67) le [[plus court]_i C [_{sc} [le livre] t_i]]

If we were to have a numeral (cardinal or ordinal) within the small clause subject, we would have (adjusting to plural in the first of these):

(68) les [[plus courts]_i C [_{sc} [les quatre livres] t_i]]

(69) le [[plus court]_i C [_{sc} [le quatrième livre] t_i]]

Small clause preposing would then yield:

(70) [_{sc} [les quatre livres] t_i]_j les [[plus courts]_i C t_j]

(71) [_{sc} [le quatrième livre] t_i]_j le [[plus court]_i C t_j]

corresponding to:

(72) les quatre livres les plus courts ('the four books the most short')

(73) le quatrième livre le plus court ('the fourth book the...')

These are well-formed, but they still have the superlatives postnominal.

Put another way, the type of derivation proposed earlier for the well-formed (58) has the (welcome) property that it does not lead us to expect (65)/(66) to be available. If it were possible in French to stop the derivation at the point shown in (67), we would get, switching back to *belle*:

(74) *la plus belle la femme

which is ill-formed in French (even with an adjective like *belle* that lends itself to being prenominal). I conclude that when the derivation reaches (67) (or (68) or (69)) it must continue on, with the small clause obligatorily moving to Spec, D, yielding (58) (or (72) or (73)).¹⁸

There remains the question of how to allow for the well-formed prenominal superlatives of (63) and (64), as well as for the corresponding case with no numeral:

i) la fille la plus intelligente ('the girl the most intelligent')

would not be expected.

For some cases of non-agreement with adverbial superlatives (which fall outside the scope of this chapter), see Martinon (1927, 104).

¹⁸ Whether this obligatory continuation is due more to a property of the higher *le* or more to a property of the small clause is left an open question here.

(75) les plus belles femmes ('the most beautiful women')

in all three of which there is only one definite article. A possible answer is that French, in addition to (67), also allows the small clause subject to contain no overt article:

(76) la [[plus belle]_i C [_{sc} [femme] t_i]]

yielding (75) or its singular counterpart directly. If a numeral can be merged above CP but below D in this kind of derivation, we can derive (63) and (64), for example for (63):¹⁹

(77) les [quatre [[plus belles]_i C [_{sc} [femmes] t_i]]]

A question that arises is why small clause preposing applied to (76) yields a deviant result:

(78) *femme la plus belle

Adapting an idea of Alexiadou and Wilder's (1998, 327), let me say that (small clause) movement to Spec,*la*, i.e., to the Spec of the higher D in (76), is subject to a strong agreement effect, namely that the subject of the small clause must itself be preceded by (overt) definite D, as in:

(79) la femme la plus belle

with the representation:

(80) [_{sc}[la femme] t_i]_j la [[plus belle]_i C t_j]

in which the preposed small clause matches the higher D *la* in definiteness.²⁰

¹⁹ The presence of a numeral between CP and D appears to interfere with small clause preposing, however, if we return to (67). Adding a numeral above CP to (67) gives us (with a plural):

i) les [quatre [[plus courts]_i C [_{sc} [les livres] t_i]]]

Doing nothing further is not possible (just as we saw with (74)):

ii) *les quatre plus courts les livres

But in this case, as opposed to (58), small clause preposing is not possible, either:

iii) *les livres les quatre plus courts

²⁰ If Sportiche (2002) is on the right track, the *la* preceding *femme* might be the head of the small clause, rather than the head of the specifier of the small clause.

A reviewer makes the interesting suggestion that (78) might be related to the definiteness requirement on Icelandic object shift.

Note that this matching requirement cannot be met in French by an unpronounced definite article that would precede *femme* in (76), otherwise (78) could incorrectly be generated. Nor, not unexpectedly, by an indefinite article:²¹

(81) *une femme la plus belle ('a woman the most beautiful')

On the other hand, one sees no definite article per se in the well-formed:

(82) ton livre le plus court ('your book the most short')

Either the possessive must itself count as fulfilling the matching requirement imposed by *le*, or there must be an unpronounced *le* specifically licensed by that possessive.

Although French does not permit (81), it does have:

(83) une femme des plus jolies ('a woman of-the most pretty')

with an interpretation akin to that of a *most beautiful woman*. In French this is not possible with a non-superlative:

(84) *une femme des jolies

suggesting that superlative raising plays a role in (83) (though I won't pursue the analysis of (83) here).

5. French superlatives vs. Italian superlatives

The central contrast is (cf. the discussion of (36) and (37) earlier):

(85) le livre le plus court (French 'the book the most short')

(86) il libro più corto (Italian)

With a postnominal superlative, French must have a definite article preceding *plus*, while Italian cannot have one preceding *più*. To exclude the word-for-word French counterpart of (86):

(87) *le livre plus court

²¹ Sentences corresponding to (81) are found, however (perhaps they are akin to (83), or, thinking of Martinon's (1927, 101) discussion, to a reduced relative—see also Chenal (1986, 415, 417) and Grevisse (1993, sect.950)). Martinon also mentions as a (probable) superlative:

i) ce qu'il y a de plus beau ('that which there is of most beautiful')

which needs to be looked into.

as a superlative in French,²² we need to ensure that the higher definite article in:

- (88) [_{sc}[le livre]_i t_j] le [[plus court]_i C t_j]

is overt, i.e., French must not allow the equivalent of (88) with an unpronounced definite D.

We can now ask in what way Italian is different. Let me propose that Italian is only minimally different from French, in that (86) has a structure identical to (85)/(88), except that Italian leaves its definite D there unpronounced:

- (89) [_{sc} [il libro]_i t_j] D [[più corto]_i C t_j]

The unpronounced definite D of (89) is not allowed in French.

Before going on to make this proposal more precise, let me note that the unpronounced (definite) D that Italian has in (89) shares with the pronounced definite D of French (88) the property that the (specifier of the) small clause that it attracts to its Spec must match in definiteness (in the superlative interpretation—see note 22). Italian (90) is parallel to French (78), and Italian (91) (as a superlative) is parallel to French (81):

- (90) *libro più corto
(91) *un libro più corto

Italian (89) and French (88) are thus strongly parallel, yet with a sharp difference concerning whether the higher D is pronounced or not.

6. French vs. Italian bare arguments

Distinguishing French (85) from Italian (86) (with the corresponding representations (88) and (89)) in terms of the pronounced vs. unpronounced character of the higher D (rather than via recourse to an ad-hoc distinction between French *plus* and Italian *più*) makes it possible, I think, to relate these superlative facts to another difference between French and Italian (in a way that an ad-hoc distinction between *plus* and *più* would not have).

Let us ask, then, why French and Italian should differ here at all, and secondly, why it is French whose higher D must be pronounced in (85) and Italian whose higher D must not be pronounced in (86), rather than the other way around. The answer that I will now propose will rest in part on the fact that this French/Italian difference is one that is in essence already familiar from work on bare plurals and bare mass nouns (for example, Delfitto and Schroten (1991), Longobardi (1994), and Chierchia (1998)).

Italian allows bare plurals, but French does not:

²² Possible as a comparative is:

- i) le seul livre plus court que... ('the only book more short than...')

- (92) *Jean achetait livres. (French ‘J bought (was buying) books’)
 (93) Gianni comprava libri. (Italian—same)

Bare mass nouns/NPs show a parallel difference:

- (94) *Jean buvait bière. (French ‘J drank beer’)
 (95) Gianni beveva birra. (Italian—same)

To express (92) and (94) French has what I will, partly following the French grammatical tradition, call the ‘partitive’:

- (96) Jean achetait des livres.
 (97) Jean buvait de la bière.

in which the direct object is preceded by the preposition *de* (‘of’) and the definite article. (This is clearly so in (97), with definite article *la*; in (96) the expected **de les* is reduced to *des*, in a way that is fully general in French and not limited to these partitives.²³)

The presence of *de* in these partitives is related to the presence of an unpronounced noun akin to overt nouns like *number*, *amount* and *quantity*, i.e., we should think of (96) and (97) as:²⁴

- (98) ...NUMBER *de les livres*
 (99) ...AMOUNT *de la bière*

with capitals indicating non-pronunciation, and *de* akin to the *de* and *of* of:

- (100) un certain nombre *de livres*
 (101) a certain number *of books*

It is important to see that the syntax of this *de* and the syntax of the definite article that follows it in (96)–(99) are at least partially independent. A simple indication in this direction comes from Piedmontese, which is like French in rejecting exact counterparts of (93) and (95), and like French in having a partitive preposition akin to *de*. However Piedmontese lacks the definite article that French partitives have; the following examples have been provided by Luigi Burzio:

- (102) Maria a-l’*a cata’ d’* sucher. (‘M she has bought of sugar’)
 (103) *Maria a-l’*a cata’ d’l* sucher. (‘...of the sugar’)

²³ Roodenburg (2003) suggests that with *des* the *l-* is not syntactically present at all. On bare nominals with coordination, see Longobardi (1994, 619 n) and Roodenburg (2004). Cf. also Bouchard (2003).

²⁴ Cf. the (undeveloped) suggestion in Kayne (1975, sect.2.9) in terms of the noun ‘part’; on NUMBER/AMOUNT, cf. Kayne (2002a; 2005a; 2005b).

The unpronounced NUMBER/AMOUNT of these partitives is not subject to the restriction concerning Italian bare plurals/mass nouns as subjects discussed by Longobardi (1994, 616). Why Italian hanging topics (cf. Cinque (1977, 406) and Benincà and Poletto (2004, 64)) are (contrary to French) not subject to that restriction remains to be understood.

(In what follows, I will use the term ‘bare plural/mass’ in such a way as to cover (102), as well as (93) and (95), i.e., ‘bareness’ will pick out absence of overt determiner and will be indifferent to the presence of a preposition. The French (96)/(97) are not ‘bare’, since they contain a (reduced) definite article following the preposition.)

Within French itself, one sees this independence of *de* and the definite article in at least two ways. First, the definite article can fail to appear in cases like (96) where the plural noun is preceded by an adjective:

(104) Jean achetait de bons livres. (‘J was-buying of good books’)

Yet the *de* continues to be present. Second, there is an alternation concerning quantity elements like *beaucoup* (‘a lot’), which in simple cases corresponding to *a lot of friends* are followed by *de*-NP, with no definite article:

(105) Jean a beaucoup d’amis. (‘J has a lot of friends’)

Yet under right-dislocation *beaucoup* can for many speakers co-occur either with or without the definite article:

(106) Jean en a beaucoup, d’amis. (‘J of-them has a lot, of friends’)

(107) Jean en a beaucoup, des amis. (same, with the definite article)

Granting, then, that *de* and the definite article of partitives are independent of one another (even if they interact in important ways), we can return to (92)–(95) and conclude that French and Italian actually differ there in two separate ways. French (like Piedmontese) must have *de* where Italian does not have to have it. And, second, French has a definite article (in (96)/(97)) where Italian does not have to have one (in (93)/(95)). (On Italian partitives, see the discussion of (122) later.)

This second conclusion is very similar to what we have seen in the syntax of superlatives. More specifically, assume that I have been correct in arguing that the superlative difference has to do, not directly with the superlative morphemes *plus* and *più*, but rather with French necessarily having an overt higher definite article in certain DPs (containing postnominal superlatives), as opposed to Italian necessarily having an unpronounced higher definite article in the same (superlative) context.

Then both differences now under consideration (superlatives on the one hand, bare plurals/mass on the other) have something to do with the pronunciation (in French) vs. the non-pronunciation (in Italian) of the definite article in certain contexts.

The structures given for the two French cases now under discussion are:

(108) [_{sc} [le livre] t_i]_j le [[plus court]_i C t_j] (=88)

(109) AMOUNT de la bière (=99)

Their Italian counterparts are, in the superlative case, with unpronounced D:

(110) [_{sc} [il libro] t_i]_j D [[più corto]_i C t_j]

and in the bare mass noun case (95):

(111) AMOUNT D birra

In (111) I have attributed to Italian the same structure (but with D unpronounced) that we have in (109), less the *de*.²⁵

Assume that AMOUNT in (111) is in Spec,D (in all likelihood having gotten there by movement—and similarly for (109), with respect to Spec,P). Then we can formulate two generalizations:

(112) In Italian, a definite D with a filled Spec can and must be unpronounced.

(113) In French, a filled Spec does not license non-pronunciation for a definite D.

The formulation in (112) allows both (110) and (111), while prohibiting (cf. (37)):

(114) *il libro il più corto (Italian ‘the book the most short’)

It also allows (111)/(95), while prohibiting:

(115) *AMOUNT la birra

with a pronounced D. That (115) is impossible translates into the fact that the interpretation of (95) is distinct from that of:

(116) Gianni beveva la birra. (‘G drank the beer’)

As far as French is concerned, (113) excludes the counterpart of (88) in which D would be unpronounced, thereby correctly excluding as a superlative (cf. (87)):

(117) *le livre plus court

In the case of partitives, (113) is compatible with the well-formedness of (109)/(97), but excludes (the Italian-like):²⁶

(118) *AMOUNT D bière

²⁵ It might be that an unpronounced preposition could not be licensed by unpronounced AMOUNT.

²⁶ The fact that no language has (as far as I know):

(i) *Jean a les amis. (‘J has the friends’)

with a partitive/indefinite interpretation means that the presence of an overt definite article induces for some reason to be determined the need for an overt preposition.

with an unpronounced D, and thereby prohibits French from having (the Italian-like) (94), repeated here:²⁷

(119) *Jean buvait bière. ('J drank beer')

The pair of generalizations (112)/(113) thus allows bringing together the difference between French and Italian superlatives with the difference between French and Italian bare plurals/mass nouns. (From the present perspective, bare plurals and bare mass nouns/NPs (at least those with an indefinite interpretation²⁸) must contain NUMBER/AMOUNT, and are therefore less 'bare', strictly speaking, than has been thought.)

Taking singular count nouns not to be compatible either with NUMBER or with AMOUNT, this gives us a way of understanding the asymmetry within Italian between the widespread character of bare plurals and bare mass nouns, and the much more limited character of bare singulars:

(120) *Gianni comprava libro. ('G bought book')

The status of (120) follows from the impossibility of having an argument be a simple NP,²⁹ combined (since (120) has neither NUMBER nor AMOUNT in Spec,D) with the limited possibilities for licensing a null D. (In Italian, a null D can perhaps be licensed only via (112).³⁰

²⁷ As for (104), it might be that the plural morpheme following the prenominal adjective counts as a pronounced definite D—see Pollock (1998, note 24).

²⁸ The definite article *la* in (109)/(97) (and its unpronounced counterpart in (111)/(95)) may have something significant in common with the definite article found in generic sentences, as noted by Gross (1968, 30). The global indefinite interpretation of (111) and (109) is comparable to that of:

- i) a certain amount of beer
- ii) a number of people

The presence of an overt preposition (like) *of* is not essential:

- iii) a hundred people
- iv) ein Liter Wein (German 'a liter wine')

Left aside here is any discussion of French negative sentences like:

- v) Jean n'a pas d'amis. ('J neg has not of friends')

with no definite article. It may be that Italian bare plurals match both (v) and French partitives; see note 30.

Like (ii), French partitives seem to be positive polarity items.

²⁹ Cf. the discussion in Longobardi (1994, 620). The possible counterexample having to do with (Italian and French) infinitives mentioned in Kayne (1999, sect.4) might dissolve if, as suggested to me by Viviane Déprez, their prepositional complementizer (*di/de*) reflects the presence of an unpronounced head noun—cf. Kayne (2003b, sect.4.6).

³⁰ Which would amount to saying that there are no null indefinite determiners per se in Italian. On Brazilian Portuguese, which differs from Italian in productively allowing bare singulars, see Schmitt and Munn (2002); on the relevance of French-based creoles, see Déprez (2005).

Of interest is the fact that (112) does not exclude an Italian counterpart of (109) (since in (109) AMOUNT is, given the presence of the (overt) preposition,³¹ not in Spec,D), i.e., Italian is not prohibited from having:

(121) AMOUNT de la birra

which arguably corresponds to the well-formed *della birra* in sentences like:³²

(122) Gianni beveva della birra. ('G drank of-the beer')

Somewhat similarly (112) does not prevent Italian from having a counterpart to French (83).³³

(123) Ho parlato con un impiegato dei più gentili. (Italian 'I-have spoken with an employee of-the most nice')

since the definite article *-i* is 'protected' by the preposition from having a filled Spec. The same holds for:

(124) due dei ragazzi (Italian 'two of-the boys')

A question concerning (112) is, what exactly is meant by filled Spec, in particular in cases in which some phrase might have moved through Spec,D, landing in some still higher position. Passage through Spec,D has been proposed in at least two kinds of cases. One involves extractions from NP/DP of the sort discussed by Giorgi and Longobardi (1991, chap. 2); the other involves extraction of a dative possessor in Hungarian (Szabolcsi (1983)), which can plausibly be transposed to Italian (and French) sentences with dative inalienable possessors, for example, in Italian:³⁴

(125) Gli hanno rotto la gamba. ('to-him they-have broken the leg')

Italian allows bare singulars in negative contexts like:

i) Non ho mai visto gatto che fosse... ('neg I-have never seen cat that was...')

as discussed by Benincà (1980).

³¹ See note 25. It remains to be understood why Italian partitives with *di* require an overt definite article—as opposed to Piedmontese (102) and also (in the special case of prenominal adjectives) as opposed to French (104):

i) *Gianni comprava di buoni libri. ('G bought of good books')

³² There are differences in behavior between Italian partitives as in (122) and French partitives as in (97) that fall outside the scope of this chapter.

³³ Example provided by Paola Benincà, who notes that the construction is literary in Italian, and who finds the exact counterpart of (83) less than perfectly natural.

³⁴ See Landau (1999). Similarly, perhaps, for clitic doubling and for antecedent-pronoun relations—see Kayne (2002b).

A reviewer notes the potential relevance here of Boskovic's (2002) approach to successive cyclicity.

If there is in fact movement through Spec,D, then, given the pronunciation of the definite article in many such cases (e.g., *la* in (125)), movement through Spec,D must not count as producing a filled Spec in the sense of (112).

7. Back to *lequel* and *quale*

Consider again (38), repeated here:

- (126) If a Romance language obligatorily has an overt definite article preceding (its equivalent of) bare interrogative *quel*, then it obligatorily has a definite article preceding (its equivalent of) postnominal superlative *plus*.

The relevant interrogative sentences are:

- (127) Lequel as-tu vu? (French 'the which have you seen')
 (128) *Quel as-tu vu?

and:

- (129) *Il quale hai visto? (Italian 'the which have-you seen')
 (130) Quale hai visto?

Why should the correlation stated in (126) hold?

The correlation expressed in (126) brings together interrogative *lequel/quale* and superlatives. The discussion of section 6 brought together superlatives and bare plurals/mass nouns. It is therefore of interest that the following seems to hold:

- (131) If a Romance language has an obligatory overt definite article preceding bare interrogative *quel*, then it does not allow bare plurals/bare mass nouns any more than French does.

The fact that the *lequel* vs. *quale* difference between French and Italian correlates both with a difference having to do with bare plurals/mass nouns and with a difference having to do with (postnominal) superlatives suggests folding *lequel/quale* into the perspective of (112)/(113). What we want to say, then, is that interrogative *quel/quale*, in the absence of an overt noun, enters into structures that are in fact similar to those proposed for postnominal superlatives, repeated here for French and Italian, respectively:

- (132) [_{sc} [le livre] t_i]_j le [[plus court]_i C t_j]
 (133) [_{sc} [il libro] t_i]_j D [[più corto] _i C t_j]

as well as to those proposed for bare plurals/mass nouns (possible only in Italian):

- (134) NUMBER D libri
 (135) AMOUNT D birra

The key question then is, where is the missing noun in (127)–(130)? Although its presence in the structure is virtually certain, its exact position is less immediate. Let me propose that the unpronounced noun (or NP) in such interrogatives precedes, rather than follows, *lequel/quale*. In all likelihood, it does so as the result of movement. The structures corresponding to the grammatical sentences (127) and (130) are thus:³⁵

(136) N_i le quel t_i ...

(137) N_i D quale t_i ...

where N is unpronounced in both languages, and D is unpronounced in Italian.³⁶

Taking N (or NP) in Italian to be in Spec,D makes (137) immediately compatible with (112). In the same way, taking N (or NP) in French to be in Spec,D makes (136) immediately compatible with (113). We consequently have a way of understanding the triple linkage across superlatives, bare plural/mass nouns, and *lequel/quale*.

8. A digression to English possessors

A question that arises is, why does N(P) here move to Spec,D? There would appear to be a link to Rizzi's (2000, 316) discussion of null topics in German and to Chomsky's (2001, 13) Phase Impenetrability Condition. An unpronounced category, here N (see note 35), that is not locally licensed by another category must arguably move up to the Spec of an appropriate phase (here perhaps DP), presumably to the nearest such Spec (thinking of the discussion of (125)). (This would not apply to the unpronounced D itself of (137), which is locally licensed by the phrase in its Spec.)

There is a curious set of English facts that bears on the principles regulating the syntax of unpronounced categories. These facts concern possessives with unpronounced nouns (or NPs), as in:

³⁵ If the agreement requirement discussed at (78) holds with *lequel/quale*, too, then the unpronounced phrase in Spec,D in (136)/(137) should be taken to be DP.

The text proposal means that (i) (cf. note 1):

i) *Lequel de ces livres...* ('the which of these books...')

must be:

ii) N_i le quel t_i de ces livres...

³⁶ Left open here is the contrast within Italian between (137) and possessive *il mio* ('the my') (also *l'altro* ('the other') and relative *il quale*—(22)), which has an unpronounced noun together with a pronounced D. One possibility is further movement of the unpronounced noun (cf. Bianchi (1999, 79) on relatives), with a link to (125); another is that the unpronounced noun in *il mio*, etc., need raise no higher than just past *mio* itself.

With an overt noun, French and Italian do not differ, in cases like:

(i) Marie a gagné le concours. (French—'M has won the competition')
 (ii) Maria ha vinto il concorso. (Italian—same)

Given (112), (ii) must not have a filled Spec.

(138) John's car is bigger than Bill's.

The possessor of the unpronounced noun can be pronominal:

(139) John's car is bigger than yours.

In these examples, the unpronounced noun clearly has an antecedent *car*. Somewhat different is:

(140) Why don't we go over to Bill's tonight?

which is perfectly natural in an out-of-the-blue context, with no feeling of an antecedent in the sense of (138)/(139). The interpretation of (140) in an out-of-the-blue context is very close, if not identical, to that of:

(141) Why don't we go over to Bill's place tonight?

a fact that (among others) led me to propose (see Kayne (2004a)):

(142) ...Bill's PLACE...

as (part of) the structure of (141). In (142), PLACE is an unpronounced noun that differs from the ones in (138) and (139) in not (necessarily) having an antecedent.

Trudgill and Hannah (1994, 76) have noted in effect that in American English (and this is certainly true for mine) the possessor in (140) cannot be pronominal:³⁷

(143) *Why don't we go over to yours tonight?

To me, this sentence is clearly impossible in an out-of-the-blue context, contrary to (140). Similarly, in a contrastive context, I have a clear difference between non-pronominal and pronominal possessors, with unanteceded PLACE:

(144) Why should we go over to Bill's tonight? We should all go over to John's/*yours, instead.

Why should this be? The answer depends in part, I think, on the fact that in a sense, (138) and (139) are misleading—the parallel behavior of pronominal and non-pronominal possessors that those two examples display breaks down if we reinstate the lexical noun and simultaneously keep the -s:

(145) Bill's house

(146) *yours house

³⁷ I have come across one speaker of American English who accepts (143). Although this leads to interesting questions, it does not bear on the text discussion.

and similarly for **hers house*, **theirs house*, **ours house* (and for the less regular possessive of **mine house*).³⁸

A natural hypothesis is that (143) is out for the same reason as (146). But if that's true, how can we distinguish these two from (139)? Assume that, parallel to (142), we have, for (143):

(147) *...yours PLACE

but that for (139) we have, rather:

(148) ...N_i yours t_i

with N-raising approximately as in (136) and (137). Let me, more specifically, adopt the approach to (145) vs. (146) put forth by Bernstein and Tortora (2005), who have pronominal possessors lower in the DP structure than lexical ones (cf. Nilsen (2003) on object shift and Cardinaletti (1997)). In particular, pronominal possessors are lower than the position in which 's is found, so that *your* in the simple case cannot precede 's, as seen in (146). To allow for:

(149) a friend of yours

they propose that when *a friend* raises to Spec,*of* (cf. Kayne (1994a, 86)) *your* in fact can raise to the position normally reserved for lexical possessors. In their footnote 30, they suggest looking at predicative:

(150) This book is yours.

in the same way, with raising of an unpronounced (pronominal) counterpart of *book* licensing the raising of *your* past 's.

If we generalize further to all argument positions, we in effect reach (148) as part of the analysis of (139). If the raising of *your* (and other pronominal possessors) to Spec, 's is dependent on such N-raising (in a way that recalls Chomsky (1995, 185) on equidistance) and if no such raising takes place with PLACE in (143)/(144)/(147), then we can draw the desired distinction.

This leads in turn to the question why unpronounced PLACE would fail to raise in (147) while unpronounced N does raise in (148), which corresponds to (139) and (150). A likely initial answer is that N raises in (148) precisely because it has an antecedent, which PLACE in (147) does not have.³⁹

³⁸ Possible is *his house*, because *his* is (irregularly) the form that occurs both with and without an overt lexical noun.

³⁹ This approach to (147) differs from the suggestion made in Kayne (2004a, sect.1.1).

Trudgill and Hannah (1994, 76) state that, in English English, sentences like (143) are possible, contrary to (most—see note 37) American English. (Possibly there is a link to *The soup has carrots in*, which they (p. 81) also give as possible in English English.) The implication here is that for such speakers, either PLACE is being taken to have an antecedent, or else PLACE is raising for a distinct reason—cf. Longobardi (1996, sect.1.4) on Italian *casa* ('home').

This might then be related to the proposal in Kayne (2002b, sect.9), to the effect that every antecedent-pronoun pair originates in a doubling constituent that subsequently raises (a movement induced by a property of the pronominal subpart).

9. Conclusion

Examples (127)–(130), with *lequel* and *quale*, have in common with (150) and (139) that there is an unpronounced noun understood to have an antecedent. Therefore, the suggestion just made as to why there should be N-raising carries over and provides an account of why (136) and (137) are the correct structures.⁴⁰ Those structures in turn allow linking *lequel/quale* to the question of postnominal superlatives (and via (131) to the question of bare plurals).

That these three phenomena are each to be seen as reflecting a (differential) property of definite D is not self-evident. To look at *lequel* vs. *quale* in that way is straightforward, less so no doubt are the other two. For postnominal superlatives, one might have thought that what was at issue was some property of the superlative morpheme itself. For bare plurals, one might have thought that the absence of any definite D in bare plurals in Italian would make the approach argued for here unlikely to be on the right track. But that consideration is overridden if it is correct to take French partitives (which do contain a definite article) to be a true French counterpart of Italian bare plurals.⁴¹

Moreover, the fact that within Romance there is a partial correlation/clustering across these three properties (as stated in (131) and (126)) constitutes additional evidence (especially in the case of (131)) that the syntax of definite D is central to an understanding of indefinite bare plurals/bare mass nouns across Romance.

This is of course not entirely a surprise, since we can readily see through French partitives that phrases that are globally interpreted as indefinites (similarly to bare plurals in Italian) can and do contain a definite D. The comparative evidence discussed here suggests (in a way that recalls Cheng and Sybesma (1999, 529; 2005) on Chinese) that the same holds for Italian (cf. Chomsky's (2001, 2) uniformity principle), even though Italian bare plurals do not give their definite D any pronunciation.⁴²

It goes without saying that additional Romance languages need to be examined to test the validity of the cross-Romance correlations that I have suggested, and that additional morphosyntactic properties of French and Italian (and other Romance

⁴⁰ If the antecedent relation underlies raising in the case of *lequel/quale*, then the motivation for raising (to Spec,D) is distinct from the case of postnominal superlatives.

⁴¹ See Spector (2001) and references cited there, emphasizing the parallelism. Possibly, French partitives can in addition have an analysis corresponding to that of Italian partitives (on which, see Storto (2001)).

⁴² Cf. also the fact that, according to Harrell (1962, 206), Moroccan Arabic, with the numerals between 2 and 10 inclusive, has the possibility of a definite article within what corresponds to indefinite *two books*, etc.

languages) need to be looked into with an eye to seeing how widespread (and how consistent) the ramifications are of (112)/(113).⁴³

The present conclusion shares with Longobardi (1994, 618) and Chierchia (1998, 386) the idea that Italian bare plurals/mass nouns⁴⁴ contain an unpronounced determiner. But I have been led to think that that determiner is an unpronounced counterpart of the definite article (see note 28), with the indefinite reading (again recalling Cheng and Sybesma (1999; 2005)) depending rather on the additional presence of an unpronounced NUMBER/AMOUNT.

Acknowledgment

For helpful comments on an earlier draft of this chapter, I am indebted to Guglielmo Cinque and to Jean-Yves Pollock.

⁴³ For example, Delfitto and Schroten (1991) suggest a link between bare plurals and postnominal number morphology, though as noted by Chierchia (1998, note 32) their proposal doesn't extend to mass nouns. Nor can the presence of (pronounced) suffixal number morphology be a sufficient condition for licensing bare plurals, given the apparent absence of bare plurals in Genoese (Toso (1997, 66)) and Pavese (Andrea Moro—p.c.). Déprez (2005) argues that it is not a necessary condition for bare nominals, on the basis of various creole languages.

A reviewer makes the interesting suggestion that despite (apparent—cf. Bernstein (1997)) complications in French it might be that (112) is also what underlies the absence of an overt definite article following prenominal demonstratives in Italian (vs. Greek—Holton et al. (1997, 97, 317)), thinking of Giusti's (1993) and Brugè's (2002) analysis of demonstratives as raising to Spec,DP.

Ultimately many other language families will need to be brought into the discussion in a systematic way.

⁴⁴ And by plausible extension English indefinite bare plurals. Chomsky (2000, 139) argues against bare plurals having a semantically null D; that would lead to the (plausible) conclusion that the unpronounced definite D proposed here (like the one visible in French partitives) is not semantically null.

Several, Few, and Many

1. Introduction

That there is more to syntax than meets the eye is clear. One important way in which this holds involves the presence of elements that are syntactically and interpretively active, but yet not pronounced.

In this chapter I primarily discuss the particular case of the unpronounced noun NUMBER (capitals indicate non-pronunciation) especially insofar as it co-occurs with elements like *few*, *many*, and *several*, which I take to be adjectives modifying unpronounced NUMBER (or occasionally pronounced *number*)—in a way that is parallel, for *few* and *many*, to overt *a small/large number* and, in the case of *several*, to *more than a few*. (The general conditions under which non-pronunciation is licensed are not discussed here, but cf. chapter 4.)

2. *Few* and *many*

As noted by Jespersen (1970, 106), English *few* takes comparative and superlative suffixes:

- (1) John has fewer books than Bill.
- (2) John has the fewest books of anybody I know.

in a way that makes it natural to take *few* to be an adjective. *Few* also patterns with adjectives in the way it takes degree modifiers:

- (3) John is too rich.
- (4) John has too few friends.

as well as in the way it disallows *much*:

- (5) *John is too much rich.
- (6) *John has too much few friends.

But what exactly does the adjective *few* modify? Taking it to modify *friends* in (4) might seem reasonable at first glance, yet would lose the parallelism between (4) and:

- (7) John has too small a number of friends.

in which the adjective *small* modifies *number*, not *friends*. For this and other reasons, I proposed in Kayne (2002a; 2005a; 2005b) that *few* invariably modifies either the noun *number* or its unpronounced counterpart (which I will represent using capitals as NUMBER). The proposal is intended to cover comparative and superlative *fewer* and *fewest*, too, so that we have:

- (8) ...fewer NUMBER books...
- (9) ...fewest NUMBER books...

corresponding to (1) and (2), and clearly displaying the parallelism with:

- (10) John has a smaller number of books than Bill.
- (11) John has the smallest number of books of anybody I know.

In similar fashion:

- (12) John has few books.

should be analyzed as:

- (13) ...few NUMBER books...

The question of course arises as to why:

- (14) *John has few number (of) books.

is not possible, with overt *number*. Although I do not have a complete answer, it is notable that the sentence improves with a degree modifier:

- (15) ?(?)John has too few a number of books to qualify for a fellowship.

and becomes quite acceptable with superlative *fewest*:

- (16) (?)John has the fewest number of books of anybody I know.

The generalization seems to be that if *few* is moved away from *number*, as it clearly has been in (15), given the intervening *a*, then the sentence in question is acceptable to some degree. In (16) *few* is separated from *number* by *-est* and perhaps also by an unpronounced counterpart of the *of* seen in:

- (17) They're the best of friends.

The proposal that *few* always modifies either *number* or NUMBER extends naturally to:

- (18) John has bought a few houses this year.

with the analysis:

- (19) ... a few NUMBER houses ...

clearly expressing the parallelism between (18) and:

- (20) John has bought a small number of houses this year.

Although *many* is not a perfect counterpart of *few*:¹

- (21) *John has bought a many houses this year.

I take the proposal in favor of NUMBER to cover *many*, too, so that:

- (22) John hasn't bought many houses this year.

is to be analyzed as:

- (23) ... many NUMBER houses ...

3. UG and the syntax/semantics mapping

The claim that in *many books* and *few books*, for example, *many* and *few* modify NUMBER rather than directly modifying *books* leads to the question of how broadly

¹ There is also a contrast for me between (15)/(16) and:

- (i) *John bought too many a number of houses to qualify for assistance.
 (ii) *John has the most number of houses of anybody I know.

(On the other hand, I have heard a sentence like (ii)—cf. perhaps the acceptability of *for the most part*.)

to construe this proposal. The strongest interpretation is to take it not to be English-specific, but rather to hold of UG:

- (24) In all languages, modifiers with the interpretation of *many* and *few* necessarily modify NUMBER/*number*.

Although the mass noun correspondents *much* and *little* are less relevant to the question of *several* that is at the heart of this chapter, (24) should be taken to extend to them, too:

- (25) In all languages, modifiers with the interpretation of *much* and *little* (in its quantity use) necessarily modify AMOUNT/*amount*.

Another way of putting (24), thinking of (7), (10), (11), and (20), is:

- (26) UG excludes the possibility that a single adjective such as *many* or *few* could simultaneously express what is expressed by the adjective *large* or *small* and what is expressed by the noun *number*.

It is plausible that (26) is itself to be understood as a specific instance of a much broader property of UG:

- (27) UG imposes a maximum of one interpretable syntactic feature per lexical item.²

Although this ‘scattering’ principle is not as precise as it might be (since the notion ‘interpretable syntactic feature’ is not), it is clear what kinds of ‘decompositional’ implications it is likely to have. We can ask, for example, whether there are other cases where an adjective that appears to be modifying one noun must rather be taken to modify another noun that is unpronounced.

One good candidate (among others) is the case of color adjectives. Although *red* in *a red car* appears to be a modifier of *car*, it may well be better analyzed as a modifier of COLOR:

- (28) a red COLOR car

thinking in part of sentences like:

- (29) That car is red in color.

² Note that Fodor’s (1970) and Ruwet’s (1972, chap. 4) arguments against causative ‘decomposition’ depended on the assumption (no longer held, given small clauses) that the complement of a causative verb would have to be a full sentence.

Depending on the status of ‘interpretable/uninterpretable syntactic features’ (cf. Sportiche (2002)), (27) will be more or less closely related to the prohibition against multiple specifiers of Kayne (1994a)—see also Rizzi (1997) and Sigurdhsson (2004).

(arguably parallel to *Those cars are few in number*)
and of:

- (30) What color car did you buy this time?

It remains to be determined exactly what range of adjectives call for an analysis of the sort indicated in (28) and (19), etc.

Before returning to *few* and *many*, we can note that under a reasonable interpretation of (27), a noun (e.g., *beer*) cannot by itself convey the notion of quantity. Thus (27), when a quantity interpretation is at issue, arguably calls for the presence of NUMBER or AMOUNT. That this is correct is strongly suggested by French:

- (31) *Jean a acheté bière. ('J has bought beer')
(32) Jean a acheté de la bière. ('J has bought of the beer')

in which the obligatory presence of the preposition *de* in such cases follows directly from:

- (33) ... acheté AMOUNT de la bière.

where *de* itself provides a way of detecting the presence of (unmodified) AMOUNT (parallel to the *of* of a *pint* *(*of*) *beer*). (On the fact that Italian and English do apparently allow bare mass nouns (and bare plurals) in sentences like (31), see chapter 1.)

4. *Every* and *a* and NUMBER

The contrast between *a few* and **a many* ((18) vs. (21)) recalls that seen in:

- (34) They come by every few days.
(35) *They come by every many days.

These examples are of interest given that *every* is known to require a singular noun (for recent discussion, see Zweig (2006)). From the present perspective, that requirement is naturally met in (34) by singular NUMBER:

- (36) ...every few NUMBER_{sing.} days

which will also account for the appearance of *a* in *a few*.

- (37) ...a few NUMBER_{sing.} days

In (37) it is the singularity of NUMBER that licenses the presence of *a*.

The status of (35) is more complex than it looks, since *many* can combine fairly well with *every* in certain cases:

(38) (?)They come by every how many days?

(39) ?They come by every so many days.

Both of these are fairly acceptable to me (with (38) interpreted as an echo question and with (39) containing a demonstrative-like *so* similar to that of *He can stand only so much noise*). In the same vein, (21) can be improved:

(40) John has bought a great/good many houses this year.

If we assume that the unacceptability of (21) and (35) is to be attributed to some other factor (to be discovered),³ then (38)–(40) can, like (36) and (37), also be taken to contain singular NUMBER (which will license *every* and *a*), for example:

(41) ...every how many NUMBER_{sing.} days

(42) ...a good many NUMBER_{sing.} houses

Example (39) is similar to the fully acceptable:

(43) They come by every so often.

(44) They come by every once in a while.

The question is whether *every* in these can be taken to be licensed in exactly the same way, i.e., via the presence of singular NUMBER.

Notable is the absence of:

(45) *They come by every twice in a while.

Given the argument outlined for (36) and (37), either (45) must not contain a singular noun or there must be another factor excluding it. Pursuing the second possibility, consider:⁴

(46) They come by once a year.

(47) *They come by once two years.

³ Note, for example, that (35) remains impossible even with singular *day*:

i) *They come by every many a day.

⁴ French has:

i) Ils passent une fois par an. ('...one time per year')

which is more usual than (ii) is in English:

ii) They come by once per year.

(French has no form that corresponds exactly to *once* or *twice*.) French disallows a word-for-word counterpart of (46):

iii) *Ils passent une fois un an. ('...one time a year')

We have, rather:

(48) They come by once every two years.

along with:

(49) They come by once every (*a) year.

which suggests that (46) might be:⁵

(50) They come by once EVERY a year.

with *every* non-pronounceable only in the presence of *a*:

(51) *They come by once one year.

Bringing to bear:

(52) They come by once *(in) a while.

further suggests modifying (50) to:

(53) They come by once IN EVERY a year.

Comparison between this structure and (44) now leads to the proposal that the *every* of (44) actually originates in a position parallel to the *every*/EVERY of (48) and (49):

(54) ...every_i once in t_i a while.

in which case the licenser for *every* in (44) has turned out to be the singular noun *while*, which can be modified:

(55) They come by every once in a great while.

The question now is why (54) is not possible with *twice* in place of *once* (which would yield (45)):

(56) *...every_i twice in t_i a while.

Possibly, (56) is to (54) as (58) is to (57):

⁵ Counterparts of *every* and *a* co-occur overtly in Kurdish—see Abdulla and McCarus (1967, 36, 51, 145); see also Beghelli and Stowell (1997, 101) on the indefiniteness of *every*. Relevant, too, is the fact that, although Italian *ciasc-* is more like *each* than like *every*, it cooccurs with *un*:

i) *ciascun libro* ('each-a book')

On the relation between *every* and *each*, see Jayaseelan (2005).

- (57) You bought as big a house as we did.
 (58) *You bought as big two houses as we did.

with the movement of *every* past *once* in (54) parallel to the movement of *as big* past *a* in (57).⁶

The proposal just sketched amounts to saying that the possible NUMBER_{sing.} component of *twice* (which would have to be present if *twice* is essentially equal to ‘two NUMBER times’⁷) in (45)/(56) is not able to license *every* since *every* originates too low down in the structure (and perhaps because the movement of *every* is really remnant movement). If this is on the right track, then (44) and (45) are in fact consistent with the idea developed earlier, to the effect that *every* in *every few days* is licensed by NUMBER_{sing.} (see (36)).

As for (43), it probably should be analyzed, thinking of the existence in some varieties of English of *oftentimes*, as:

- (59) ...every so often NUMBER_{sing.} TIME

in which *every* is licensed by NUMBER_{sing.} and (cf. Doetjes (1997; 2007)) *often* is a variant of *many* limited to modifying TIME/*time(s)*, so that (59) is quite parallel to (41). That (43) is close to (39) is also supported by the deviance of (60), parallel to that of (35):

- (60) *They come by every often.

⁶ On the movement of *as big*, see Hendrick (1990). A potential problem for the parallelism in question is:

- i) *You bought as big one house as we did.

Independently of the potential link to *as big*, the contrast:

- ii) Once in a (great) while, they come to visit us.
 iii) *Twice in a (great) while, they come to visit us.

and its similarity to *every once/*twice in a while* suggests that (ii) is:

- iv) EVERY once in a (great) while,...

with unpronounced EVERY.

⁷ Cf. Zweig (2006). A reviewer evokes the possibility that *once* might differ from *twice* in not containing NUMBER—for relevant discussion, cf. Barbiers (2007) (whose argument that *many* (in Dutch) is not an adjective does not take into account the possible presence of NUMBER, the parallel with *a large number*, or the *few/fewer/fewest* triplet).

Yet to be understood is:

- i) Do it just this once!
 ii) *Do it just this/these twice!

though I find a similar (though weaker) difference with overt *time*:

- iii) Do it just this one time!
 iv) ?Do it just these two times!

The adjectival status of *often* in (59) (parallel to that of *many* in general) allows us in addition to make sense of:

- (61) *They come by every so frequently.

in terms of the adverbial status of *frequently*, which prohibits it from modifying NUMBER in (59).⁸ In part similarly, if neither *a lot* nor *lots* can modify NUMBER or TIME (probably because *lot* is nominal), we can account for the fact that (59) doesn't allow replacing *often* by *a lot* or *lots*, as reflected in the unacceptability of:

- (62) *They come by every so (a) lot.

- (63) *They come by every so lots.

In this context, consider again (48), which has the somewhat marginal (for me) variant:

- (64) ?They come by once in every two years' time.

More natural for me is:

- (65) In three days' time, you'll have our answer.

The existence of these suggests that (48) could be further analyzed as:⁹

- (66) They come by once IN every two NUMBER_{sing.} years TIME.

with unpronounced IN and unpronounced TIME, in addition to NUMBER.

Note in passing that it is important to distinguish the *time*/TIME of (64)–(66) from the *time*/TIME of (59), *oftentimes* and (67):

- (67) They come by three times a week.

The *time*/TIME of (59), *oftentimes* and (67) is a count noun. The *time*/TIME of (64)–(66) is a mass noun, also seen in:

- (68) We spent a lot of time(*s) on that.

⁸ The impossibility of:

- i) *They come by every so frequent.

must mean that *frequent* cannot modify NUMBER—cf.:

- ii) *They've been here on a frequent number of occasions.
iii) *Frequenttimes, they arrive late.

⁹ This differs from Zamparelli (2004), who suggests a different unpronounced noun—his (partly similar) proposal does not appear to account for (135) or (139). Another interesting alternative is suggested by Jayaseelan (2005).

(69) In the time(*s) it takes for the letter to arrive, you'll have our answer.

(70) *In three days' times, you'll have our answer.

Although English has the same pronunciation for count *time* and mass *time*, French keeps them separate—the count one is *fois*, as in:¹⁰

(71) Ils viennent trois fois par semaine. ('they come (by) three times per week')

The mass one is *temps*, as in:

(72) Nous avons passé beaucoup de temps là-dessus. ('we have spent great-deal of time there-on')

Since TIME in (48)/(66) is a mass noun, it is not a potential licenser for *every*:

(73) *John lost every money.

(74) *We spent every time on that.

(75) *Every time it takes for the letter to arrive,...

Rather, the licenser for *every* in (48)/(66) must be NUMBER_{sing.}, as proposed earlier.¹¹

5. A *small(little)/large(big) number*

Despite the similarity between *a few books* and *a small number of books* and between *many books* and *a large number of books* that the present analysis has taken to be

¹⁰ Also, French uses neither in:

i) What time is it?

ii) Quelle heure est-il? ('which hour is it')

¹¹ The following contrast (bearing on Jayaseelan (2005)) remains to be understood:

i) They come by once every three years.

ii) ??They come by once each three years.

French arguably lacks a direct counterpart of *every*. Its counterpart of *each (chaque)* can be used here to some extent—Grevisse (1993, sect.611). The normal French counterpart of *every three years* is:

iii) tous les trois ans ('*tous* the three years')

which is not possible in English with *all*:

iv) *They come by all (the) three years.

Nor is:

v) *They come by every the three years.

Possibly, (iii) contains singular *tout* rather than plural *tous*.

significant, (34) and (38)/(39) have no well-formed counterpart with a *small/large number*, e.g.:

- (76) *They come by every (a) small number of days.
 (77) *They come by every how large (a) number of days?

Although these examples differ from the comparable well-formed ones with *every few days* and *every how many days* in containing *of*, the presence of *of* is not sufficient to account for their deviance, given the acceptability of:¹²

- (78) They come by every couple of days.

In part the deviance of (76) and (77) may rather reflect a more general fact about ‘measures’ that is in fact independent of *every*:

- (79) We’ll be there in a few days.
 (80) ??We’ll be there in a small number of days.
 (81) The baby weighed just a few pounds.
 (82) ???The baby weighed just a small number of pounds.
 (83) How many feet tall is that building over there?
 (84) *?How large a number of feet tall is that building over there?
 (85) That rock weighs thousands of pounds.
 (86) *That rock weighs large numbers of pounds.

There may also be a link between (76)/(77) and the deviance of:

- (87) *They come by every very few days.
 (88) *They come by every great/good many days.
 (89) *They come by every good ten days.

with the last of these, for example, contrasting with:

- (90) One visit is usually separated from the next by a good ten days.

Given (79)–(90), especially (87), I take the deviance of (76) and (77) (although more work is needed) to be compatible with the hypothesis I have been pursuing, namely that *few* and *many* are necessarily modifiers either of NUMBER or of *number*.

¹² Impossible is:

- i) *They come by every a couple of days.

like:

- ii) The comet appears (once) every (*a) thousand years.

and perhaps like:

- iii) We just bought three more (*a) hundred drawer file cabinets.
 iv) They cut down two more (*a) hundred-year-old trees.

In the case of *few*, the comparison with *small number* was actually somewhat misleading, in that there is evidence that *few* is actually closer to *little* than it is to *small*, despite the deviance of:

(91) ???You've only written a little number of articles this year.

which, however, improves if *tiny* is added:¹³

(92) ?You've only written a tiny little number of articles this year.

A reason to take *few* to be closer to *little* than to *small* comes from the 'positive' effect of adding *quite* to *a few*:

(93) You've written quite a few articles this year.

something of which is also found in:

(94) That's quite a little discovery you've made there.

but not in:

(95) That's quite a small discovery you've made there.

with praise being conveyed by (94) but not by (95).

6. *Several* vs. *many* and *few*

Unlike *many* and *few*, *several* does not look much like an adjective. It does not enter into comparison:

(96) *John has severaler books than Bill.

(97) *John has more several books than Bill.

Nor are there superlatives:

(98) *the severalest books; *the most several books

¹³ It remains to be understood why (i) is impossible:

i) *You've only written a tiny few articles this year.

The felt parallelism between *tiny little* and *great big* suggests that *many* may be closer to *big* than to *large*.

In addition, whereas *many* and *few* take a range of degree modifiers typical of adjectives:¹⁴

(99) too/as/so/how many books; too/as/so/how few books

several allows none of these:

(100) *too/as/so/how several books

There is also a contrast concerning *a*:

(101) a few books

(102) *a several books

In the same vein:

(103) a great many books

is not paralleled in interpretation (or matched in acceptability) by:

(104) ?a great several books

On the interpretation side, *several* might at first glance appear to be close to *a few*:

(105) We're planning to buy a few books.

(106) We're planning to buy several books.

These seem fairly similar. Yet *a few* can 'expand' in a way that *several* cannot (as noted in Payne and Huddleston (2002, 392)), for example via *quite* (cf. also (94)) and *not*:

(107) We bought quite/not a few books.

(108) *We bought quite/not (a) several books.

Another kind of difference between *several* and *a few* is seen in:¹⁵

¹⁴ Note, though, that *a few* is not compatible with degree modifiers:

i) *a too/as/so/how few books

ii) *too/as/so/how a few books

A link between *a few* and *several* will be drawn later.

¹⁵ Payne and Huddleston (2002, 392) say that *only* is "hardly idiomatic" with *several*. Cf. the fact that (110) improves somewhat without *any*:

i) ??Only several linguists came to the party.

- (109) Only a few linguists have any interest in physics.
 (110) *Only several linguists have any interest in physics.

7. *Several* and numerals

Rather than being especially close to *many* and *few*, *several* could be thought to have more in common with numerals (as in Borer (2005, 149, 240)). Like *several*, numerals do not allow comparatives or superlatives:

- (111) *fiver books; *more five books
 (112) *the fivest books; *the most five books

or degree words, as in:

- (113) *too/as/so/how five books

or (apart from *hundred*, *thousand*, etc.) an immediately preceding indefinite article:

- (114) *a five books

In addition, the following is interpreted like (104), rather than like (103):

- (115) ?a great five books

The idea that *several* and numerals are more similar to each other than either is to *many* or *few* would also seem at first glance to be supported by *very*:¹⁶

- (116) (not) very many books
 (117) very few books
 (118) only a very few books

which contrast with:

- (119) *very several books
 (120) *very five books

¹⁶ Cf. also the emphatic:

- i) They have many, many faults.
 ii) ???They have few, few faults.
 iii) *They have several, several faults.

Below, (iii) will turn out to be related to:

- iv) *They have more than a few, more than a few faults.

The same kind of contrast holds for certain adverbs when they express degree:

- (121) unbelievably many books
- (122) unbelievably few books

as opposed to:

- (123) *unbelievably several books
- (124) *unbelievably five books

Continuing in the same vein, we have:

- (125) ?fairly many people
- (126) fairly few people

vs.:

- (127) *fairly several people
- (128) *fairly five people

as well as:

- (129) ??pretty many people
- (130) pretty few people

vs.:

- (131) *pretty several people
- (132) *pretty five people

Despite these contrasts I will argue below that *several* is not all that close to numerals in its syntax and interpretation (and in effect, therefore, that pairs like (131) and (132) should have at least partially different accounts).

8. More on *every*

(34)/(36) with *every few days* is more natural than:

- (133) ?They come by every several days.

This is, however, not a clear instance of *several* being closer to *few* than to numerals, given the possibility of:

- (134) They come by every three days.

(135) The comet passes by every million years or so.

which must, by previous reasoning concerning (34)–(36), contain a singular noun. Furthermore, that singular noun must be lacking in the impossible.¹⁷

(136) *The comet passes by every millions of years.

A similar point holds for:

(137) For every three books you buy, you get one free.

(138) For every hundred (or so) books you buy, you get one free.

as opposed to:

(139) *For every hundreds of books you buy, you get one free.

By previous reasoning either *three* in (134) and (137) must be a singular noun itself or else (134) and (137) must contain singular NUMBER (or both), and similarly for *million/hundred* in (135) and (138) (for interesting discussion, see Zweig (2006)).

A similar paradigm holds for *a* in:

(140) It will take you a good three years to write that book.

(141) It will take that comet a good hundred (or so) years to reach us.

(142) *It will take that comet a good hundreds of years to reach us.

Again, (142) is sharply worse than the others because it lacks the singular noun called for by *a*.

A related contrast is given by:

(143) They come by every two days.

(144) They come by every other day.

In (143), *every* is licensed by the presence of a singular noun, either *two* or NUMBER. In (144), it must be singular *day* that is the licenser, on the reasonable assumption that *other* is an adjective rather than a noun.¹⁸ We are consequently led to the

¹⁷ Strictly speaking, there could perhaps be a singular noun in the structure, as long as it was not accessible to *every*:

- i) *We admire every pictures of a cat that we've ever seen.
- ii) *We admire every cat lovers we meet.

¹⁸ Even, I think, in sentences like:

- i) The others look better.

as suggested in Kayne (2003c, section 4).

correct expectation that *days* in (144) would (contrary to *days* in (143)) be incompatible with *every*:

(145) *They come by every other days.

In (143) the licenser for *every* (whether *two* or NUMBER) is closer to *every* than *days* is. Related to this is the fact that the presence of *every* is not sufficient to make singular *day* available:

(146) *They come by every two day.

Every in (143) cannot be replaced by *all*:¹⁹

(147) *They come by all two days.

Thinking of the earlier discussion of (48) and (66), this might be related to the contrast:

(148) They come by once every three days.

(149) *They come by once all three days.

if (134) and (143) contain an unpronounced ONCE. These facts in turn recall:

(150) One student from every department will be appointed to the committee.

(151) One student from all (the) departments will be appointed to the committee.

in which *every* can scope over *one* more readily than *all* can.

That a distributive reading of this sort distinguishes *every* from *all* is also shown by the contrast between (137) and:

(152) *For all three books you buy you get one free.

which holds despite *all* appearing to enter into a distributive reading in:

(153) All the students have cars.

With what is arguably a non-distributive interpretation, *all* is possible in:

(154) All three of the books were hard to read.

in which context *every* is not possible:

¹⁹ It is not the case that *all* and *two* are systematically incompatible:

i) He's bringing his friends. Sure, all two of them!

(155) *Every three of the books were/was hard to read.

as opposed to:

(156) Every (single) one of the books was hard to read.

Whether (155) can be excluded by virtue of *every* there being in an insufficiently local relation with its potential licenser (*three* or NUMBER) is not clear.

By similar reasoning to the preceding, in (133) and in:

(157) ?For every several books you buy you get one free.

either *several* must be a singular noun, or singular NUMBER must be present, or both.

Given the differences between *many* and *few*, on the one hand, and numerals and *several* on the other, as seen in (96)–(132), neither numerals nor *several* can plausibly be taken to be simple modifiers of NUMBER in the way that *many* and *few* are. (It might be that numerals (though not *several*, as we shall see presently) are in a relation of apposition to NUMBER, in which case there would be a link to phrases like *the number three*.)

9. *Several* vs. numerals (and a proposal for ordinals)

Of course *several* differs from numerals in various ways, beginning with the fact that it does not occur in:²⁰

(158) *the number several

or as an ordinal:

(159) the seventh person

(160) *the severalth person

These two restrictions will turn out to be one if (159) (and similarly for other ordinals) is derived from a structure resembling:²¹

²⁰ An incorporation type of approach to the verb *number* may allow relating to (158) the following:

i) ?Next year our incoming students are expected to number seven/*several.

Why (ii) is better remains to be understood:

ii) ?Last year's incoming students were several in number.

²¹ When ordinals occur in fractions:

i) four fifths (of a pound)

there is very likely:

(161) the -th person NUMBER seven

to which movement would apply, yielding:

(162) the [NUMBER seven]_i -th person t_i

This would then be another instance of unpronounced NUMBER. (Given (161)/(162), the restriction seen in (160) reduces to that seen in (158).)

In addition, we have the contrast:

(163) seven and a half hours

(164) *several and a half hours

as well as (cf. *For some reason, they invited the seven/ *several of us together*):

(165) All seven of them were already there when I arrived.

(166) *All several of them were already there when I arrived.

Similarly:

(167) The only seven books that are of any interest to me are...

(168) *The only several books that are of any interest to me are...

and:

(169) You have exactly/precisely seven minutes left.

(170) *You have exactly/precisely several minutes left.

It seems plausible to take the differences mentioned in (158)–(170) to reflect the fact that *several* is less precise than numerals. At the same time, as was shown necessary by (96)–(132), we need an analysis that, while expressing this relative lack of precision, keeps *several* distinct from *many* and *few*, which are also less precise than numerals.

10. Possible analyses of *several*

Let me use the following sharp contrast as a clue to the right kind of analysis. It involves expressions of age:²²

ii) four fifth PART s

with an unpronounced noun comparable to *part*.

For interesting discussion of ordinals, cf. Barbiers (2007), whose section 9 account of cases like *chapter four* should be amended to ‘chapter NUMBER four’, if the text approach is correct.

²² Similar to (171) vs. (172) (and fitting in with the analysis to be proposed) are the following contrasts between numerals and *several*:

i) They have a seven-year-old to take care of.

- (171) He's seven.
 (172) *He's several.

Again, a plausible intuition is that it is the imprecision of *several* that is at issue here. At the same time, an analysis too close to that of *many* and *few* is to be avoided. Since the imprecision of *many* and *few* has been expressed by relating them closely to a *large/big number* and a *little/small number*, the imprecision of *several* cannot be expressed in exactly the same way.

Numerals themselves can enter into expressions of imprecision through the addition of certain elements, as in:

- (173) We've bought approximately fifteen books.
 (174) We've bought about fifteen books.
 (175) We've bought (somewhere) around fifteen books.²³

However, these are appreciably less deviant than *several* is in (172):²⁴

-
- ii) *They have a several-year-old to take care of.

and:

- iii) At the age of seven, you...
 iv) *At the age of several, you...

as well as:

- v) That football team will kick two more seven-yard/*several-yard field goals.
 vi) the seven/*several of spades

²³ Note the contrast with:

- i) *We've bought someplace around fifteen books.

Of interest, too, is:

- ii) We were there something like 10 days.
 iii) *We were there something.

which suggests that in (ii) 'something like 10' is a constituent, in the spirit of Corver and Zwarts (2004).

²⁴ Like (176) and (177) are:

- i) By next June, he'll be seven or so
 ii) (?)By next June, he'll be sevenish.

Also:

- iii) At the age of seven or so, he...
 iv) ??At the age of fifteenish, John....

On *-ish*, note:

- v) ?We spent two-ish hours on that problem.
 vi) *?We spent one-ish hours...

(176) (?)By next June, he'll be approximately/about seven.

(177) By next June, he'll be somewhere around seven.

The sharp minimal contrast with *several* is shown by:

(178) *By next June, he'll be several.

It therefore doesn't seem as if *several* should be taken to be very close to any of the expressions of imprecision shown in (173)–(177).

A similar pattern holds for:

(179) (?)At the age of approximately/about seven, we...

(180) ?At the age of (somewhere) around seven, we...

as opposed to the very strong deviance of:

(181) *At the age of several, we...

English has another way of expressing (a certain kind of) imprecision that matches the judgments concerning *several* somewhat more faithfully.²⁵

(182) We must have bought a good fifteen books yesterday.

If we add *a good* to the contexts of (176)–(181), we get:

vii) *We spent one-ish hour...

viii) **We spent an-ish hour(s)...

Cf.:

ix) *John's book numbers one

x) ?J's books number just one

²⁵ On this *good*, cf. also Kayne (2005a, section 7). On the perhaps related *a meager two hours*, cf. Ionin and Matushansky (2006).

The *good* in question may be an adjectival (or perhaps nominal) variant of the *well* of:

i) We go there on weekdays as well as on weekends.

ii) John is well over 40.

Both this *good* and this *well* appear to be positive polarity items, and both reject modification (with *very*, with *quite*, and with *unbelievably*). There may also be a link to the *well* of:

iii) You may well be right.

despite its allowing *very*.

It remains to be understood why the following is very marginal:

iv) *?They come by (once) every good seven days.

(183) ??By next June, he'll be a good seven.

(184) ??He must be a good seven by now.

and:

(185) *At the age of a good seven, he...

The strong deviance of (181) is matched by that of (185); both are quite a bit less acceptable than (179) or (180). However, (183) and (184) do not seem as sharply unacceptable as (178).

11. A more likely analysis for *several*

I think that a better match for (178) is:

(186) *At the age of a small number,...

(187) *By next June, he'll be a small number.

The key example is (187), which seems to me more starkly unacceptable than (183) or (184), and to clearly be closer in status to (178) than any of (176), (177), (183), or (184).²⁶

However, *several* cannot plausibly be taken to be a direct counterpart of a *small number*, since I have already proposed earlier that *a few* is virtually that (apart from the distinction between *number* and *NUMBER*, and the distinction between *small* and *little*—cf. the discussion of (94)). In fact, *a few* behaves here as a *small number* (and as *several*):

(188) *At the age of a few,...

(189) *By next June, he'll be a few.

A way of expressing the parallelism between (186) and (189) and the corresponding facts with *several*, repeated here:

²⁶ Or the non-standard:

- i) He ain't no eighteen.

again in the sense of age. This non-standard use of *no* is that of:

- ii) He ain't written no twenty books.

which may be related to the standard (for me, non-colloquial, with stress on the numeral):

- iii) He's written some twenty books.

although (iv) doesn't seem possible to me, for reasons to be determined:

- iv) *He must be some twenty.

- (190) *At the age of several, ...
 (191) *By next June, he'll be several.

all of which contrast sharply with numerals:

- (192) At the age of seven, ...
 (193) By next June, he'll be seven.

is to take *several* to be like *a few* in involving NUMBER and in involving parallelism with *small/little*, yet to be different from *a few* in involving something extra.

What that extra something might be is suggested by Corver's (2005) observation (citing a similar point made by Jespersen (1924, 248) on 'weakened comparatives') that Dutch *meerdere* (as well as German *mehrere*), which translates as *several*, is nonetheless morphologically decomposable with the first morpheme (Dutch *meer-*, German *mehr-*) being the comparative morpheme corresponding to English *more*.²⁷

My proposal, then, is that there is significant parallelism between the following two sentences:

- (194) They know several linguists.
 (195) They know more than a small number of linguists.

Taking *a few linguists* to be very close to *a small number of linguists*, as proposed earlier, leads to the expectation, if *several* is akin to *more than a small number*, that '*several* + N' is more than '*a few* + N'. This seems correct, to judge by:

- (196) (?)John has written a few articles this year, but Mary has done even better—she's written several.²⁸
 (197) *John has written several articles this year, but Mary has done even better—she's written a few.

This contrast feels like the following one (assuming in both pairs that writing more articles is to the good):

²⁷ Similarly for French *plusieurs* with initial *plus-*, as Jespersen noted in discussing late Latin *plusiores*. Jespersen and Corver further take these forms to include a (doubling) comparative suffix (*-er* in Dutch and German, akin to English *-er*) whose relevance to *several* I will leave open.

²⁸ Note that *various* does not work here:

- i) *John has written a few articles this year, but Mary has done even better—she's written various (ones/articles).

Arguably, *various* does not involve NUMBER at all, as suggested also by:

- ii) This cake needed several/*various more ounces of chocolate.
 iii) That sculpture is several/*various meters tall.

and similarly for *a variety of*.

- (198) John has written three articles this year, but Mary has done even better—she's written four.
 (199) *John has written four articles this year, but Mary has done even better—she's written three.

This judgment correlates with that of Payne and Huddleston (2002, 392), who say that “the ‘not multal’ implicature conveyed by *a few* seems somewhat stronger than that conveyed by *several*. Thus a salesperson would be more likely to say that their product had several advantages over a competitor than that it had a few.”

The significant parallelism between *several* and *more than a small number* (as opposed to numerals)²⁹ holds up straightforwardly across many of the phenomena mentioned earlier, for example, with expressions of age:

- (200) At the age of seven/*several/*more than a small number, ...
 (201) By next year, he'll be seven/*several/*more than a small number.

and in combination with *a half*:

- (202) seven and a half hours; *several and a half hours; *more than a small number and a half hours

as well as with *all*:

- (203) All seven/*several/*more than a small number of them were already there when I arrived.

There is a similar contrast with ‘...only...any...’:

- (204) The only seven books that are of any interest to me are ...
 (205) *The only several books that are of any interest to me are ...
 (206) *The only more than a small number of books that are of any interest to me are ...

as well as with:

- (207) You have exactly/precisely seven minutes left.
 (208) *You have exactly/precisely several minutes left.
 (209) *You have exactly/precisely more than a small number of minutes left.

²⁹ The French counterpart of *several* differs from numerals in not allowing *ans* (as opposed to *années*) for *years*:

i) Elle a passé trois/*plusieurs ans à étudier la linguistique. (‘she has spent three/several years to study the linguistics’)

though it has in common with numerals non-occurrence with *de* (apart from right-dislocation):

ii) Elle a plusieurs (*de) soeurs. (‘she has several (of) sisters’)

Thinking back to ordinals at (159), we find a parallel contrast between *several* and *more than a small number*, on the one hand, and numerals on the other, in the following:³⁰

- (210) the seventh person; *the severalth person; *the more than a small number-th person

and in the related:

- (211) the number seven; *the number several; *the number more than a small number

We can note in passing that the overtly phrasal character of *more than a small number* in (210) and (211) is not sufficient to account for its incompatibility with *-th* and with *the number*, given:

- (212) the five hundred and fifty-fourth person

- (213) the number five hundred and fifty-four

Finally, we have the supporting contrasts:

- (214) seventeen/*severalteen/*more than a small number-teen

and:

- (215) seventy/*severalty/*more than a small number-ty

(Note that **severalteen* in (214) contrasts with *umpteenth* (though there's no **umpty*), presumably because *ump-* is simplex, unlike *several*.)

In conclusion, then, *several* has more in common with *more than a small number* than it does with numerals.

12. Toward spelling out the analysis

A way to spell out an analysis expressing the idea that *several* is very close to *more than a small number* is to take *several* in English to be a variant of *few* that is like *few* in necessarily modifying NUMBER (or *number*)³¹ but unlike it in requiring the particular comparative context of:

³⁰ Probably related to (210) and (211) is:

- i) Our problems have increased by a factor of seven/*several/*more than a small number.

Why *several* is in contrast possible in (ii) remains to be elucidated:

- ii) Our problems have increased severalfold.

³¹ Recall that *few* occurs with overt *number* in limited cases—v. (15) and (16). However a *few* does not cooccur with *number*, so that on the text analysis we would not expect *several* to:

- i) *They know a few number linguists.
ii) *They know several number linguists.

(216) MORE THAN A several NUMBER...

From this perspective, we can think of *several people* as being particularly close to *more than a few people*. (By transitivity from the discussion of *small* vs. *little* at (94), *several* will now be closer to *little* than to *small*.) There are of course some questions that arise, for example:

(217) You have quite a few friends.

(218) *You have quite several friends.

Why is (218) not possible as 'MORE THAN quite A several friends'? Since the syntax of *quite* is not well understood,³² let me transpose to a perhaps related question:

(219) You know far/way/a lot more than a few linguists.

(220) *You know far/way/a lot several linguists.

Why can *far* or *way* or *a lot* not be added to (216) to yield (220)? A possible answer is that (216), while part of the correct analysis, is necessarily subject to a further movement operation that yields:³³

(221) [A several NUMBER...] _i MORE THAN t_i

and that the landing site of such movement is not accessible if *far* or *way* or *a lot* is present.

Another type of question that arises can be illustrated with:³⁴

(222) We bought a (?very) few books yesterday.

(223) We bought (*very) several books yesterday.

³² Note, however, that (218) recalls:

i) *You have quite many friends.

Also:

ii) *You have a quite few friends.

³³ Perhaps this movement would be blocked by overt *a*. If so, we would have an account for:

i) *a several friends

as opposed to *a few*.

There is also a question concerning (157), repeated here:

(ii) ?For every several books you buy you get one free.

since it contrasts with:

(iii) *For every more than a few books you buy you get one free.

³⁴ Although *a little* is a close mass noun counterpart of *a few*, there seems to be no mass noun counterpart for *several*. There might be a link here to:

Although modifying *a few* in this way is not entirely natural for me, it is clearly better than doing the same with *several*. Somewhat similarly, we have, with other modifiers:

(224) We bought a(n) ??unbelievably/*?fairly/??pretty few books yesterday.

(225) *We bought unbelievably/fairly/pretty several books yesterday.

With *very*, I find improvement with *only*:

(226) We bought only a very few books yesterday.

Assume that such modification of *a few* is possible only in the presence of *only* or its unpronounced counterpart ONLY. Then (223) might ultimately reduce to (220). If ONLY precedes MORE and occupies the same position as *far/way/a lot*, then the reduction is direct. If ONLY is as in:

(227) We bought more than only a few books yesterday.

it still might block movement of '[A several NUMBER...]'.

Related to this, I think, is the fact that *several* and *more than a few* differ with respect to:

(228) New York City has more than a few inhabitants.

(229) New York City has more than several inhabitants.

The first of these is more natural, though perhaps even better is:

(230) New York City has more than just a few inhabitants.

If (228) requires an unpronounced JUST, then this difference in naturalness may reduce to the previous discussion concerning ONLY.

More immediate is an understanding of why *several* has no comparative or superlative forms and why it is incompatible with degree words like *too*, *so*, etc.—see (96)–(100). If *several* is strongly parallel to *more than a few*, then the answer is in part that one can't have:

i) You have a good/great many friends.

ii) *You have a good/great much money.

and/or to:

iii) You have numerous friends.

iv) *You have amountous money.

and/or to:

v) Your friends number in the hundreds.

vi) *Your money amounts in the tons.

(231) *We've made too/so/as/how more than a few mistakes.

and in part that one can't have:

(232) *We've made more than a too/so/as/how few mistakes.

13. Conclusion

Several, *few*, and *many* have in common that they are modifiers of unpronounced NUMBER (and sometimes *number*), closely related to modifiers like *little* (in the case of *several* and *few*) and *large* or *big* (in the case of *many*). *Several* is more complex than *many* and *few* in necessarily entering into a larger comparative structure.

The presence of NUMBER here is not an idiosyncratic fact about English, but is imposed by UG, as discussed for *few* and *many* in section 2, where it was proposed that the relation between syntax and semantics is constrained by:

(233) UG excludes the possibility that a single adjective such as *many* or *few* could simultaneously express what is expressed by the adjective *large* or *small* and what is expressed by the noun *number*.

which is to be interpreted as a special case of:

(234) UG imposes a maximum of one interpretable syntactic feature per lexical item.

The presence of NUMBER in the analysis of *several* suggested in (216) should be attributed to (234), much as with *few* and *many*. It seems likely that the other components of (216) can be attributed at least in part to principles of UG, in a way that remains to be made precise by future work.

Acknowledgments

This chapter corresponds closely to part of a talk presented at the Linguistic Perspectives on Numerical Expressions conference held at the Utrecht Institute of Linguistics–OTS in June 2004.

A Note on the Syntax of Numerical Bases

1. Introduction (English)

The English number system has a base ten in the familiar sense that its multiplicative numerals are formed using powers of ten:

- (1) There were four hundred/four thousand/four million people at the conference.

Ten itself does not have this possibility in a regular way:

- (2) *There were four ten people at the conference.

What one has of course is:

- (3) There were forty people...

in which at least the *-t-* (or perhaps *-ty*) is plausibly taken to be a reduced form of ten. That ten is a base and seven, for example, is not shown on the one hand by the impossibility of:

- (4) *There were four seven people...

and on the other by the absence of any irregular counterpart to (4):

- (5) *There were forsevy people...

Nor are there any multiplicative numerals based on powers of seven that would parallel *four hundred* or *four thousand*, etc.

In a similar way English additive numerals can involve powers of ten:

- (6) two hundred and five
(7) three thousand five hundred and two

or the irregular forms based on ten itself just mentioned:

- (8) forty-six

or ten alone, as in:

- (9) sixteen

where *-teen* is straightforwardly taken to be a form of ten. But there are no additive numerals based, for example, on seven:

- (10) *sixseven

Less often discussed as a reflection of the base status of ten is the following contrast:

- (11) There were tens of thousands of people at the conference.
(12) *There were sevens of thousands of people...

In my English *tens of* is fully natural only with *thousands*, *millions*, *billions*, etc.:

- (13) ?There were tens of mistakes in your paper.

But there is still a sharp contrast with:

- (14) *There were sevens of mistakes in your paper.

and similarly for the other numerals below ten, all of which act like seven here.

The higher powers of ten are fully acceptable in sentences like (13):

- (15) There were hundreds/thousands/millions of mistakes in your paper.

Other numerals higher than ten are not possible, for example:

(16) *There were twelves/fifteens of mistakes in your paper.

(17) *There were fifties of mistakes in your paper.¹

Although there is no doubt that ten is a numerical base in English, it may be that English in an extremely limited way allows twelve (in an irregular form *dozen* or perhaps *doz-*) to act as a base:

(18) There were dozens of mistakes in your paper.

If so, then English here would be acting a bit like French, which has ten as its normal base but in the case of eighty has:

(19) Elle a écrit quatre-vingts articles. ('she has written four-twenty articles')

in which twenty behaves as base for a multiplicative numeral.

In this chapter, I will be interested in the question of how the language faculty treats the notion of numerical base. The proposals I will make will not require that a given language have exactly one base, nor will they care what number a given language has as its base. It may be that the choice of base and the choice of number of bases fall outside the language faculty proper.² At the same time, I will argue that the language faculty has a very specific way of treating a numerical base (whatever its value and whether or not it is unique).

2. French

French is like English in allowing (15):

(20) Il y avait des centaines d'erreurs dans votre papier. ('it there had of-the hundreds of errors in your paper')

(21) ...des milliers d'erreurs... ('...of-the thousands...')

¹ This example contrasts with the possible:

(i) John is in his fifties.

(ii) John was born in the fifties.

both of which arguably contain (unlike (17)) an unpronounced YEAR(S)—cf. Kayne (2003c).

Apparently closer to (17) is:

(iii) Her articles must number (somewhere) in the fifties.

though here (again unlike (17)) there may be an unpronounced pronominal N whose antecedent is *articles*:

(vi) ... (somewhere) in the fifty N -s

² Cf. Ionin and Matushansky (2006, sect.9.2.1).

French also fully allows (13):

- (22) Il y avait des dizaines d'erreurs dans votre papier. ('...of-the tens...')

At the same time, French differs from English in certain ways.

One is that *dizaines*, *centaines*, and *milliers* are preceded here by the so-called partitive article *des* (more precisely, by the preposition *de* ('of') followed by (a reduced form of) the definite article). In (13) and (15) no article at all precedes *tens*, *hundreds*, or *thousands*. This is part of a more general difference between the two languages concerning bare plurals, allowed by English but generally disallowed in French. This difference, though important in other ways, is not particularly relevant to what follows and I will not pursue it.

A second difference between English and French is that French has singular counterparts to (20)–(22):

- (23) Il y avait une centaine d'erreurs dans votre papier. ('...a hundred of errors...')
- (24) ...un millier d'erreurs...('...a thousand of...')
- (25) ...une dizaine d'erreurs...('...a ten of...')

These are lacking in English:

- (26) *There were a hundred of errors in your paper.
- (27) *...a thousand of errors...
- (28) *...a ten of errors...

Of course English has, without *of*:

- (29) There were a hundred/a thousand errors in your paper.

But (29) conveys a precise numerical quantity, whereas (23)–(25) convey approximate numerical quantities much as (20)–(22), (15) and (13) do.

A third difference is that while English limits (13)/(15) to powers of ten (apart from *dozens*), French allows a wider range, in particular in the singular. Thus, in addition to (23)–(25), French has:

- (30) Il y avait une quinzaine d'erreurs dans votre papier. ('...a fifteen+-aine of...')
- (31) ...une vingtaine d'erreurs...('...a twenty+-aine of...')

and similarly for *une trentaine d'* ('a 30+-aine of'), *une quarantaine d'* ('a 40+-aine of'), *une cinquantaine d'* ('a 50+-aine of'), and *une soixantaine d'* ('a 60+-aine of').³

³ A plural example provided by Jean-Yves Pollock is:

- i) La dernière fois... Jean a acheté des dizaines, que dis-je?, des vingtaines, peut-être des trentaines de CD! ('the last time... John has bought of-the tens, what say I, of-the twenties, may-be of-the thirties of CD')

A fourth difference, the most important for what follows, is that all the French forms cited contain a visible suffix distinct from the numeral itself. For example *vingtaine* in (31) is transparently related to the numeral *vingt* (20), and similarly, with only minor irregularities, for:

- (32) dix/dizaine (10)
- (33) douze/douzaine (12)
- (34) quinze/quinzaine (15)
- (35) trente/trentaine (30)
- (36) quarante/quarantaine (40)
- (37) cinquante/cinquantaine (50)
- (38) soixante/soixantaine (60)
- (39) cent/centaine (100)
- (40) mille/millier (1000)

With the exception of *millier*, all of these contain the suffix *-aine* preceded by the associated numeral. (The suffix in *millier* is *-ier*.) This suffix appears in the plural examples (20)–(22), as well as in the singular examples.

3. English and French

English *tens*, *hundreds*, and *thousands*, while strongly parallel to (20)–(22) in interpretation and in being followed by a preposition (*of* in English, *de* in French), differ from the French forms in showing no visible suffix (apart from plural *-s*). This parallelism in interpretation (combined with the difference concerning *of* between *hundreds/thousands of books* and *a hundred/a thousand books*) led me in earlier work—cf. Kayne (2005b, sect.3.1)—to propose that the English forms *tens*, *hundreds*, and *thousands* actually do contain a suffix comparable to French *-aine*, though in English that suffix is unpronounced. Writing the unpronounced suffix as *-AINE*, we have, for example, for *tens of thousands of books* and *hundreds of books*:

- (41) ten -AINE -s of thousand -AINE -s of books
- (42) hundred -AINE -s of books

Multiplicative numerals like *two hundred* or *three thousand* differ from the preceding in not being intrinsically approximative and in not allowing *of*:⁴

- (43) two hundred (*of) books
- (44) three thousand (*of) people

The French counterparts of these do not show a preposition, either:

- (45) deux cents (*de) livres
- (46) trois mille (*de) personnes

⁴ Apart from cases like *two hundred of these books*, which are not relevant to the present discussion.

and in that respect contrast with the approximative examples of (20)–(25) and (30)–(31), all of which do contain *de*.

The difference in interpretation (approximative vs. not) and the difference concerning *of/de* led me in the earlier work mentioned to take the position that *hundred* and *thousand* (and *cents* and *mille*) in (43)–(46) were not followed by any suffix (apart from the plural *-s* in French *cents*), contrary to the analysis of (what I will informally call) approximatives illustrated in (41) and (42).

4. Similarities between approximatives and multiplicative numerals

That decision overlooked some similarities, however. One is seen starting with the pair:⁵

- (47) There were nine/eleven hundred linguists at the conference.
- (48) *?There were ten hundred linguists at the conference.

This contrast resembles:

- (49) There were tens of thousands of people at the demonstration.
- (50) ??There were tens of hundreds of people at the demonstration.

As a multiplicative numeral, *?*ten hundred* is quite unnatural. To my ear that unnaturalness is shared to a significant degree by ??*tens of hundreds*. The same holds even more sharply for me in:⁶

- (51) They have nine hundred thousand dollars in their bank account.
- (52) *?They have ten hundred thousand dollars in their bank account.

paralleled by the following contrast:

- (53) They must have tens of thousands of dollars in their bank account.
- (54) *?They must have tens of hundreds of dollars in their bank account.

A second similarity between multiplicative numerals and the approximatives under discussion holds with respect to the requirement that in a multiplicative numeral a lower numeral must precede a higher one (in both English and French):

- (55) They bought three hundred books.
- (56) They have five hundred thousand dollars.

⁵ The reason for these contrasts is not entirely clear. The deviance of *?*ten hundred* and ??*tens of hundreds* could plausibly be related to the possibility of replacing them with *thousand* and *thousands*. Yet *eleven hundred* in (47) is well-formed despite being replaceable by (the also well-formed) *one thousand, one hundred*.

⁶ Left open is why (i) is less good than (47):

These are the only well-formed orders:⁷

- (57) *They bought hundred three books.
- (58) *They have five thousand hundred dollars.

It turns out that a similar property holds for approximative expressions:

- (59) They must have tens of thousands/hundreds of thousands of dollars in their account.

Here the lower precedes the higher. The reverse is not possible:

- (60) *They must have thousands of tens of dollars in their account.
- (61) *They must have thousands of hundreds of dollars in their account.

The question is how best to express the similarity between (60)/(61) and (57)/(58). (Part of the answer must rest on the fact that (59), while approximative, is also multiplicative.)

The same question arises for a third similarity between multiplicative numerals and (multiplicative) approximatives:

- (62) *They have five hundred hundred dollars in their account.
- (63) *They have five thousand thousand dollars in their account.

The deviance of these cases of repetition of the same numeral seems to extend to:

- (64) *They must have hundreds of hundreds of dollars in their account.
- (65) *They must have thousands of thousands of dollars in their account.

Again, the fact that (59) is multiplicative in interpretation seems crucial, since the following, with *and* instead of *of* and an additive interpretation, are fine:

- (66) They must have hundreds and hundreds of dollars in their account.
- (67) They must have thousands and thousands of dollars in their account.

Also acceptable with an additive interpretation (and with *upon*) are:

- (68) They must have hundreds upon hundreds of dollars in their account.
- (69) They must have thousands upon thousands of dollars in their account.

i) ??They have eleven hundred thousand dollars in their bank account.

⁷ Irrelevantly to the present discussion, (57) and (58) are possible (in French) as examples of additive numerals:

- i) Ils ont acheté cent trois livres. ('103')
- ii) Ils ont cinq mille cent dollars. ('5100')

A fourth set of facts that seems to suggest a closer relation between multiplicative numerals and multiplicative approximatives than one might have thought involves *several*, which in English can combine with *hundred* and *thousand* in a way resembling the way in which multiplicative numerals are formed:⁸

- (70) They have several hundred dollars in their account.
- (71) They have several thousand dollars in their account.

French *plusieurs* seems in general like an excellent match for English *several*. Yet it cannot combine with *cent* or *mille* at all:

- (72) *Ils ont plusieurs cent dollars dans leur compte.
- (73) *Ils ont plusieurs mille dollars dans leur compte.

Close to (70) and (71), instead, are:

- (74) Ils ont plusieurs centaines de dollars dans leur compte.
- (75) Ils ont plusieurs milliers de dollars dans leur compte.

whose closest word-for-word counterparts in English are less natural than (70) and (71):

- (76) ?They have several hundreds of dollars in their account.
- (77) ?They have several thousands of dollars in their account.

The fact that English (70) and (71), with *hundred* and *thousand* in the manner of multiplicative numerals, transpose into French yielding (74) and (75), which contain the suffix-bearing (and plural) *centaines* and *milliers*, suggests that (70) and (71) contain nominal suffixes, too:

- (78) ...several hundred NSF dollars...
- (79) ...several thousand NSF dollars...

where NSF is an informal abbreviation for nominal suffix. This proposal turns out to receive convergent support from Romanian.

5. Romanian

As a (further) way of reaching an analysis that expresses what multiplicative numerals and multiplicative approximatives (the ones containing more than one numeral,

⁸ The parallel is supported by an observation in Ionin and Matushansky (2006), who note:

i) several hundred/*forty books

just like:

ii) three hundred/*forty books

as in *hundreds of thousands of books*) have in common, let us turn to Romanian,⁹ which displays a phenomenon that is intriguingly, though not exactly, similar to what is found in the English contrasts seen earlier, such as in:

(80) a hundred (*of) books

(81) hundreds *(of) books

Also:¹⁰

(82) ten (*of) books

(83) tens *(of) books

What is notable about Romanian is that we find something comparable (concerning the presence or absence of a preposition) entirely within the domain of ordinary numerals, in particular with ten and its simple multiples (20, 30, etc.).

Ten in Romanian is followed directly by the (plural) noun, with no preposition:

(84) zece caiete ('ten notebooks')

and in that sense resembles (82). Thirty in Romanian is more transparent than in English (or French) and has the form 'three tens'. A following (plural) noun must be separated from Romanian 30 by the preposition *de*:

(85) treizeci de caiete ('three-tens of notebooks' = '30 notebooks')

and in that sense 30 in Romanian acts like (83) in English, despite the fact that (83) is not an example of an ordinary numeral.

The generalization might seem to be that the presence of the preposition (*of* or *de*) is keyed directly to the plural form of *tens* and *zeci*. But why would that be? Let me instead propose that what is central, or at least more central, is the unpronounced nominal suffix mentioned earlier as being present in (83)—cf. the discussion of (20)–(42)—as illustrated in:

(86) ten -AINE -s of books

with the absence of *of* in (82) then correlating with the absence there of any such suffix.

Generalizing to Romanian, we can attribute the contrast concerning *de* between (84) and (85) to the presence of a nominal suffix in (85) vs. the absence of any such suffix in (84). We should consequently think of (85) as:

⁹ I am grateful to Oana Săvescu-Ciucivara for all the Romanian data.

¹⁰ Strictly speaking, (83) is not perfect for me (cf. (13)), though (11) is. In any case, the contrast concerning *of* between (82) and (83) is very sharp.

- (87) *trei zec- NSFX -i de caiete*

where NSFX is the nominal suffix in question (and *-i* the plural morpheme). If we now ask why (85), but not (84), contains this suffix, the generalization would seem to be:¹¹

- (88) In Romanian, *zec-* is followed by NSFX whenever *zec-* is itself multiplied by a preceding numeral.

6. UG and numerical bases

What (88) says is that in a multiplicative numeral based on 10 in Romanian, 10 must be associated with a nominal suffix. The facts of Romanian are consistent with generalizing this to all multiplicative numerals in Romanian. But let me jump immediately to a much broader proposal:

- (89) In all languages, the multiplicand of a multiplicative numeral must be associated with a nominal suffix.

In a numeral like three hundred, ‘hundred’ is the multiplicand, so (89) requires:

- (90) *three hundred NSFX...*

In a numeral like three hundred thousand, there are two multiplicands, ‘hundred’ and ‘thousand’, so (89) plausibly leads to:¹²

- (91) *three hundred NSFX thousand NSFX...*

Note that (89) gives us a way of expressing syntactically the impossibility of:

- (92) **three seven books*

if we grant that only a base numeral (or one of its powers) can combine with NSFX. Put another way, the choice of a base numeral for a given language amounts to that language allowing that numeral to combine with NSFX. Since seven in English is not a base numeral, it cannot combine with NSFX, so (92) violates (89).¹³

¹¹ This formulation assumes either that *zec-* in (84) is not multiplied by 1, or else that 1 is not a numeral—on the latter possibility, cf. Barbiers (2007).

¹² This conclusion concerning (91) is connected to the question of constituent structure to which I return briefly below. An alternative that seems less plausible is:

i) *three [hundred thousand NSFX] NSFX*

¹³ Similarly for:

7. Prepositions

A generalization concerning prepositions can now be stated as follows:

- (93) If in a given language there are two forms involving numerals or approximatives that differ in that one contains a nominal suffix and the other not, then either
- a) both have a preposition or
 - b) neither has a preposition or
 - c) only the one with the nominal suffix has a preposition.

Case (c) corresponds to Romanian numerals as in (84) vs. (85); the latter has a nominal suffix as indicated in (87), and the former does not. Case (b) corresponds to English *three books* vs. *three hundred books*—although only the latter has NSFX as imposed by (89),¹⁴ neither contains *of*.

The English contrast between *three hundred books* and *hundreds of books*, while not falling under (93), indicates that the NSFX associated with numerals calls for the presence of a preposition less strongly than the -AINE suffix associated with approximatives.¹⁵ This, along with the perhaps related fact (if it is one) that NSFX is pronounced less widely than -AINE, remains to be better understood. What (93) excludes is the possibility of a language just like Romanian but with *de* appearing with 10 and not with 30.¹⁶

8. More on NSFX

The question arises as to whether NSFX is ever pronounced. Within the Romance and Germanic families, I can think of two candidates. One is Italian -*ant*- as in:

-
- i) *three seven thousand books

¹⁴ I am assuming that numerals are associated with NSFX only when required to be by (89).

¹⁵ The Romanian contrast between (84) and (85) means that if low numerals are accompanied by unpronounced NUMBER (cf. Zweig (2006)), then NUMBER is to NSFX as NSFX is to -AINE, with respect to how strongly the presence of a preposition is required.

As Zweig notes, the question of the categorial status of the simple numeral itself (*three* or *seven*, for example) is a separate one.

¹⁶ Another factor bearing on the presence of a preposition is whether or not the NP is preceded by an overt determiner. Elabbas Benmamoun (p.c.) tells me that in Moroccan Arabic the numeral two allows (the counterpart of) either 'two books' or 'two of the books' (both with an indefinite interpretation), with 'of' in the latter apparently induced by 'the'.

The presence of a definite article in Moroccan Arabic in what corresponds to an indefinite is almost certainly closely related to French:

- i) Ils ont acheté des livres. ('they have bought of-the books')

with a definite article yet with an interpretation akin to *They bought (some) books*.

- (94) cinquanta; settanta; ottanta; novanta

which correspond to 50, 70, 80, and 90 and are readily decomposable as:

- (95) cinqu+ant+a etc.

where the first part is the numeral 5, 7, 8, or 9 (less its final vowel), the second part *-ant-*, and the third part the most usual Italian ending for a feminine singular noun. (30, 40, and 60 in Italian are almost as transparent as these; 20 is not.) It is possible, of course, that *-ant-* here should be analyzed as a suppletive variant of ten (*dieci*, in Italian). Alternatively, the proper analysis might be:

- (96) cinqu + TEN + ant + a

with TEN unpronounced and *-ant-* the spelling out of NSFX. (The same might hold for French, though the forms are less regular than in Italian.)

The second candidate is found in English *million*, *billion*, *trillion*. Given this series (along with the less usual *quadrillion*, *quintillion*), it is tempting to factor out *-illion* as a possible realization of NSFX.

Alternatively, *-illion* might have some precise numerical content, though that might be hard to square with its appearance in *zillion*, which lacks a precise value.

These larger numerals raise other questions, e.g., in French:

- (97) trois cents (*de) livres ('300 books')
 (98) trois mille (*de) livres ('3000 books')
 (99) trois millions *(de) livres ('3 million books')
 (100) trois milliards *(de) livres ('3 billion books')

Unlike the French counterparts of *hundred* and *thousand*, the French *million* and *milliard* require *de*. From the present perspective, this suggests the presence in the case of *million* and *milliard* of a suffix not present with *cent* or *mille*. It might be that (99), e.g., is:

- (101) trois million NSFX -AINE₂ -s de livres

with an unpronounced -AINE₂ in addition to NSFX, where -AINE₂ is a weaker version of -AINE. This would amount to claiming that the larger single-word numerals like *million* are intrinsically associated with approximation.

The presence of -AINE₂ with *million* (and *milliard*) in French would then correlate with the contrast:

- (102) cent livres
 (103) mille livres
 (104) un million de livres

In addition to differing from *cent* and *mille* with respect to *de*, French *million* also differs from them in that *million* requires *un* ('a/one') preceding it when there is no other preceding numeral.

A further difference in French between *cent* and *mille* on the one hand and *million* on the other is that the full-fledged approximatives of the first two show a suffix lacking with the approximative corresponding to *million*:

- (105) des centaines de livres ('of-the hundreds of books')
- (106) des milliers de livres ('of-the thousands of books')
- (107) des millions de livres ('of-the millions of books')

Centaine contains *-aine* and *millier* contains *-ier*, but there is no corresponding suffix in (107). This might be related to the very fact that *million* as an ordinary numeral (cf. (104)) is already associated with *-AINE₂*.

In Romanian, the cutoff that corresponds to (102)–(104) is between 10 and 100:

- (108) zece caiete ('ten notebooks')
- (109) o sută de caiete ('a hundred of notebooks')

It may be that Romanian associates *-AINE₂* with the single-word powers of ten beginning with 100, while French 'waits until' 1,000,000.

9. Constituent structure

The postulation of NSFX via (89) is, strictly speaking, independent of the question of the constituent structure of multiplicative numerals or multiplicative approximatives. Yet the question needs to be addressed. Ionin and Matushansky (2006) propose:¹⁷

- (110) three [hundred books]

whereas (89) seems to fit more naturally with:

- (111) [three hundred] books

in which there is a constituent that corresponds to 'multiplicative numeral'.

There is some evidence suggesting that (111) is closer to being correct than (110). Given the arguments presented earlier (see (47)–(77)) in favor of a substantial parallelism between multiplicative numerals and multiplicative approximatives (which we

¹⁷ In addition to the facts discussed below, their proposal would seem to have a problem with Romanian numerals followed by *de*. As Corver (2001) has noted, the presence of *de* fits naturally into an analysis in which the (complex) numeral moves to the Spec of *de*.

now see to rest at least in part on the presence in each of a nominal suffix, either NSFX or -AINE),¹⁸ evidence from the latter is relevant to the analysis of the former.

Consider then:

(112) They have hundreds of thousands of linguistics books.

Preposition-stranding under topicalization gives a sharp contrast:

(113) (?)Linguistics books they have hundreds of thousands of.

(114) *Thousands of linguistics books they have hundreds of.

The strong deviance of (114) suggests that *thousands of linguistics books* in (112) is not a constituent, and that we rather have:¹⁹

(115) [hundreds of thousands] of linguistics books

With ordinary numerals, topicalization in English is not natural (for me), though there is still a sharp contrast seen in:

¹⁸ An apparent discrepancy is:

- i) hundreds of thousands of books
- ii) *three hundred thousands of books

which might be related to:

- iii) three hundred thousand books
- iv) *hundreds of thousand books

in terms of syntactic ‘agreement in approximateness’ (cf. Ionin and Matushansky (2006)’s similar pragmatic principle, in an additive context), though that would have to distinguish (iv) and (v):

- v) *a lot of thousand books

from:

- vi) several/?many thousand books

An advantage of ‘agreement in approximateness’ would be (v) vs.:

- vii) a couple of thousand books

On the additive side, such agreement does not seem necessary in:

- viii) five-hundred some-odd books

¹⁹ This constituent structure would also appear to be supported by the contrast (for me):

- i) ?tens of books
- ii) tens of thousands of books

Similarly:

iii) Your books/published articles must number in the tens of thousands/?tens by now, presumably with an unpronounced ‘books’.

(116) ??Linguistics books they have three hundred.

(117) *Hundred linguistics books they have three.

supporting (111) over (110). Again starting from:

(118) They have three hundred linguistics books.

we find a similar contrast involving:

(119) They have three hundred linguistics books and we have three hundred, too.

as opposed to:

(120) *They have three hundred linguistics books and we have three, too.

(This similarity in contrasts suggests that (119) involves movement of unpronounced ‘linguistics books’.)

10. Why is NSFX needed?

Assume that (111) is on the right track. Making NSFX explicit in it, we have:

(121) [three [hundred NSFX]] books

where ‘[three [hundred NSFX]]’ is in the Spec of some functional head (cf. note 17). Comparing this with:

(122) three books

where ‘three’ itself is in a corresponding Spec position, it is natural to conclude that in (121) ‘three’ itself is in a Spec position within ‘[three [hundred NSFX]]’.

Since in (122) ‘three’ is paired with a NP (‘books’) and since by hypothesis NSFX is nominal, we see that in (121), in parallel fashion, ‘three’ is also paired with a NP, namely ‘hundred NSFX’. This gives us a way of excluding:

(123) *[three hundred] books

i.e., of enforcing the presence of NSFX, namely by taking numerals to require being paired with a NP²⁰ and by taking ‘hundred’ not to be one.²¹

²⁰ Or with some projection containing NP, in cases such as those mentioned in note 16.

²¹ Alternatively, by taking ‘hundred’ not to be of the right sort of NP. Relevant here is Ionin and Matushansky’s (2006) discussion of Case in Russian.

Whether the text idea could be made compatible with (110) is unclear.

As for the interpretation of NSFX, pairs like the following come to mind:

- (124) They entered the room in threes.
 (125) They entered the room in groups of three.

as do, especially:

- (126) Counting these grains of rice would go faster if you counted them by
 threes/groups of three/sets of three.

where the grouping comes into being solely as a function of the counting. In other words, NSFX may be equivalent to (unpronounced) SET.

11. Conclusion

Multiplicative numerals like *three hundred* have more in common with multiplicative approximatives (like *hundreds of thousands*) than one might have thought. Each depends on the presence of a nominal suffix. In the case of multiplicative numerals that (unpronounced) suffix is associated with the numeral base (or its power) and is probably interpreted in a way akin to *set*. A numeral base (or its power) can be multiplied by another numeral only if combined with such a nominal suffix.

Pierre Pica (p.c.) has suggested a link between the absence of higher numerals and the absence of sentential complementation, in some languages. If so, then the appearance of NSFX has something important in common with the nominalization of sentential complements proposed in Kayne (2003b, sect.4.6).

On Parameters and on Principles of Pronunciation

1. On parameters

The point that Chomsky (1995, 160) makes concerning Case chains can be put as follows:

- (1) Languages themselves are never the immediate locus of parametric variation. Rather, parametric variation across languages/grammars is to be thought of in terms of varying features/properties of corresponding items of the lexicons of the languages in question.

A familiar question is whether the locus of parametric variation in syntax is always restricted to functional as opposed to lexical items. Such a restriction seems plausible, although there are some potential counterexamples worth considering.

One has to do with nominal gender. For example, French and Italian have strongly similar gender systems, yet the word for sea is feminine in French (*la mer*) and masculine in Italian (*il mare*). This looks like a parametric difference associated with *mer/mare*, which is a lexical rather than functional item.

Alternatively, though, it is feminine gender itself (an item of the lexicon—cf. Ferrari (2005)) that has slightly different properties in French vs. Italian. One common property of feminine gender in the two languages is that, to the (partial) extent that it is subject to arbitrariness, it can be associated with a list indicating which lexical items (including suffixes—Williams (1981)—which reduces the size of the list considerably) have feminine gender in unpredictable fashion. In French this list

(arbitrarily) contains *mer*, whereas in Italian it does not contain the corresponding *mare*. In this way we can think of the *mer/mare* difference as being associated most directly with a functional item (feminine gender).

This parametric property of feminine gender may look complex, in that it consists of a long (but finite) list of nouns. But this is counterbalanced by the fact that looking at things this way avoids having to have a large number of feminine nouns associated with a gender parameter directly.

From this perspective, feminine gender can be merged with a noun only if (in the unpredictable cases) that (suffixal) noun is contained in its list, in essence a selectional property of feminine gender. (Feminine gender via agreement, on adjectives, determiners, etc. will involve something more.)

A second potential counterexample to the claim that parametric variation is limited to functional items comes from prepositional complementizers of the sort found in French and Italian. In both languages, infinitives are often preceded by no overt prepositional complementizer (the contexts are not identical in the two languages). In both, prepositional complementizers frequently do appear (again, the contexts are not identical). The prepositional complementizer is usually *de* in French and *di* in Italian. Sometimes it is *à* in French and *a* in Italian. A minimal difference is found with their counterparts of *try*: *essayer de...* in French vs. *provare a...* in Italian.

If French *essayer* differed from Italian *provare* in being parameterized for taking *de* rather than for *à* (and the reverse for *provare*) we would be associating a parameter with a non-functional item (assuming *try* to be lexical).

Alternatively, it might be that at least the prepositional complementizer *à/a* is associated with a list of (subject and object control) verbs that it selects for and that differs somewhat in French vs. Italian. In Italian *provare* is on the list associated with *a*; in French *essayer* is not on the list associated with *à*.

An apparent problem is that *a* seems to be in the wrong place relative to the verb, if *a* is to be the selector (parallel to feminine gender). The problem would dissolve if prepositional complementizers are merged outside VP, as in Kayne (2005c, chapters 5, 7, and 9). (Strictly speaking, the relation between prepositional complementizer and verb (or VP headed by it) will be mediated by a K(ase) morpheme.)

2. Intralanguage parametric variation

A possible objection to the preceding is that within Italian there are actually two verbs for *try* (cf. *try* and *attempt* in English) and they differ from each other in choice of prepositional complementizer:

- (2) Gianni ha provato a cantare. ('G has tried *a* sing-inf.')
- (3) Gianni ha tentato di cantare. ('...attempted *di*...')

The earlier difference between French *essayer de...* and Italian *provare a...* might then appear misleading, since Italian *tentare di...* seems to show that what's at issue is not really a difference between French and Italian at all.

The correct reply to that objection, I think, is that that's exactly what is expected, given (1). Languages are not the locus of parametric variation. Italian *a* contains in its verbal selection list *provare* but not *tentare*, an example of intra-Italian parametric variation.

Another example of the same general sort comes from French vs. English:

- (4) Jean est assez grand pour...('J is enough big for/to...')
- (5) John is big enough to...

Alone among degree words in English, *enough* follows the associated adjective:

- (6) *John is enough big to...

as opposed to:

- (7) John is too/so/as/how big.
- (8) *John is big too/so/as/how.

In French *assez* patterns regularly with the other degree words:

- (9) Jean est trop/si/aussi grand.

The word order difference between (4) and (5) can be thought of parametrically in movement terms. In English the adjective must move higher past *enough* (cf. in part Bresnan (1973, 285) and Jackendoff (1977, 151)). No comparable movement takes place in (standard) French.

But again (as with prepositional complementizers), this is not just a French/English difference, since we see something similar entirely within English, insofar as the other English degree words don't share the property of *enough* that induces movement of the adjective.

And again there is nothing unexpected here. Given (1), it's not languages that differ parametrically, at bottom, but rather particular elements of the lexicon (arguably only functional elements) that differ parametrically. So there's no reason at all not to expect that in many languages there will be cases in which similar elements within that language have differing properties (such as *enough* vs. the other degree elements in English). Another way to put this is:

- (10) Parametric variation occurs within languages as well as across languages.

A stronger formulation (that seems plausible) is:

- (11) The parametric variation that occurs within languages is of exactly the same sort as the parametric variation that occurs across languages. The elements subject to it are the same in both kinds of cases, and the features/properties in question are, too.

3. Back to lexical vs. functional

In addition to gender and prepositional complementizers, the count/mass distinction appears to involve parametric variation associated with lexical rather than functional items. For example, English and French differ with respect to *grape*:

- (12) Give us some grapes/*grape.
- (13) Donne-nous du raisin/*des raisins.

In English *grape* normally has count noun properties and can be used as a mass noun only in special contexts. In French *raisin* is on the contrary normally a mass noun. (It can be used as a count noun in special cases.) This looks like a parametric difference associated with lexical items.

Alternatively, we might try to relate this kind of variation to:

- (14) John has a large number/*amount of friends.
- (15) John has a large amount/*number of money.

by taking lexical nouns to always be accompanied by either *number* or *amount* or (cf. Kayne (2005c, chapter 8)) unpronounced NUMBER or AMOUNT, depending on count vs. mass.

If we take nouns like *number* and *amount* and their unpronounced counterparts to be functional, not lexical, elements (cf. the notion ‘semi-lexical’ in Corver and van Riemsdijk (2001)), then we can say that these functional nouns select for lexical nouns (again, in the unpredictable cases in terms of a list—the selection configuration needs to be made precise). English *grape* and French *raisin* differ with respect to which list they are on. If so, we are looking at a property of functional nouns (and only indirectly at a property of lexical nouns). English NUMBER/*number* selects for *grape*, French AMOUNT/*quantité* selects for *raisin* (the relevance of markedness needs to be worked out).

Consider now the case of missing lexical items, of the sort illustrated by English *shallow* having no direct counterpart in French. This might be thought of as a parametric difference centered on a lexical (as opposed to functional) item (realizable in one language but not in another). But that would appear to leave out the fact that French can readily express what English expresses using *shallow*, namely with *peu profond* (‘little deep’).

The alternative that suggests itself is that *shallow* in English is necessarily accompanied by LITTLE BIT:

- (16) This lake is LITTLE BIT shallow.

LITTLE BIT ‘selects’ for certain adjectives, including *shallow*, in English. The same is true in French, except that French has to pronounce BIT (as *peu*—cf. Kayne (2005c, sect.12.4)). Thus this French/English difference may be rethinkable as a property of LITTLE and/or BIT, both arguably functional rather than lexical.

A case that may lie at the intersection of *shallow* and *grape* is one pointed out (p.c.) by Peter Svenonius, who noted that various languages presumably lack a direct counterpart of *reindeer*. In fact French seems to lack a word corresponding to English *moose*. Thinking of the fact that the plural of *moose* is *moose* and that such a zero plural is widespread in English with names of animals, it may be that English has an unpronounced classifier for (large) animals that is associated with a selection list that contains *moose*. French would have a comparable classifier whose selection list contains no parallel item, so the parametric difference would be associated more directly with the animal classifier than with *moose* itself.

There is some similarity between this case and the Hale and Keyser (2002) discussion of *laugh* in English vs. Basque, which expresses *laugh* as overt light verb plus noun. The expectation would be that this difference could be localized as a property of the light verb itself, which has to be pronounced in Basque vs. English and which would count as functional, rather than as a property of lexical *laugh*. (In this case and in general, it is essential that the properties associated with parameters be limited in complexity.)

As a final case bearing on the functional vs. lexical question, consider idioms, which seem to crucially involve, in at least some cases, arbitrary choices of lexical items (judgments given for the idiomatic sense), e.g.:

- (17) He just kicked the bucket/*pail.
- (18) They're going to have to close up shop/*store.

It remains to be seen to what extent these are really arbitrary choices that would have to be directly associated with the lexical items in question. For example, *shop* vs. *store* might be related to:

- (19) They're going shopping/*storing.

and *bucket* vs. *pail* to:

- (20) You've been spending ?buckets/*pails of money these days.

4. More on *enough*

The difference within English between *enough* and the other degree words seen in (4)–(8) is paralleled by a well-known difference concerning cooccurrence with *much*:

- (21) They have too/so/how/as much money...
- (22) They have *enough much/*much enough money...

With *enough*, we have no visible *much*:

- (23) They have enough money.

which is not possible in English with the other degree words:

- (24) *They have too/so/how/as money.

In present terms, the natural proposal is that (23) contains an unpronounced MUCH (cf. Jackendoff (1977, 152)).

But that by itself leaves us with a curious coincidence. *Enough* is the one degree word to occur with unpronounced MUCH rather than with pronounced *much*, and also the one degree word that imposes the order ‘adjective + degree word’, as in *smart enough* (vs. **smart too*, etc.).

A step toward linking these two properties is to say the following:

- (25) MUCH in (23), like overt *much*, is an adjective (cf. the related *little* and also *few/fewer/fewest*—Kayne (2005c, chapter 8)).

and:

- (26) Like other adjectives, MUCH precedes *enough*.

Therefore the structure of (23) is:

- (27) ...MUCH enough money.

We can now account for the impossibility of (24) if the following two statements hold:

- (28) MUCH comes to precede *enough* as a side effect of adjectives in general coming to precede *enough*, in which case we would expect MUCH not to be able to precede *too/so/as/how*.

and:

- (29) MUCH is legitimate only if it comes to precede the degree word.

In other words, (24) is unavailable in part because (30) is unavailable:

- (30) *...MUCH too/so/as/how money

(due to the absence of adjective preposing across degree words other than *enough*) and in part because by (29) MUCH is not legitimate in:

- (31) *...too/so/as/how MUCH money.

5. On principles of pronunciation

The question now is what distinguishes (31) and (27), i.e., why does MUCH need to prepose? This needs to be related to a broader question:

- (32) Why should UG ever allow elements that can perfectly well be pronounced (e.g., as *much*) to sometimes be unpronounced?

The answer to this broader question is, I think, that the existence of non-pronunciation (at least of the MUCH type, but arguably more broadly, as I will suggest) is an automatic consequence of the architecture of derivations. (Rizzi (2005) independently has a partially similar idea for the case of the high portion of root contexts.)

Assume that the following holds:

- (33) i) At a given phase level, only the head and material in the c-command domain of the head can (and must) be spelled out.
ii) At a given phase level, no material within (or adjoined to) a lower phase can be spelled out.

If so, then spellout systematically and automatically ‘fails to see’ phrases in the Spec of a phase (similarly for adjunction, if that is distinct). Any pronounced Spec will of necessity now be the Spec of a non-phase. (For example, an overt *wh*-phrase must be in the Spec of a non-phase.)

Assume further:

- (34) (33) is the only source of non-pronunciation (at least of elements that have a potential pronunciation).

Then we can say that (31) is excluded because MUCH/*much* did not reach the Spec of any phase. In (27), on the other hand, MUCH/*much* arguably has reached the Spec of some phase and therefore can (and must) be unpronounced. (In *big enough*, the lexical adjective *big* must not end up in the same position as MUCH/*much*. Note that from the present perspective *much* and MUCH are identical, apart from landing site.)

The question arises as to the status of unpronounced copies in a movement chain, a question that might be closely related to the present discussion. Assume that successive cyclic movement passes through the Spec of a phase (alternatively, via adjunction). The corresponding copy is typically unpronounced. This follows immediately from (33). (Apparent cases of pronunciation of an intermediate or lower copy might be hidden cases of doubling.)

Somewhat different is the question of the typical non-pronunciation of the lowest copy in a chain. We could bring this case into the present framework by claiming:

- (35) Moved phrases must originate in the Spec of a phase.

(And by (33) they must not end up in the Spec of a phase, if they are pronounced.) If (35) holds, then there is no longer a need to stipulate that only the highest copy of a chain is (typically) pronounced.

I am assuming that there is no covert movement of the LF type (if only because there is no LF component—cf. Chomsky (2005)). The question also arises as to whether there can be movement from Spec,non-phase to a c-commanding Spec,phase. Long movement of that type may be excluded for PIC reasons. Whether short movement of that type exists is left an open question.

6. Further types of non-pronunciation

We also have cases of non-pronunciation related to the presence of a non-commanding antecedent, as, e.g., with VP-deletion. The non-pronunciation of the VP will follow from (33)/(34) if that VP is the Spec of some phase (or phases, if it moves).

Note in passing that Chomsky's (1995, 203) idea of linking VP-deletion directly to VP-distressing does not cover the whole range of cases:

(36) JOHN didn't break the window, YOU did (*break the window).

(37) Who broke the window? HE did (*break the window).

In these, a destressed in situ VP is impossible.

French allows unpronounced objects of certain prepositions in a way that English does not.

Alongside:

(38) On a tiré sur lui. ('one/they have shot on him')

one has:

(39) On a tiré dessus. ('...shot of-on')

By (33)/(34)/(35), the unpronounced object must be in the Spec of a phase, the head of which might be the *de* whose appearance needed explaining. (Alternatively, *de* itself might head a phase through whose Spec the unpronounced object has passed. In some cases there may be an unpronounced counterpart of *de*.)

What about unpronounced heads? If the unpronounced head is the head of a projection that contains no pronounced material at all, we can speak of an unpronounced phrase, and fall back into the previous discussion.

What, then, of an unpronounced head whose maximal projection does contain pronounced material (in complement or in specifier position)? A familiar apparent such case is pseudo-gapping/VP-subdeletion, as in:

(40) He praises you more often than he does us.

An idea that goes back to work by Jayaseelan (1990) is that the stranded phrase *us* in (40) must have been moved out of the VP prior to 'deletion'.

But why couldn't the verb alone have been 'deleted' under identity with the matrix verb?

Assume as earlier that (33) is the sole source of non-pronunciation (at least for elements that have a possible pronunciation). Then the verb alone could not possibly be unpronounced, since head positions themselves (whether of phases or non-phases) will never fail to be seen by the operation of spellout. Spellout will fail to see V in (40) if V is within a phasal Spec, in which case pronounced *us* must not be, i.e., must have moved out (to the Spec of some non-phase), which is what we needed to show.

Note that the ‘must’ of (33)i excludes classical head movement. Head movement that would leave a pronounced copy behind might in turn be excluded if the doubling alluded to just above (35) is incompatible with head positions—cf. Kayne (1994a, 59) on coordination.

7. Back again to *enough*

The deviance of:

- (41) *John has much enough money.

can now be attributed to (33) (assuming the appropriate landing site(s) for *much*/MUCH).

As is well known, (41) contrasts with:

- (42) (?)John has little enough money.

which in turn correlates with the fact that (23) cannot have the interpretation of (42). Put another way, *little* must be pronounced, unlike *much*, even when preposed to *enough*. Rather than an informal notion of ‘recoverability’, it might be that (42) contains an unpronounced negation (that must be licensed by overt *little*—cf. the earlier discussion of *shallow*) and that the presence of that negation prevents *little*/LITTLE from reaching the Spec of a phase.

8. Conclusion

I. The restriction of parametric variation to functional elements may be tenable despite a number of apparent counterexamples.

II. The pronunciation or not of material that has a potential pronunciation may be entirely and automatically regulated by principles (33)–(35) that make reference to phases and to spellout; spellout will have a ‘blind spot’ for material in the Spec of a phase. (It remains to be determined how closely the notion of phase needed here matches the notion of phase needed for movement and the PIC (and what exactly determines what categories count as phases).) If (33)–(35) are correct, then UG has no need for an additional operation of deletion or ellipsis.

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A Short Note on *where* vs. *place*

1. Introduction

In the spirit of Katz and Postal (1964, 133–134), Kayne (2004b) proposed that sentences like:

- (1) John went there.

contain an unpronounced noun corresponding to overt *place*. (I will represent the unpronounced version as PLACE, with capital letters, and similarly for other unpronounced elements.) Thus (1) should be thought of as:¹

- (2) ...there PLACE

At the same time, I proposed that this same *there* can be accompanied in other cases by an unpronounced noun distinct from PLACE, as in the now archaic:

- (3) He spoke thereof.

for which I took there to be an unpronounced THING present in the derivation:

¹ Alternatively, (2) might rather be ‘...PLACE...there’, especially if chapter 4 is correct in its proposal that unpronounced elements necessarily occupy the Spec of some phase.

- (4) ...there THING of

Similarly, in (5) it is more plausible to postulate REASON than PLACE as the unpronounced noun accompanying *there*:

- (5) Therefore, we should say that.

with the representation:

- (6) there REASON fore...

This establishes a link (that abstracts away from the orthographic difference between *fore* and *for*) to:

- (7) What did you say that for?

which also plausibly contains REASON, as well as to:

- (8) For what reason did you say that?

with overt *reason*. (The unpronounced noun present with *thereby* may be WAY.)

In archaic English (and in contemporary Dutch and German), one also has sentences like:

- (9) Whereof have they spoken?

These must have a parallel analysis, with unpronounced THING (cf. (3)/(4)):

- (10) where THING of...

(and similarly for *whereby*, again perhaps with WAY).

The claim that *there* and *where* together form a natural class (along with *here*) is immediately plausible. Let me informally refer to them using van Riemsdijk's (1978) term 'r-pronoun'. The 'r-' part of this term is based on the fact that the final consonant of *there*, *where* and *here* is /r/ (and similarly in Dutch). The 'pronoun' part of the term has an obvious naturalness in the case of *there* and *here*; for *where*, one can think of 'indefinite pronoun', a term that has sometimes been used.

More satisfactorily, though, we should think of this terminology in light of Postal's (1966) proposal that pronouns are essentially the same as determiners (and are not nouns). Postal is clearly right in at least some cases, e.g., in French the accusative third-person clitic pronouns *le*, *la*, and *les* (m.sg.; f.sg.; pl.) have exactly the same form as the definite article. Of course, if Postal is right, the term 'pronoun' itself is misleading. Pronouns don't 'stand for' nouns, rather they are determiners that allow the non-pronunciation of nouns.

In this sense, to (informally) call *there* and *where* (and *here*) ‘r-pronouns’ is natural, given analyses such as those indicated in (10), (6), (4), and (2), which specifically attribute to *there*, *where*, and *here* the property of allowing the non-pronunciation of the associated noun, in a way partially akin to more familiar pronouns. (Similarly, we can call the *there* and *here* of non-standard *that there book* and *this here book* ‘r-determiners’.)

Postal’s proposal needs to be fleshed out in various ways. For example, French subject clitics don’t match the definite articles in the way that accusative clitics do. In Italian, the accusative clitics match the definite article to a large extent but not as regularly as in French. In English, there is no pronoun exactly matching the definite article *the* at all. Furthermore, the pronouns that in Romance do match well with the definite article are quite distinct in various ways from the first- and second-person pronouns,² the analysis of which as determiners is less certain (see Bartos (2001) for relevant discussion of Hungarian). Nonetheless, Postal’s core claim that what are traditionally called pronouns are not nouns seems plausible.³

2. *where* vs. *place*

Let us assume, then, that *there* and *where* (and *here*) are close to pronouns (and determiners), and are not nouns. This is perfectly compatible with the (almost certain) fact that r-pronouns are not single morphemes, since what we call ordinary pronouns are often not single morphemes, either. Ordinary pronouns can have Case morphology (even in English, thinking of the *-m* of *him*, *them*, and *whom*), plural morphology (e.g., French *le* vs. *les*), gender morphology (Italian *lo* vs. *la*), and other morphology of a less clear sort (French *moi*, *toi*, *soi* as *m-/t-/s-* + *-oi*—see Kayne (2003a)).

Similarly, *there* and *where* and *here* share an *-r* that is arguably a morpheme, as Noonan (2005) has in fact suggested for partially similar cases in German. The *th-* of *there* is arguably a morpheme that *there* has in common with *they* and *that* and *then*—cf. Bernstein (2004). The initial *wh-* of *where* is plausibly a morpheme that *where* has in common with other *wh*-words. If both *-r* and *th-* are separate morphemes in *there*, and *-r* and *wh-* in *where*, then so might be the vowel *-e-* between them.

The possible morphemic status of that vowel is made more interesting by the observation that, despite the orthography, the vowel of *here* is not the same as that of *there* and *where*. This recalls Italian (and Spanish) pronominal possessives, which have second singular *tu-* and (third singular/) reflexive *su-* vs. first singular *mi-*. The fact that *here* and *mi-* share the status of being ‘the odd man out’ in turn recalls the fact that *here* has, interpretively speaking, something in common with first person,

² And from reflexives of the Romance *s-* type—cf. Kayne (2003a).

³ Unless it were to turn out that all categories are either nouns or verbs, with nouns (and similarly for verbs) then subdividing into lexical nouns and (multiple subclasses of) functional nouns, with functional nouns including classifiers and also nouns like English *number*, *amount*, *pound*, etc., and perhaps also what we call determiners—cf. Corver and van Riemsdijk (2001).

and suggests a possible link between the indefinite *wh*- and the *s*- morpheme of Romance, which might then be seen as the indefinite person counterpart of first-person *m*- and second-person *t*-.

Taking *where* to have much in common with pronouns/determiners (and taking *where* not to be a noun) leads to a clear differentiation between *where* and *place*, which seems clearly to be a noun rather than a pronoun. This difference is reflected in:

- (11) the part of Italy where they spent the summer
- (12) *the part of Italy place they spent the summer

Where, but not *place*, can have the behavior of a relative pronoun.⁴ A similar distinction can be seen in interrogatives:⁵

- (13) Where did they spend the summer?
- (14) *Place did they spend the summer?

((13) contains PLACE in addition to *where*, parallel to (1)/(2).)

Conversely, *place* behaves like an ordinary noun in ways not open to *where*:⁶

- (15) The place they took us to was beautiful.
- (16) *The where they took us was beautiful.

as well as:

- (17) They took us to a really beautiful place.
- (18) *They took us to a really beautiful where.

Despite these clear differences, there is a context in which *where* and *place* appear to be equivalent:

- (19) They went somewhere else.
- (20) They went someplace else.

⁴ I leave open the question whether (11) contains PLACE in addition to *where*. Relevant is the exact form of the head-raising analysis of relatives—for recent discussion, see Cheng (2005).

⁵ A partial counterpart of (14) with *cosa* ('thing') is possible in (certain varieties of) Italian:

i) Cosa vuoi fare? ('thing want-you to-do')

presumably with an unpronounced CHE ('what').

⁶ In what is for me archaic English, one can have:

i) ?Let's go just any old where.

I would guess that *where* here is still not a noun, despite being preceded by (this very particular) *old*, which seems to be a reinforcer of *any*.

These appear to be synonymous and seem equally acceptable.⁷

At the same time, even *somewhere* and *someplace* act very differently from each other in:

- (21) She's written somewhere/*someplace between 10 and 15 papers this year.
- (22) She's written somewhere/*someplace around 15 papers this year.

A plausible interpretation of these facts is as follows. In line with (2), (19) contains unpronounced PLACE (as does (13)—v. note (1)):

- (23) ...somewhere PLACE else

In contrast, (21) and (22) with *somewhere* do not contain PLACE. They are, rather, like (3) and (9) and contain THING, instead:⁸

- (24) ...somewhere THING between/around...

in a way that recalls:

- (25) She's written something like 15 papers this year.

with overt *thing*.⁹ (Put another way, (21) and (22) are the closest productive counterparts in English to

⁷ Payne and Huddleston (2002, 423) give *-place* as an informal variant of *-where* in American English. Cf. Curme (1977a, 18).

⁸ It is worth noting that the presence of THING (and not PLACE) in (21) and (22), as given in (24) (in a way parallel to (3) and (4)), suggests that *between* in (21) is not intrinsically a locative preposition. Cf. the fact that French *entre* ('between') occurs as a reciprocal:

- i) s'entretuer ('refl. *entre* to-kill' = 'to kill one another')

The text analysis takes *where* not to be intrinsically locative, either. As Thomas Leu (p.c.) has pointed out, that *where* is not intrinsically locative is also supported by those varieties of German that have *wo* ('where') as a relative clause marker even with non-locative heads—v. Bayer (1983) and van Riemsdijk (1989); cf. also the use of *où* ('where') in French in temporal relatives, as discussed by Starke (2001)

⁹ In some colloquial English, one finds:

- i) She's written like 15 papers this year.

arguably with an unpronounced SOMETHING. Similarly for:

- ii) She was like he's gotta be kidding.

with an unpronounced verb in addition (probably GO—cf. van Riemsdijk (2002)); cf. in part Singler (2005). In other words, (ii) is really:

- iii) She was GOING SOMETHING like he's gotta be kidding.

Note that the proposal in (24) is supported by the fact that (21), (22), and (25) share the property of being unamenable to *else*:

sentences like (9), which are productive in Dutch and German.¹⁰)

Despite the apparent synonymy of (19) and (20), and similarly for:

(26) Let's go somewhere/someplace tonight, instead of staying home.

there is reason to think that *somewhere* and *someplace* are actually never quite identical in interpretation, even when both are purely locative, as in (26). This is reflected, I think, in the fact that the following are (to me) less natural with *someplace* than with *somewhere* (it may be that *else* would obscure the difference here):

(27) They must have hidden it somewhere/?someplace.

(28) You've got to take your vacation somewhere/?someplace, after all.

As an initial approximation, let us say that *somewhere* is less specific than *someplace*.

Given (23) and the corresponding structure without *else*:

(29) ...somewhere PLACE

which I take to be appropriate for the *somewhere* subcase of (26)–(28) (as opposed to (21)/(22)/(24)), a natural proposal, in light of the difference in interpretation felt in (27) and (28), is that *someplace* does not contain WHERE:

-
- iv) *She's written somewhere else between 10 and 15 papers this year.
 - v) *She's written somewhere else around 15 papers this year.
 - vi) *She's written something else like 15 papers this year.

Perhaps closely related to (i) is:

- vii) She's written some 30 articles this year.
- viii) She hasn't written any 30 articles.
- ix) She ain't written no 30 articles.

with unpronounced THING and LIKE:

- ix) ...some/any/no THING LIKE 30 articles

This is supported by:

- x) *She's written just some 30 articles.

parallel to:

- xi) *She's written just something like 30 articles.

vs.:

- xii) She's written just about 30 articles.

¹⁰ Even closer to (21) and (22) is the Dutch phenomenon that has *ergens* ('somewhere') replacing *iets* ('something') when *iets* is the object of a preposition—v. van Riemsdijk (1978, 36 ff.).

(30) ...some (*WHERE) place

since, if it did, it would be hard to see where the (slight) difference in interpretation between locative *somewhere* and locative *someplace* comes from. Instead, if (23) and (29) differ from (30) as indicated, we can say that the less specific interpretation associated with *somewhere* is to be attributed to the presence of *where* (i.e., *where* adds an element of indefiniteness, informally speaking, to (29) and to (23)).¹¹ As for the question why WHERE would be impossible in (30), it might be that *where* in such cases could not reach (or originate in) a position in which its non-pronunciation would be possible (see note 1).

A related question arises concerning (24) as (part of) the analysis of (21) and (22). If 'somewhere THING' is available, why can the 'where' not be omitted entirely and THING be pronounced, yielding?:

(31) ??She's written something between 10 and 15 papers this year.

(32) *?She's written something around 15 papers this year.

These are clearly less good with *something* than with *somewhere*. A possible answer is that *something* by itself (i.e., without WHERE) would be too specific (not indefinite enough) in the relevant sense, for this context.

Conversely, (25) is considerably degraded if *something* is replaced by *somewhere*:

(33) *She's written somewhere like 15 papers this year.

The question is why this is not possible with '...somewhere THING...'. Recalling that unpronounced THING may have to move (see note 1), it might be that there is a violation (if *like*, but not *between* or *around*, introduces a kind of relative clause) akin to those produced by moving a clitic heading a relative—v. Kayne (1975, sect. 2.8).

3. R-pronouns and licensing

The presence vs. absence of a determiner before *where* (as in *somewhere* vs. interrogative *where*) does not seem to matter to the presence of unpronounced THING, to judge by the fact that THING is present in both (24) (with *somewhere*) and (10) (with *where*). Similarly, unpronounced PLACE is present in both (29) and:

(34) where PLACE...

which corresponds to simple locative sentences like:

(35) Where are you going?

in a way entirely parallel to (1) and (2).

¹¹ Cf. perhaps the *which* of *every which* way.

Yet the presence of a determiner before *where* does make a difference for a phenomenon found in non-standard English (noted by Curme (1977b, 142)):

- (36) Let's go somewheres (else).
 (37) If you go anywheres (else), go to Paris.

in which *somewhere* and *anywhere* (and *nowhere*) can (non-standardly) be followed by an *-s*. There is a sharp contrast with bare *where*:¹²

- (38) *Wheres (else) are you going?

This contrast within non-standard English recalls a more familiar one concerning adjectives in standard English:

- (39) You've written too long a book.
 (40) You've written how long a book?

which are opposed to:

- (41) *You've written long (of) a book.

An adjective can precede the indefinite article (and in at least some colloquial English an *of*, too—*too/how long of a book*) only if the adjective is modified by a degree word.

Hendrick (1990) proposed an analysis involving movement. The adjective in (39) and (40) is moved past *a* (and, by extension, *of*, in the relevant English) as the result of an A-bar movement within the DP that has something in common with ordinary wh-movement. The contrast with (41) is to be understood in terms of pied-piping. The degree word *too* or *how* in (39)/(40) pied-pipes the adjective, which could not move on its own, as shown by (41).

Let me propose a parallel way of understanding (36)–(38). The non-standard English in question has an *-s* morpheme merged higher than *where*. *Where* can be moved past this *-s* if pied-piped by *some* or *any*, as seen in (36) and (37).¹³ Just as in

¹² Similarly for relative *where*:

i) the closet where(*s) they keep their shoes
 and, I think, for:

ii) *Wheresever they go, they run into trouble.

¹³ Or by *no*:

i) You ain't going nowheres (else).

The result, however, seems less good with *every*:

ii) They went everywhere(?s).

though improved with *else* (as Judy Bernstein (p.c.) points out):

(41), though, if there is no determiner,¹⁴ there can be no pied-piping, as shown by the impossibility of (38).

It should be noted that having this *-s* present and leaving *where* in situ does not yield an acceptable output, either:

(42) *S where (else) are you going?

as opposed to the adjective case, where non-movement in the absence of a pied-piper yields the well formed:

(43) You've written a long book.

iii) (?)They went everywhere else.

Just as *else* can be stranded in (36) and (37), so may be PLACE:

iv) [some/any where]_i s [t_i (else) PLACE]

though this question is complex—see note 1.

The lesser status of *every* in (ii) with *-s*, as compared with *some/any/no*, may be related to:

v) *everyhow

vs.

vi) somehow, anyhow, nohow

as well as to the contrast between (21) and:

vii) *Everywhere between 10 and 15 people will come to the parties.

though (vii) is not good with *nowhere*, either, much as:

viii) Somewhere/*nowhere/*everywhere around 15 people showed up.

Different is:

ix) Nowhere (*else)/* everywhere near that many people came to the party.

which like (viii) contains THING rather than PLACE—cf. the discussion of (25) and:

x) Nothing like that many people came to the party.

On the impossibility of *else* in (ix), cf. note 9. For me, (vi) is also impossible with *else*—**somehow else*, etc.—though some speakers accept it.

Why English doesn't generalize (vi) and the *-where* cases to **somewho*, **anywhat*, **nowhen*, etc. remains to be understood.

¹⁴ If there is an unpronounced determiner (cf. Watanabe (1992) and Kayne (1998b)), it must not be capable of acting as a pied-piper, at least not within DP.

I leave open the question whether the *-s* of interrogative *whereabouts* should receive similar treatment, and similarly for the *-s* of a (*long*) *ways* and for that of *otherwise*.

I think that (i) is more like (36) than like (38):

i) ?We should go elsewhere.

If so, *else* must be a pied-piper, unless there's an unpronounced SOME present.

Possibly, the *-s* in question, as opposed to *a*, requires that its Spec be filled.

There is a restriction concerning determiners with *where* that may further support the (partial) parallelism between (36)–(38) and (39)–(41). It is that *somewheres* and *anywheres* have no counterpart (at least to my non-standard ear) with the indefinite article *a*:

- (44) *Let's go awheres (else).

The landing site of *too long* and *how long* in (39) and (40) is clearly to the left of the position of *a*. If *somewhere* and *anywhere* in (36) and (37) have a parallel landing site, it will arguably be to the left of *a*, too, in which case (44) would not be expected at all (i.e., *a* is not part of the same class of determiners as *some*, *any*, and *no*).¹⁵

Assume, now, that standard English has a null counterpart within DP of the non-standard *-s* of (36) and (37) (call it *-S*). By extension from the preceding discussion, *somewhere* and *anywhere* will reach

Spec, *-S* as the result of the pied-piping of *where* by *some* and *any*. Since the indefinite article is not a potential pied-piper of that sort, we again have, parallel to (44):¹⁶

- (45) *Let's go awhere (else).

There is a contrast between (36)/(37) and:

- (46) *Let's go someplaces (else).
(47) *If you go anyplaces (else), go to Paris.

Unlike *where*, *place* in non-standard English seems incompatible with this non-plural *-s*. This contrast will provide additional support for the idea of a categorial difference between *where* and *place* if it can be shown that it is the nominal character of *place* (vs. the pronominal/determiner character of *where*) that is responsible for the difference in behavior.¹⁷

¹⁵ One might, instead, wonder about:

- (i) *Let's go somewheres a (else).

which plausibly falls together with:

- (ii) *You've written too long (of) a.

though the following contrast will need further elucidation:

- (iii) *Let's go somewheres a (else) one.
(iv) You've written too long (of) a one.

¹⁶ Bare *where* must have access to another licensing strategy, in all likelihood in the sentential domain. I leave this question open (but see note 19).

¹⁷ Alternatively, (36)/(37) vs. (46)/(47) might indicate that pied-piping to Spec, *-s* depends in part on the presence of unpronounced *PLACE* itself, as opposed to overt *place*—cf note 1.

Something (else) is also incompatible with the non-standard non-plural *-s* of *somewheres (else)*, just as *someplace (else)* is in (46). This groups *something* and *someplace* with *somebody* and *someone*, insofar as they, too, are not compatible with the non-standard *-s* in question:

Note, finally, that the interpretation of (36)/(37) is not that of plural *-s* and that *somewhere* in fact is incompatible with plural *-s*:

- (48) Let's go somewhere that's interesting, for a change.
 (49) *Let's go somewheres that are interesting, for a change.

4. *place* vs. *place*

With *place*, the question of plurality is more complex, in that one does have, especially with overt *to*:

- (50) Let's go ??(to) some places that are interesting.

Here the *-s* is the plural one. It is not compatible with *else*:

- (51) *Let's go (to) some places else (that are interesting).

and in that regard shows a sharp contrast with the *-s* of (36)/(37). In addition (50) has higher stress on *places* than on *some*, which is the reverse of *somewhere(s)* and also of *someplace* written as a single word.¹⁸

Put another way, the *place* seen in (50)/(51) is a noun comparable to the *book* of a sentence like:

- (52) Let's buy some books (*else) that are interesting.

in which *else* is likewise impossible and in which *books* has higher stress than *some*. On the other hand, the *place* of:

- (53) Let's go someplace(*s) else.

is compatible with *else* as shown and has low stress. Although, as argued earlier, this *place* differs sharply from *where* (cf. especially the discussion of (21)–(30)),

-
- i) Let's invite somebody/*somebodies (else) over for dinner.
 ii) Let's invite someone/*someones (else) over for dinner.

If the generalization is that non-standard *-s* is incompatible with an overt noun (which *where* is not), then *one* in (ii) must be a noun. (Scandinavian may be different here—v. note 21.)

¹⁸ English often writes *sometime* as one word, though it (for me) does not share the behavior of *someplace*, given *someplace else* vs. **sometime else*.

Note also:

- i) They're always going places (*else).

where the impossibility of *else* indicates the presence of the ordinary noun *place*.

it clearly also differs sharply from the *place* of (50)/(51), in a way that recalls the double-sided behavior of *thing* in:

- (54) Let's do some other things.
- (55) Let's do something(*s) else.

The parallelism between *place* and *thing* is emphasized by:

- (56) Let's go someplace else beautiful this time.
- (57) *Let's go (to) some other place beautiful this time.

taken together with:

- (58) Let's buy something else beautiful this time.
- (59) *Let's buy some other thing beautiful this time.

The impossibility of plural *-s* in (53) and (55) recalls the fact that in the French counterpart of *something beautiful* the normal feminine gender of French *chose* ('thing') cannot be expressed:

- (60) quelque chose de beau/*belle ('some thing of beautiful_{masc.}/beautiful_{fem.}')

as well as the fact that French can't have plural here, either:¹⁹

- (61) *quelques choses d'anormaux ('some things of abnormal')

¹⁹ French differs from English with respect to interrogative words. Although (i) and (ii) are both fine:

- i) Who else have you invited?
- ii) Qui d'autre as-tu invité? ('who of other have-you invited')

there is a difference between:

- iii) ??Who famous have you invited?
- iv) Qui de célèbre as-tu invité? ('who of famous have-you invited')

The greater deviance of (iii) might be relatable to (v) vs. (vi):

- v) ??Who have you invited famous?
- vi) Qui as-tu invité de célèbre? ('who have-you invited of famous')

if *who famous* can never be a derivation-final constituent—v. Kayne (2000, p. 317 (18)) and Kayne (2004b, appendix)—though it remains to be understood exactly why (iii) is worse than:

- vii) Somebody famous has already been invited.

The answer may lie in the extra licensing requirement (if generalized to all bare *wh*-words) mentioned in note 16, on the assumption that French *de* is playing a relevant licensing role in (iv) and (vi), and that *who else* in (i) is not a constituent (thinking in part of Leu (2005)), as made plausible by:

- viii) Who ever the hell else are you planning to invite?

A possible interpretation of these facts is that *something* (and *quelque chose*) and *someplace* are nominal counterparts of small clauses, i.e., they contain nouns associated with a reduced set of functional projections (that in particular does not include number and feminine gender).²⁰

If this is correct, then all instances of *place* are instances of nouns, i.e., *place* turns out to be consistently different from pronominal/determiner-like *where*.²¹

²⁰ On the difference in syntactic status between feminine and masculine gender, see Ferrari (2005).

The text suggestion is orthogonal to Leu's (2005a) proposal to the effect that *something* (*beautiful*) contains an additional unpronounced noun (or perhaps two). On the question of adjectives here, see also Kishimoto (2000) and Larson and Marusic (2004). The text suggestion concerning the plural restriction differs from Kishimoto's.

It may be that *else* is limited to appearing in such 'small nominals', to judge by its restriction to singular:

- i) We didn't see much else/*many else.
- ii) We saw little else/*few else.
- iii) If all else fails/*fail,...

Possibly the exclusion of number with small nominals might underlie:

- iv) everywhere vs. *allwhere

and similarly for **allbody*, **allone*, **althing*, and **allplace*. Relevant, ultimately, will be **eachwhere*, **eachplace else*, etc.

²¹ A further difference is *elsewhere* vs. **elseplace*, though it is unclear whether it can be made to follow simply from the non-N vs. N difference. Also yet to be understood is **elsehow*, as well as **some elsewhere*, ??*elsewhere interesting*, and **aplace else*. If this last were to turn out to reflect the necessary absence of *a* from small nominals, the exclusion of (45) and (44) might be looked at in the same way.

Left open, too, is the contrast (in non-standard English):

- i) that there place/city
- ii) *some where place/city

and the question whether there are languages in which a counterpart of (ii) can be found. Of potential importance in this regard is Leu's (2005b) Swedish example with *var...nånstans*, in which it seems that *where* and a counterpart of *place* do cooccur, though separated (v. note 1).

Expletives, Datives, and the Tension between Morphology and Syntax

1. Introduction

Pronominal clitics of the sort found in Romance languages are in many ways obviously part of the syntax of those languages. Yet certain aspects of their behavior can lead to proposals more morphological than syntactic in character, as seen in Perlmutter's (1971) templatic approach to the question of clitic ordering and clitic combinations. In this chapter, I examine a somewhat different aspect of Romance clitics, one for which a more morphological, less syntactic approach might again come to mind. I will argue, however, in favor of an analysis that using familiar syntactic notions ties the phenomenon in question more tightly and more fruitfully, I think, to other aspects of Romance (and universal) syntax.¹

In the course of so doing, I will be led to reanalyze the status of expletives such as English *there* and its Romance counterparts, proposing in effect that they are

¹ The present chapter corresponds in varying degrees to the first part of a paper presented at the Stony Brook Workshop on Romance Clitics (May 2005), at the Cambridge University Graduate Linguistics Conference (March 2006) and GLOW, Barcelona (April 2006), and in talks at the University of Padua and University of Siena (March 2006).

The proposal on expletive *there* goes back to talks at NYU (September 2000) and especially at Sophia University, Tokyo (November 2002), as well as to a series of lectures at Leiden University (May/June 2003).

Since Perlmutter (1971), many authors have taken a more syntactic (and more fruitful) approach to clitic ordering and clitic combinations; for particularly striking results concerning Romanian, see Săvescu (2007).

not true expletives. Rather, they originate within their so-called associate, in a way that has something in common with Moro (1997) and, more so, with Sabel (2000), though the proposal I will make ties expletive *there* more closely to various other instances of *there* than do these earlier works.

2. North Italian *ghe*

A clitic that will have an important role in what follows is the *ghe* found in many North Italian dialects, in particular in the Veneto area (Padua, Venice, etc.). The behavior of this *ghe* is different in certain respects from that of comparable clitics in French and Italian.

French has a locative clitic *y* seen in:

- (1) Jean *y* a mis le livre. ('J there has put the book')

This *y* is a clitic in the familiar sense. It can't be coordinated, or modified, or contrastively stressed. It occurs to the left of the finite verb or auxiliary, in contrast to non-clitic locatives, which follow the verb. In French, this *y* is distinct from the third-person dative clitic, which is *lui* in the singular and *leur* in the plural, e.g.:

- (2) Jean *lui* a donné le livre. ('J him/her(dat.) has given the book')

A parallel contrast between locative clitic and third-person dative clitic holds for Italian:

- (3) Gianni *ci* ha messo il libro. ('G there has put the book')
 (4) Gianni *gli* ha dato il libro. ('G him/them(dat.) has given the book')

with *ci* the locative clitic and *gli* the dative (*le* for feminine gender, in the singular).

Many Veneto dialects, on the other hand, have a clitic *ghe* that seems to cover both locative and third-person dative, e.g., in Paduan:

- (5) *Ghe* meto el libro. ('there I-put the book')
 (6) *Ghe* dago el libro. ('there I-give the book' = 'I'm giving him/her/them the book')

The use of *ghe* in (6) is systematic for Paduan—there is no distinct dative clitic form for third person, singular or plural.²

The question is how to think of this kind of syncretism. A highly morphological approach might be tempted to say that it's merely a case of two pronominal clitics

² This is so, whether or not the sentence contains an accusative clitic—differently from the Spanish 'spurious *se*' that Perlmutter (1971) discusses.

that happen to be spelled out in the same way. Yet Paduan third-person pronouns typically have, like those of French and Italian, an *-/-* (sometimes pronounced as a *y*-glide, sometimes not pronounced), and never otherwise have a *g(h)-* (the *h* in *ghe* is just orthographic).

The more syntactic approach that I will now develop will try, instead, to find a principled reason for the appearance of an apparently locative clitic in dative sentences like (6).

3. *There* and *ghe* as deictics

As a first step, it is necessary, I think, to move away from the terminology ‘locative clitic’, which is misleading in an important respect. This is true for all three languages mentioned so far. Both French and Italian, which clearly distinguish their locative clitic from their dative clitics, have their locative clitic appearing, as is well-known, in sentences that are not locative at all:

- (7) Jean y pense. (‘J of-it thinks’)
- (8) Gianni ci pensa. (Italian—same)

In these sentences with the verb ‘think’, in the sense of ‘think of/about something’, both French and Italian readily have, when the complement is an unstressed pronominal (especially inanimate), what looks like the locative clitic.

In earlier work—Kayne (2004a)—I argued that sentences like (7) and (8) correspond closely to archaic English sentences of the following sort:

- (9) We spoke thereof.

which also contain what seems to be a locative *there* in sentences that do not involve location. Such archaic English sentences (whose counterparts are very much alive in Dutch and German) differ from (7) and (8) in having an overt preposition (in this example, *of*) in addition to *there*. My proposal was to take French and Italian sentences like (7) and (8) to contain a silent counterpart of that preposition, whichever one is appropriate for the verb in question. (Thus (7) will have a silent *à* and (8) a silent *a*—essentially the same one in the two languages.)

From this perspective, there is a unified phenomenon in (7)–(9) whereby an element that looks like a locative (*y* or *ci* or *there*) appears in a non-locative sentence. The account I proposed goes essentially as follows (using mostly English examples, but the analysis is the same for French and Italian, apart from the orthogonal non-clitic vs. clitic difference).

There is not, strictly speaking, locative in any of its uses. Both in (9) and in banal locative sentences like:

- (10) We went there yesterday.

we have an element *there* that is the same element as the one found in non-standard English in:³

- (11) That there car ain't no good.

In addition, the proposal is that in both (10) and (11) *there* modifies a noun, except that in (10) the noun is silent (to be indicated by capital letters), i.e., (10) is to be thought of as:

- (12) ...there PLACE...

The same holds of (9), except that the silent noun in (9) is not PLACE, but THING:⁴

- (13) ...there THING of...

Exactly parallel, except for the silent preposition (indicated as P) are (7) and (8):

- (14) ...y/ci THING P...

The question now is how to understand the elements *y*, *ci* and *there* that occur in this range of environments (see also note 3). In (7)–(9), they are not locative in any simple sense. The link with (11) suggests a link with what we call demonstratives, which in some cases do seem related to location, as in pointing contexts:

- (15) Bring us that book, please.

³ And similarly for *here* in:

- (i) This here car ain't no good.

Although non-standard in English, comparable combinations of *there/here* with a demonstrative are standard in French:

- (ii) cette voiture-là ('dem. car there')
(iii) cette voiture-ci ('dem. car.here')

(In French, the demonstrative itself does not vary in form, in contrast to English *this* vs. *that*.) On the fact that *-là* and *-ci* follow the noun in French, see Bernstein (1997). Sentences like (11) and (i) but with a definite article in place of the demonstrative are also standard in various Scandinavian languages—cf. Leu (2007).

In French, there is also a form *ici* ('here') in ordinary locative sentences like:

- iv) Jean est ici. ('J is here')

with an extra *i-* whose morphemic status remains to be fully understood.

⁴ Possibly THING precedes *there*, and similarly for French and Italian; cf. chapter 4.

Yet, as is well-known, demonstratives are not limited to contexts involving location:

- (16) That book you mentioned yesterday is of little interest.

A familiar idea concerning demonstratives is that they involve deixis, or reference to or orientation with respect to the speaker. The difference between *this* and *that* in English could, for example, be put as ‘in the sphere of the source of the sentence’ vs. ‘not in the sphere of the source of the sentence’.

Taking the term ‘deixis’ over to *there* (and *here*), I will henceforth speak of deictic *there* (and deictic *here*), for all the cases mentioned. In each of (9), (10), and (11) we have an instance of exactly the same deictic *there*; the three differ with respect to what deictic *there* modifies (THING in (9), PLACE in (10), and *car* in (11)⁵). For the case of deictic *there* modifying PLACE, a noun expressing location, I will use the term ‘locative *there*’, to be understood solely as an abbreviation for ‘deictic *there* modifying PLACE’.

From this perspective, all of (9)–(11) contain deictic *there*. But of the three sentences, only (10) is a locative sentence (in the sense that it contains locative *there*, by virtue of containing ‘*there* PLACE’). (7) and (8) are like (9)—they contain deictic *y* and *ci*, the French and Italian counterparts of deictic *there*, but are not locative sentences, since they have no PLACE.

Y and *ci* in (7) and (8) are deictic clitics that are not part of a locative phrase. In:

- (17) Jean *y* va. (‘J there goes’)
 (18) Gianni *ci* va. (Italian—same)

y and *ci* are deictic clitics that are part of a locative phrase, since (17) and (18) contain PLACE.

Returning to Paduan, we see that (5) contains a deictic clitic *ghe* that is part of a locative phrase, given that the verb ‘put’ calls for PLACE (or some overt counterpart). The specificity of Paduan (6), repeated here:

- (19) *Ghe dago el libro.* (‘there I-give the book’ = ‘I’m giving him/her/them the book’)

is now seen to be that Paduan, unlike standard French and Italian, has a deictic clitic in its third-person dative sentences where one might have expected a dative clitic. The question is why.

A second question is whether (19) contains PLACE, i.e., whether *ghe* there is locative. I will argue that it is not. *Ghe* in (19) will be seen to be deictic, but not locative, just as the clitics *y* and *ci* in (7) and (8) are deictic but not locative.

⁵ In colloquial Norwegian, a prenominal (counterpart of) *there* can in some cases itself modify PLACE, with ‘*there* PLACE’ then modifying the lexical noun—see Leu (2007)—whether this is an option in non-standard English is not clear. English certainly allows this postnominally, as in:

- i) That car (over) there looks dangerous.

4. Silent DATCL

As part of the analysis of Paduan sentences like (19), let me propose that (19) actually does contain a third-person dative clitic, of the sort seen overtly in French and Italian in (2) and (4). The difference is that, in Paduan and various other dialects, that clitic is silent. In other words, (19) should be thought of as:⁶

(20) DATCL *ghe* dago el libro.

where DATCL represents the silent dative clitic.

The fact that *ghe* appears to ‘replace’ only third-person dative clitics must now be interpreted more precisely as meaning that the silent DATCL that *ghe* co-occurs with in sentences like (19)/(20) is limited to third person and cannot be first or second person (or reflexive).

This person restriction can be understood in part as follows. The person property of silent DATCL⁷ links up here to the fact that various languages (e.g., Somali—cf. Saeed (1993, 174)) have zero forms for (object) third-person pronouns in general (even in the absence of any apparent licenser), but not for first or second person. Closer to Paduan, French silent subject clitics, as in:

(21) Lui a téléphoné (‘him has called’)

with a silent third-person subject clitic (in addition to non-clitic *lui*), are also limited to third person (non-reflexive):

(22) *Moi ai téléphoné (‘Me has called’)

as discussed in Kayne and Pollock (2001, sect. 5). Additional instances of a restriction to third person, in the case of silent pronominals, are discussed in Kayne (2001). (Whether, despite appearances, this restriction can be attributed directly to UG, in which case nothing special would need to be said about Paduan in this regard, remains to be seen.)

By attributing the person restriction holding of Paduan dative sentences with *ghe* to the presence of DATCL, i.e., by calling DATCL (rather than *ghe*) the true locus of the person restriction, we account straightforwardly for the fact that the Paduan counterpart of (7) and (8), namely:

⁶ Whether DATCL precedes *ghe* (as I’ve chosen to indicate it here) or follows it is a potentially important question that will, however, not be relevant to what follows in this chapter.

The silent clitic postulated here should be compared to those discussed by Benincà (1989) for Friulian, by Roberts (1993) for Valdostano, and by Longa et al. (1998) for various Iberian languages/dialects.

⁷ The presence of DATCL appears to be licensed by deictic *ghe*, though how exactly remains to be worked out—perhaps the presence of *ghe* makes available a phasal spec position into which the dative clitic can ‘disappear’, à la chapter 4.

- (23) Giorgio ghe pensa. ('G there thinks')

does not show the same person restriction. Paduan (23), like French (7) and Italian (8), allows reference to a first-or second-person (or reflexive) object (of the silent preposition) to some extent, especially with CLLD (clitic left dislocation) and with coordination. An example with CLLD in Italian (from Cinque (1990, 59)) with a reflexive is:

- (24) A se stessa, Maria non ci pensa. ('to refl. same, M neg. there thinks')

(A French example with coordination is given in Kayne (1975, sect. 2.7).⁸)

Although sentences like (23) cannot refer to first or second person or reflexive with complete freedom, the restriction appears to be different in kind from the absolute one holding of (19). The reason is that only in (19) is reference mediated by DATCL (rather than by *ghe*, which is expletive-like in (19), as we shall see later), and silent DATCL is absolutely limited to third person.

In (23), on the other hand, DATCL is not present. Instead, we have, as in (14), with P = preposition:

- (25) ...ghe THING P...

or, more exactly, in those (limited) cases involving reference to a person (as in (24)):

- (26) ...ghe PERSON P...

Conversely, a phrase of the type 'ghe PERSON' is not present in (19). (This is related to the just-mentioned expletive-like character of the *ghe* of (19).)

The presence of DATCL in (19) also plays a role in clitic doubling of the sort seen in:

- (27) Ghe dago el libro a Giorgio. ('there I-give the book to G')

By having DATCL in such sentences, we can (correctly, I think) assimilate this clitic doubling to the parallel well-known phenomenon found with datives in Spanish (although the dative clitic in Spanish is pronounced more than in Paduan). Of particular interest here is the point made by Cordin (1991) for Trentino (which is similar to Paduan in the relevant respects), namely that despite the appearance of the deictic clitic in both dative and locative sentences, there is a difference between them when it comes to clitic doubling. Clitic doubling is compatible (and generally obligatory when there's a non-clitic dative) with the presence of *ghe* in dative sentences, yet impossible with *ghe* in locative sentences. (Clitic doubling must be kept distinct from

⁸ Cf. also van Riemsdijk (1978, 125) on colloquial Dutch R-pronouns being able to refer to humans, perhaps parallel to *y/en*, *ci/ne*; cf. also Bennis (1986, 191).

right-dislocation, which is possible with both datives and locatives.) The reason, from the present perspective, is that clitic doubling is dependent on DATCL, and that *ghe* by itself is not compatible with clitic doubling (for reasons to be elucidated).⁹

The proposal that there is a silent dative clitic in (27) leads to the expectation that there could be Romance languages in which that dative clitic would be overt at the same time as (the counterpart of) *ghe*, even in sentences with no locative (i.e., with no PLACE). This expectation is met by some Sardinian, to judge by an example given by Jones (1993, 220):

(28) Narrabilis! ('tell *bi* to-them')

where *bi* is the Sardinian deictic clitic parallel to *ghe*, and *lis* is the overt (plural) dative clitic (with the accusative unpronounced, as in some French).¹⁰

5. Expletive *there* and expletive *ghe* as deictics

From the perspective of the proposal in (20), *ghe* there is definitely not a dative clitic. It should rather be taken to be exactly the same kind of deictic element as all the other instances of *ghe* (and *there* and *y* and *ci*) under discussion. At the same time, it does not seem to be identical to any of them.

The reason, I think, is that the *ghe* in Paduan dative sentences that co-occurs with DATCL is an expletive, in the same sense as the *ghe* of the Paduan sentence:

(29) Ghe ze un libro... ('*ghe* is a book...')

which is strongly similar to the Italian:

(30) C'è un libro sul tavolo. ('there is a book on-the table')

Burzio (1986, 148) has already argued that in this kind of Italian existential sentence *ci/c'* is significantly similar to English expletive *there* in:

(31) There's a book on the table.

By extension, the *ghe* of (29) is essentially the same as English expletive *there*.

An important difference, of course, is that English *there* is subject-like as far as its final position is concerned, while Italian *ci* shares properties of object clitics and not of subjects (e.g., *ci* follows negation and certain other object clitics). In this

⁹ The *ghe* of (23) seems by and large to be incompatible with (non-dislocated) clitic doubling, too, as expected (since there's no DATCL there), though there is the kind of exception mentioned in my (1975, chap. 2, note 51).

¹⁰ If the order of clitics in (28) were to turn out to be limited to imperatives, one would think of Terzi (1999).

regard, Paduan *ghe* is very much like *ci*. But if, in the spirit of Burzio (1986), we set aside the subject position vs. object clitic position difference, we arrive at the conclusion that all of these (*ghe*, *ci*, *there*) in (29)–(31) are expletives in the same sense.

Recall that the first part of the answer to the question why Paduan would have deictic *ghe* in its third-person dative sentences was that *ghe* in such sentences is actually present alongside silent DATCL. The second part, now, is that the *ghe* of Paduan datives is an expletive *ghe* of the sort found in (29). This will mean, in a way to be explored shortly, that Paduan dative sentences have exactly the right number of arguments for the number of theta roles.

There are still two further questions. First, what exactly do we mean by ‘expletive’? Second, why is Paduan allowed to have an expletive in dative sentences in the first place? Let me begin with the first question.

One of the guiding principles of the discussion so far has been that the various uses of *there* and of *ghe* and of *ci* and *y* are all reflections of exactly the same deictic element occurring in somewhat different environments. In all the cases discussed, the deictic modified a noun (or NP). That noun is overt in *that there car* and in the corresponding French *cette voiture-là* (‘that car there’)—see note 3. In the other cases mentioned, the noun modified by the deictic is silent, either PLACE or THING or PERSON. Pursuing this guiding principle further, we unavoidably (and desirably, I will argue) arrive at the conclusion that all the expletive uses of *there* and *ghe* and *ci* and *y* (and of Sardinian *bi* and Catalan *hi*) are likewise instances of this same deictic element.

If English expletive *there* is the same deictic element as all the other instances of *there*, then we would expect it, too, (in (31), for example) to modify a noun (or NP). The next question, then, is, what noun? Taking into account examples like:

- (32) There’s a car in this garage.

and the fact that *there* is incompatible with *this*:

- (33) There’s a car in this here/*there garage.

there is little plausibility to taking *there* in these examples to modify *garage*. Much more natural, I think, is the proposal that expletive *there* is modifying the other noun, the one informally called the ‘associate’. Put another way, in (32) and (33) expletive *there* is a deictic modifier of *car*.

More generally:

- (34) a. In English existential sentences, expletive *there* is invariably a deictic modifier of the associate.
b. The same holds in existentials for Paduan *ghe*, for Italian *ci*, for French *y*, etc.

(Note that given the discussion above, this definitely does not mean that expletive *there* is locative; expletive *there* (and its counterparts in other languages) is a deictic element that is non-locative, i.e. that does not modify PLACE.)

Adopting (34) means adopting derivations in which expletive *there* originates within the associate and splits off from it, ending up in subject position (and similarly for the other languages, apart from the object clitic vs. subject position difference). There are two ways to think of this splitting off. One would be to have *there* raise directly out of the associate containing it. A second would be to have the rest of the associate raise, stranding *there* and then to have '*there* + trace of associate' raise further in the manner of remnant movement.

There may well be some questions with respect to which the choice between these two approaches to 'splitting' is neutral. For others, though, the choice is likely to be meaningful (e.g., for agreement, as discussed below). Thinking more specifically of the kind of remnant movement derivations discussed in Kayne (2002a) and works cited there, and of the possible impossibility of extraction of modifiers from within a containing DP, let me adopt the second, remnant movement, approach, which yields (for sentences like (31)) (partial, sketchily illustrated) derivations such as the following:

- (35) ...[there a book]_i... → raising of 'a book'
 ...a book_i...[there t_i]_i... → merger of V
 ...is a book_i...[there t_i]_i... → remnant movement
 ...[there t_i]_k is a book_i...t_k...

and similarly for Paduan, etc., modulo the difference in final landing site (i.e., *ghe* will end up in an object clitic position, rather than in a subject position).¹¹

The proposal reflected in (35) has expletive *there* originating as an instance of deictic (non-locative) *there* contained within an indefinite DP (using the term DP loosely). In (non-standard) English, however, *there* appears with an overt noun only in the presence of a demonstrative:

- (36) that there book; this here book

as opposed to:

- (37) *the there book; *the here book
 (38) *a there book; *some here book, etc.
 (39) *there a book; *here some book, etc.

How plausible is it, then, in particular in light of (38) and (39), to allow the derivation in (35)?

¹¹ For the Romance languages under discussion, the most direct transposition from (35) would suggest that the expletive clitic (e.g., *ghe*) is a remnant, rather than a pure head. The possibility that pronominal clitics are always phrasal needs to be examined carefully in any event.

A remnant movement approach to pronominal clitics may be suggested, too, by cases of past participle agreement in Italian with *ne*, which itself shows no phi-features:

i) Ne ho visti tre. ('of-them I-have seen_{plural} three')

and (example suggested by Guglielmo Cinque, p.c.):

ii) Ne ho letta la metà, di quel libro. ('of-it I-have read_{fem.} the half_{fem.}, of that book_{masc.}')

One consideration can be put as follows. Given (36), would we have expected (38) or (39) to be acceptable, or not?¹² That depends, I think, on how exactly we see the derivation of (36) itself. In particular, if (36) has *there* or *here* originating within a relative clause structure, then the impossibility of (38)/(39) is actually a bit surprising, given that relative clauses are in general compatible with both definite and indefinite ‘heads’.¹³

Kayne (2004a) argued against a relative clause analysis of (36) on what I now think were inconclusive grounds. The relevant data are in part:

- (40) *that over there book, *this right here book

which contrast with:

- (41) the book that’s over there; the book that’s right here

Relatives can contain *over there* or *right here*, but those combinations are not possible prenominally. Somewhat similarly, *there* in a relative can be stressed (indicated here by extra spacing and italics) in a way that it cannot be prenominally:

- (42) the book that’s *t h e r e*

- (43) *that *t h e r e* book

(vs. that *g r e e n* book)—suggesting, apparently, that prenominal deictic *there* and *here* must have a source other than within a (reduced) relative. However, there’s a narrower conclusion that can be drawn—one that allows these facts to be interpreted as neutral with respect to the relative clause question.

This narrower conclusion is that *over* and *right* in (40) and stress in (43) are excluded because they all depend on the presence of PLACE,¹⁴ i.e., on the presence of a locative phrase. Deictic *there* and *here* are by themselves not compatible with *over* or *right* or with contrastive stress falling on them. If this is correct, then

¹² On (37), see Leu (2007).

¹³ Indefinite-‘headed’ relatives are also compatible with ‘person’-possessives that have something in common with deictics:

i) We need a place of our own.

¹⁴ For a compatible approach to *right*, see Johnson (1991).

Supporting the importance of PLACE are the following, similar to (40):

i) We spoke (*over) thereof.

ii) We spoke (*right) thereof.

The contrasts seem clear, even relative to archaic English. More part of (a certain) spoken English is:

iii) I hereby give you permission.

Again:

iv) *I over/right hereby give you permission.

prenominal deictic *there* (or *here*) could well have a relative clause source, as long as the relative lacked PLACE.¹⁵

If prenominal *there* and *here* do have a relative clause source, then it is (38)/(39) that is surprising, and not the presence of '[there a book]' in the derivation proposed in (35).

The question remains, then, as to why neither (38) nor (39) is possible. Let me suggest a link to Szabolcsi's (1983; 1994) analysis of Hungarian possessive sentences. Szabolcsi argues that possessors (in the Hungarian counterparts of simple possessive sentences like *John has a sister*) originate within a DP (containing *a sister*) that is the argument of an existential verb (that looks like *be*). The possessor then moves out of that DP, doing so obligatorily because the DP is indefinite.

Putting it slightly differently, a Hungarian DP containing a (relatively non-embedded) possessor must necessarily 'split' if that DP is indefinite (and may do so if it is definite). Let me now suggest the same for deictic *there*, namely that when deictic *there* is contained in an indefinite DP (and not embedded too far down in it), that indefinite DP must split obligatorily, in the way shown in (35).¹⁶ (Why exactly such (non-specific) indefinites must split in these two kinds of cases, and perhaps others, or perhaps all cases, remains to be elucidated.¹⁷) (38) and (39) are impossible as intact DPs because they have not split, despite being indefinite. Yet such indefinite DPs containing deictic *there* (or *here*) can be legitimate if they do split, and therefore can appear in the initial stage of a derivation such as (35).

¹⁵ Like simple adjectives, deictics, even if derived from relative clauses, cannot, I think, remain post-nominal (contrary to certain reduced relatives like *any linguist interested in physics*), i.e., (i) and, very clearly, (ii) in English feel as if they only contain a locative:

- i) that book there
- ii) the book that's there

In French, on the other hand, (iii) almost certainly can be a non-locative deictic:

- iii) ce livre-là

On the order difference between English and French and its relation to the position of adjectives, see Bernstein (1997).

On adjectives being derived from relatives, cf. Kayne (1994a, sect. 8.4) and references cited there; also Leu (2008b; 2009). On nouns themselves being derived from relatives, cf. Koopman (2003; 2005).

¹⁶ Maximal parallelism with Hungarian would lead to thinking that Hungarian indefinites containing a possessor split in remnant movement fashion, too.

¹⁷ One should also consider this from the perspective of Sportiche (2002) on D.

The Hungarian possessor asymmetry between definite and indefinite DPs has a partial counterpart within English, in the contrast between (i) and (ii):

- (i) a friend of John's

(arguably derived from 'John's a friend'—cf. Kayne (1993, sect. 1.2)—by movement of *a friend* to the Spec of *of*) vs.:

- (ii) John's friend

If the containing DP is definite, as in (ii), the kind of movement seen in (i) need not take place.

In summary, then, what we call expletive *there* is characterized by (34) and, along with its counterparts in various Romance languages, has a derivation of the sort loosely sketched in (35).

6. Deictics, demonstratives, and indefinites

As illustrated in (36)–(39), English deictics have a privileged relation to demonstratives, which are the only determiners that in (non-standard) English can overtly co-occur with a prenominal deictic. On the other hand, not every instance of a demonstrative is compatible with a deictic, even (to my not entirely native ear) in non-standard English. The following seem appreciably less possible than (36):

(44) *Your child has never been that there irritable before.

(45) *A thesis shouldn't really be this here short.

(Both of these would be possible without *there* or *here*.) The generalization may be that deictics must modify a noun (or projection thereof).¹⁸

To the (partial) extent that deictics do have a privileged relation with demonstratives, we are led to ask, given the proposal that deictics can in fact combine with indefinites, whether demonstratives might not be able to combine with indefinites, too, in a way that would support separating both deictics and demonstratives from any intrinsic link to definiteness.

Of interest here is Hebrew, as discussed by Sichel (2001), which has the convenient property that its demonstratives co-occur, when in a definite DP, with an overt definite article:

(46) ha-yalda ha-zot ('the girl the dem.')

Yet Hebrew also allows (Sichel, 2001, chap. 1, note 6):

(47) yalda zot

with no definite article, yet with the same demonstrative element. In addition, while (46) as a direct object would be preceded by the morpheme *et* that normally precedes definite direct objects, (47) would not be. Sichel concludes that (47) is an instance of a demonstrative that is not definite.¹⁹

It seems, then, that demonstratives are no more universally wedded to definites than are, given my proposal that expletive *there* is a deictic originating within an indefinite, deictics. The plausibility of (35) is thereby enhanced.

¹⁸ At least in English. Delsing (1993, 136) notes as acceptable the Swedish counterpart of **a so here big car*.

¹⁹ Cf. perhaps English:

i) There's this guy on the phone for you.

7. The definiteness effect

The order of elements in the constituent '[there a book]' postulated in (35), in which *there* precedes *a*, is indirectly supported by (non-standard):

(48) these here four books

to the extent that the indefinite article *a* is akin to numerals, as argued by Perlmutter (1970). In other words, '...there a...' in (35) parallels '...here four...' in (48).

Assume now that the definite article would, in contrast, precede the deictic, as the demonstrative does in the example just given.²⁰ This means that replacing the indefinite article in (35) by a definite article would yield:

(49) ...[the there book]...

(50) ...[the there three books]...

This contrast in relative position between definite and indefinite article will have an interesting effect. Whereas in (35) 'a book' could raise out from within 'there a book', that same raising will be precluded in (49) or (50). Such raising of 'the book' or of 'the three books' out of their containing DP is precluded by the fact that in (49) and (50) 'the book' and 'the three books' are not constituents. Therefore there is no way to have, parallel to (35), a derivation that would yield, with expletive *there*:

(51) *There's the book on the table.

Thus we have, granted that *the* must precede *there* or *here*, the beginning of an account of the core definiteness effect found in (English) existentials.²¹

²⁰ Contrary to Afrikaans, for which something further needs to be said. On relatives preceding D, cf. Whitman (1981) and Kayne (1994a, sect. 8.3).

²¹ (51) is possible in a 'list' context, e.g.:

i) What should we read? Well, there's the book on the table.

ii) Who can we invite? Well, there's John.

Perhaps the definites here are embedded within hidden indefinites.

On differing sensitivity to definiteness in two dialects of Catalan, see Rigau (2005, 792); similarly, for two varieties of Spanish, Longa et al. (1998, 13).

As a reviewer emphasizes, the account suggested for (51) should generalize to (cf. Milsark (1974)):

iii) *There's every book on the/a shelf.

on the assumption that this *every* must precede *there* as *the* does in (49), and similarly for other 'strong determiners' in Milsark's sense. The contrast with:

iv) There's every reason to believe we're right.

implies, then, that the *every* of (iv) is lower than that of (iii), as argued on independent grounds by Postma and Rooryck (1996).

In essence, any determiner that must in general precede deictic *there* will be incompatible with the kind of derivation shown in (35) that underlies existentials that contain expletive *there* (a particular subcase of deictic *there*).

Starting from (49) or (50) there is another imaginable derivation that needs to be considered, in which ‘(a) book’ or ‘three books’ would be raised out of the containing DP leaving behind ‘the there’. Such a derivation would yield:

(52) *The there is (a) book on the table.

(53) *The there are three books on the table.

These can be excluded if the presence of *the* blocks the raising operation.²² That *the* might have such a blocking effect is a long-standing idea—cf. Fiengo and Higginbotham (1981). Although there are exceptions and although the reason for the blocking effect needs to be made more precise, there is one very sharp case in Romance that seems to fit well with (52)/(53):

(54) Jean en a (*les) trois. (‘J of-them has (the) three’)

(55) Jean en a un/*l’ autre. (‘J of-them has an/the other’)

In these French examples, the extraction of quantitative *en* (cf. Pollock (1998)) is blocked by the presence of a definite article.²³

Thinking of (48) and the corresponding non-standard:

(56) them there four books

(with *them* rather than *those*), one also needs to exclude a derivation that would yield:

(57) *Them there were four books on the table an hour ago.

Again, it is plausible that the presence of *them* blocks the extraction of *four books* that would have been necessary to derive (57) in a way parallel to the licit derivation indicated in (35).

Arguably like the definiteness effect of (51) is (cf. Heim (1987)) the absence of a wide scope reading for *three books* in *There must be three books on the table*. From

²² For a partly similar idea, see den Dikken (1997).

²³ Cf. Kayne (1975, chap. 2, note 55). Note that right-dislocation with *de* (cf. Vinet (1977)), but without *en*, is possible:

i) Jean m’a montré les tiens, de livres. (‘J me has shown the yours, of books’)

though not with *des*:

ii) *Jean m’a montré les tiens, des livres. (‘...of-the books’)

The text discussion assumes that there is no ‘escape hatch’ available in these cases, either, in particular Spec,DP (unlike in the case of (Hungarian) possessors).

the present perspective, a wide scope ('specific') reading of *three books* must in general require the presence of a 'specific' D (a more general D than the one restricted to definites), covert in English but arguably overt in Gungbe—Aboh (2004, chap. 3). That D will have the same effect on extraction of *there* as the definite D.²⁴ (Not surprisingly, then, Cresti (2003) argues that there is a parallel scope restriction with Italian *ne* (related to the French *en* of (54) and (55)).)

8. Agreement

In the remnant movement derivation given in (35), what ends up in subject position is '[there t_i]', where t_i is the trace/copy of 'a book'. In the corresponding derivation of:

(58) There are three books on the table.

what ends up in subject position is again '[there t_i]', where t_i is now the trace/copy of 'three books'. This may make it possible to take the plural *are* in (58) to be determined by the plurality of the phrase in subject position, which is not simply expletive (deictic) *there*, but a bigger phrase containing (the trace/copy of) plural number—cf. also Koopman (2003; 2005). If this is correct, then there may be no need here for downward agreement of the sort proposed by Chomsky (2001).²⁵

In a similar vein, in the Italian counterpart of (58):

(59) Ci sono tre libri sul tavolo. ('there are three books on-the table')

the plural form *sono* might be determined through direct agreement with the preceding '[ci t_i]', i.e., with the phrase containing the expletive clitic. Alternatively, there may be a spec position between *ci* and *sono* through which '[ci t_i]' has passed.²⁶

9. Why is *there* the expletive?

English expletive *there* has no counterpart in *then*:

(60) There are problems with your proposal.

²⁴ The ill-formedness of (i) can similarly be taken to reflect the presence of a covert definite or specific D (required by the presence of *all*):

(i) *There will all be three books on the table.

The ill-formedness of (ii) (v. Chomsky (1995, 275)) might be related to this:

(ii) *There seem to each other to be five people here.

²⁵ The lack of agreement possible in colloquial English in some cases has a counterpart in Italian—cf. Burzio (1986, 77). On interesting variation concerning agreement within Catalan, see Rigau (2005).

²⁶ Cf. also Belletti (2005, 18).

- (61) *Then are problems with your proposal.

If expletives were uninterpretable elements merged directly into a (relatively) high subject position, it would not be immediately clear why English or some nearby (or distant) language could not have *then* as its expletive. From the present perspective, which takes expletive *there* to be a deictic element merged within an indefinite DP, we can do somewhat better. First, we can note that the contrast between (60) and (61) is not limited to existential contexts; it is also found in the archaic English construction mentioned earlier, e.g.:

- (62) We spoke thereof/*thenof.

and similarly for *thereby*, which can still be heard:

- (63) We thereby/*thenby demonstrated...

More pointedly, perhaps, deictic *there* preceding an overt noun has no *then* counterpart:²⁷

- (64) That there/*then car ain't no good.

A statement touching on all the facts of this section is:

- (65) Locatives are closer to deictics than are temporals.

More specifically, locatives can be formed by combining a deictic with silent PLACE, yielding what I have been calling locative *there* (or *here*). This in effect gives locatives the possibility of being phonetically indistinguishable from the non-locative deictic *there* seen in (60), (62), (63), and probably in one (perhaps the only—see note 5) reading of (64).

The idea behind (65) is that the proper analysis of *then* in sentences like:

- (66) They were happy (back) then.

cannot be as simple as the proper analysis of locative *there*. Put another way, although locative *there* is deictic *there* combined with PLACE, temporal *then* cannot simply

²⁷ Conversely the non-colloquial (i) has no counterpart with *there*:

- i) ?his then wife; ?the then president
- ii) *his there wife; *the there president
- (i) seems more like:
- iii) the president then

i.e., more like the temporal counterpart of a locative, rather than like the temporal counterpart of a deictic.

correspond to a deictic element combined with TIME. This property of temporals is probably not to be understood in terms of silent TIME being systematically unavailable, given the double possibility indicated in:

- (67) We'll be at your place in two hours.
 (68) We'll be at your place in two hours' time.

which makes TIME seems appropriate for (67)—see chapter 2.

It may rather be that silent TIME requires a modifier that is itself specified for 'time' (as is *two hours* in (67)), whereas PLACE is not so demanding. Alternatively put, both TIME and PLACE require a modifier at least partially specified for, respectively, 'time' or 'place'.²⁸ The difference, then, would be that there is some partial overlap between 'location' and 'deixis' itself, but no comparable partial overlap between 'time' and 'deixis'.²⁹ In effect, location would then be seen as a more concrete, narrowed down (via PLACE) counterpart of deixis, whereas time would not be.

From this perspective, (66) can be thought of as:

- (69) ...then TIME.

where temporal *then* is itself specified for time (and requires TIME)—in a way that distinguishes it sharply from deictic *there*, which is not specified for location (and does not need to co-occur with PLACE, though it can). There is consequently no derivation available for (61) that could track the derivation of (60) (that was in effect sketched in (35), which is repeated here):

- (70) ...[there a book]... → raising of 'a book'
 ...a book_i...[there t_i]... → merger of V
 ...is a book_i...[there t_i]... → remnant movement
 ...[there t_i]_k is a book_i...t_k...

In addition to there being no expletive *then* parallel to expletive *there*, we can also note that there is no modified expletive *there*:

- (71) Are there problems with your proposal?
 (72) *Are over/right there problems with your proposal?

²⁸ The PLACE found in:

- i) Let's go over to John's tonight.

is a silent counterpart of the *place* found in:

- ii) Let's go over to John's place tonight.

which conveys more than just location—it seems close to 'home', in a way that recalls Longobardi (1996).

²⁹ On probably related differences between locatives and temporals, see Starke (2001).

Since expletive *there* is a subcase of deictic *there* and since deictic *there* in general disallows modification (cf. also (40)).³⁰

(73) *That over/right there car ain't no good.

the unacceptability of (72) is expected.

There is no expletive *here* parallel to expletive *there*, either.³¹

(74) *Are here problems with your proposal?

which means that *here* cannot successfully appear in a derivation like (70). We can express this restriction as:

(75) *Here* can appear only within a definite DP.

In effect, *there* is more 'neutral' than *here*,³² with this difference in turn probably to be related to what I think are similar differences between *that* and *this*, e.g.:

(76) He's not all that/*all this smart.

(77) The behavior of their son is somewhat different from that/*this of their daughter.

and even with what we call complementizer *that*:

(78) They think that/*this everything is fine.

One (plausible) implication of (75) is that *here* must be contained within a definite DP in both of the following, despite there being no overt definite article:

(79) They live here.

(80) We hereby declare...

³⁰ Possible is:

i) that car over there

but here we have locative *there*, i.e., deictic *there* combined with PLACE, with *over* keyed to PLACE.

³¹ Possible is:

i) Here are several problems for you.

but this is probably an instance of a preposed locative *here*, i.e., with PLACE.

³² Cf. Dasgupta (1992) and Jayaseelan and Hariprasad (2001).

Here, *this*, and *these* may contain a first-person feature or morpheme that does not have or at least can fail to have a counterpart with *there*, *that* and *those*

(In addition to some silent indicator of definiteness, (79) contains PLACE and (80) THING.)

Both locative *there* and the *there* of archaic *thereof* (and non-archaic *thereby*) have counterparts with *where*:

- (81) Where do they live?
- (82) Whereof have they spoken? (archaic)
- (83) the plan whereby we...

Expletive *there* does not:³³

- (84) Where is there/*where a problem?

In this respect the deictic *there* that we call expletive behaves as the deictic *there* preceding overt nouns (in non-standard English):

- (85) that there car
- (86) *that where car; *this where car; *a where car; *some where car

If *where* is not a deictic element at all, then (84) is not surprising.³⁴

In summary to these last sections, what we call expletive *there* is an instance of deictic *there* initially occurring within an indefinite DP, and then being split away from it, as indicated in (70).

10. Expletive *ghe* and *ci* in possessive sentences

As earlier (cf. the discussion of (30)), I follow Burzio (1986) in taking Italian *ci* in existential sentences to be strongly similar to English *there*, apart from the fact that *ci* ends up in object clitic position, whereas *there* ends up in subject position. An example of Italian existential *ci* is:

- (87) C'è un libro sul tavolo. ('there is a book on-the table')

The derivation of (87) will resemble that of (70), modulo the final landing site, and similarly for Paduan *ghe* in:

- (88) Ghe ze un libro... ('there is a book...')

³³ Cf. Chomsky (1995, 392), whose argument against (an earlier version of) Moro (1997) does not carry over to the present proposal.

³⁴ If *there*, *here*, and *where* do form a natural class of deictics—see chapter 5—then more needs to be said.

For a certain subset of Italian speakers, the expletive *ci* of (87) can also appear in simple possessive sentences such as:³⁵

- (89) Gianni c'ha una sorella. ('G *ci* has a sister')

For the speakers in question (89) is possible without any locative interpretation being associated with it, i.e., it can correspond perfectly to English:

- (90) John has a sister.

In the Italian of the relevant speakers, the presence of *ci* in (89) is generally not obligatory. In many dialects of Italy such a clitic (i.e., the corresponding deictic clitic, e.g., *ghe* in Paduan) often is obligatory in the equivalent of (89)/(90)—cf. Moro (1997, 237).³⁶ It seems virtually certain, as Moro suggests, that this *ci* or *ghe* in possessive sentences is an expletive clitic and is in fact the same expletive clitic as the one found in existential sentences like (87) and (88).

The question is why (some) Italian and many dialects of Italy should allow an expletive at all in possessive sentences like (89). I think the answer is to be found in Szabolcsi's (1983; 1994) analysis of simple possessive sentences in Hungarian. Her proposal, mentioned earlier, is essentially that possessive sentences are based on existentials. The derivation of simple possessive sentences tracks that of existential sentences (which are taken to have a single verb that takes a single argument (apart from a possible additional locative)), with an important twist.

In possessive sentences like (90) in Hungarian, the possessor originates within that single argument of the existential and raises out of it, picking up dative Case on the way. Transposition of Szabolcsi's analysis to English—Kayne (1993)—has the possessor in English raising out of the same single argument of the existential.

³⁵ (89) becomes (much) more widely accepted if expletive *ci* co-occurs with an accusative or quantitative clitic:

- i) Una sorella, ce l'ha anche Gianni. ('a sister there it has also G')
- ii) Gianni ce n'ha due. ('G there-of-them has two')

in a way that recalls the improvement in Italian non-dislocated clitic doubling attributable to a second clitic—Cinque (1990, 178).

In possessive sentences, this *ci* cannot undergo clitic climbing:

- iii) *Ci vorrei avere una sorella. ('there I-would-like to-have a sister')

unless accompanied (perhaps pied-piped) by another clitic, as in:

- iv) Una bella casa, ce la vorrei avere anch'io. ('a beautiful house, there it I-would-like to-have also I')

In addition, there are restrictions preventing *ci* from appearing (postverbally) in non-finite contexts, in many cases. All of this needs further study.

³⁶ In many dialects, there is a *ghe* with auxiliary 'have', too. The source for those instances of *ghe* may lie with the nominalization-like character of past participles.

There are, however, two (linked) differences between Hungarian and English; the possessor in English ends up with nominative Case (apart from ECM contexts) and the verb in English must be *have* rather than *be*, as seen in (90). (In the Hungarian counterpart of (90), *John* would bear dative Case and the verb would be existential *be*).

Szabolcsi's idea that possessive sentences like (90) embed an existential structure within them clearly makes the appearance of expletive *ci* in (89) less surprising (and similarly for the relevant dialects). In effect, (89) has 'inherited' its expletive *ci* from the existential embedded within it.

To see what the derivations might look like, let's begin with one (modeled on (70)) for:

- (91) There is a sister of John's in our class.

Setting aside the locative *in our class*, the derivation proceeds as follows:

- (92) ...[there a sister of John's]_{indef.DP}... → raising of 'a sister of John's'
 ...[a sister of John's]_i...[there t_i]... → merger of V
 ...is [a sister of John's]_i...[there t_i]... → remnant movement
 ...[there t_i]_k is [a sister of John's]_i...t_k...

Transposing to Italian (89) gives:

- (93) ...[ci una sorella di Gianni]_{indef.DP}... → raising of 'una sorella di Gianni'
 ...[una sorella di Gianni]_i...[ci t_i]... → merger of V
 ...è [una sorella di Gianni]_i...[ci t_i]... → remnant movement
 ...[ci t_i]_k è [una sorella di Gianni]_i...t_k...

If the derivation stopped here, it would correspond to the existential sentence:

- (94) C'è una sorella di Gianni... ('there is a sister of G...')

Extending the derivation in (93) along Szabolcsi's lines amounts to saying that in Italian the possessor *Gianni* can subsequently raise out of the phrase 'una sorella di Gianni', ending up in subject position. With the necessary appearance of 'have' instead of 'be', this yields (89). The last step (abstracting away from the question whether 'have' is in the numeration or not and also from the question of the prepositional *di*) is then:

- (95) ...[ci t_i]_k ha [una sorella Gianni]_i...t_k... → raising of the possessor
 ...Gianni_m [ci t_i]_k ha [una sorella t_m]_i...t_k...

Again, this allows us to make sense of the presence of expletive *ci* in such possessive sentences—*ci* (and similarly for *ghe* in the relevant dialects) has been carried over into such possessive sentences from the existential substructure embedded in them.

In contrast, of course, expletive *there* cannot appear in the corresponding English simple possessive sentences:

(96) *John has there a sister.

(96) is not acceptable and (97) is not a simple possessive sentence, i.e., its *there* must be interpreted as a locative, parallel to (98):

(97) John has a sister there.

(98) John has a sister in Chicago.

This restriction on English, as compared with some Italian and many Italian dialects, is plausibly to be related to the fact that expletive *there*, unlike expletive *ci* or *ghe*, occupies a subject position.³⁷ Thus the impossibility of (96) could be attributed to ‘competition’ between the expletive and the possessor for the same position. Alternatively, in part, one might say that in the spirit of relativized minimality—Rizzi (1990)—the movement of the possessor to the highest subject position is blocked in (96) by the presence of expletive *there* in an intervening subject position.

11. Comparative syntax of possessives and existentials

The account just suggested for (96), although it may well be on the right track for English, does not extend to the fact that the French expletive *y* that is a close counterpart of Italian *ci* never occurs in French possessive sentences, in any variety of French, as far as I know:

(99) Jean (*y) a une soeur. (‘J (there) has a sister’)

The reason that (99) with expletive *y* is impossible cannot be exactly the reason suggested for English (96); the proposal for English does not carry over to French because French expletive *y* is in an object clitic position (just like Italian *ci*) and not in subject position. Let me therefore propose a separate account for French (which will in turn not carry back over to English, as it arguably should not). This account of (99) will, in line with earlier discussion, involve the syntax of existentials.

In existentials, French has:

(100) Il y a un livre sur la table. (‘it there has a book on the table’)

³⁷ If the contrast in:

i) John has a sister.

ii) *John has the sister.

is due to the same (definiteness) effect found with existentials illustrated in (51), we might be led to postulate a silent *there* in (i) parallel to the overt *ci* of (89). This silent *there* would not interfere with the raising of the possessor (for reasons to be made precise - cf. chapter 4), but it would call for the kind of splitting seen in (70) that leads to the definiteness effect. For relevant discussion, see Szabolcsi (1986).

with *y* an object clitic-like expletive parallel to Italian *ci* not only in position, but also in that *y*, like *ci*, occurs elsewhere as a locative (with PLACE), as in (17), repeated here:

(101) Jean *y* va. ('J there goes')

and also with THING (and a silent P), as in (7), repeated here:

(102) Jean *y* pense. ('J there thinks')

Unlike Italian, though, French existential sentences show what seems to be a second expletive, the subject clitic *il*, as seen in (100). (Furthermore, the verb in French is 'have' rather than 'be'—both Italian and English have 'be').

The fact that French 'have' co-occurs in (100) with expletive *y* recalls the co-occurrence of Italian 'have' with expletive *ci* in (89), and suggests that French (100), like Italian (89), contains, despite appearances, a possessor subject.

The most natural interpretation of this conclusion is, I think, that the possessor subject in question in French is the subject clitic pronoun *il*. Thinking of Chomsky (1981, 325), a way to put this is to say that the *il* of (100) is a 'quasi-argument' (rather than a true argument).

The status of the *il* of (100) is then significantly similar to that of the *il* of French weather sentences like:

(103) Il pleut. ('it rains')

with which it shares the property of being zero (rather than the usual accusative *le/l'*) in accusative contexts:

(104) ?Un malentendu (*I') a fait *y* avoir trop d'enfants à la soirée. ('a misunderstanding has made there have too-many of children at the party')

Although embedding an existential like *There were too many children at the party* under a causative in French is somewhat marginal (perhaps as in English), the result is clearly, as seen in (104), appreciably more acceptable without *le/l'* than with it. This is the same property that one finds with weather verbs:³⁸

(105) Les savants sont maintenant capables de (*le) faire pleuvoir. ('the scientists are now capable of making to-rain')

The subject *il* of French existentials also shares with the *il* of French weather sentences the ability to control PRO (much as in Chomsky's discussion of English; cf. also Kayne (1979, 713)):

³⁸ Why exactly *le* is impossible here remains to be understood. Note the contrast with English:

i) Scientists are now capable of making *(it) be very cold.

- (106) Il pourrait y avoir du pain sans y avoir de l'eau. ('it could there to-have of-the bread without there to-have of the water' = 'there could be bread without there being water')
- (107) Il peut neiger sans pleuvoir. ('it can to-snow without to-rain')

Note that in the French existential control example (106) *il* does not appear in the infinitival part (it is replaced by PRO), while *y* does. This is indirectly related to the fact that English *there* cannot be a controller:

- (108) There can't possibly be a solution without *(there) being a problem.
- (109) *There was a problem before being a solution.

The reason that English prohibits control with expletive *there*, in contrast to (106), is that expletive *there* (like *y*) is not a quasi-argument (but rather a deictic element that is not an argument at all), contrary to *il*. (106) can thus have PRO as the subject of the infinitival phrase beginning with *sans*, whereas in (108) and (109) the subject of the gerund cannot be PRO; put another way, in both languages the existential argument within the controlled infinitive or gerund needs to be merged with a deictic—in French that deictic *y* can co-occur with PRO since they occupy different types of positions, contrary to what holds in English.

In summary, neither of the two elements that might have appeared to be expletives in French (100) is actually an expletive. The *il* is a quasi-argument, and the *y* is a deictic modifier that originates within the associate.

As for the derivation of a French existential sentence such as (100), the best way to see it is to begin by going back to (93)–(95), consolidated here as the derivation of:

- (110) Gianni c'ha una sorella. ('G there has a sister') = (89)

which is the Italian possessive sentence containing expletive *ci*. The derivation goes as follows:³⁹

- (111) ...[ci una sorella Gianni]_{indef,DP}... → raising of 'una sorella Gianni'
 ...[una sorella Gianni]_i...[ci t_i]... → merger of V
 ...ha [una sorella Gianni]_i...[ci t_i]... → remnant movement
 ...[ci t_i]_k ha [una sorella Gianni]_i...t_k... → raising of the possessor
 ...Gianni_m [ci t_i]_k ha [una sorella t_m]_i...t_k...

The proposal now is that (100) has a similar derivation, except that quasi-argument possessor *il* replaces the full possessor argument *Gianni*; *un livre* replaces *una sorella*; and *y* replaces *ci*:

³⁹ Here I'm taking *ha* = 'have' to be in the numeration, and abstracting away from the question of preposition incorporation — on which, see Kayne (1993), Rigau (2005) and references cited in those works.

The last step of the derivation in (111) involves the extraction of the possessor from within a previously moved constituent. In this respect it recalls (vs. Wexler and Culicover (1980, 278)):

i) That's the problem that we explained to John only part of. (cf. Kayne (1994a, 74))

- (112) ...[y un livre il]_{indef.DP}... → raising of 'un livre il'
 ...[un livre il]_i...[y t_i]... → merger of V
 ...a [un livre il]_i...[y t_i]... → remnant movement
 ...[y t_i]_k a [un livre il]_i...t_k... → raising of the possessor
 ...il_m[y t_i]_k a [un livre t_m]_i...t_k...

Consider in turn the result of replacing *un livre* in (100) by *une soeur de Jean* ('a sister of J'):

- (113) Il y a une soeur de Jean dans la cour. ('it there has a sister of J in the courtyard')

This is a sentence whose derivation (abstracting away from the preposition *de*) must begin with '[y [une soeur Jean] il]_{indef.DP}' in place of '[y [un livre] il]_{indef.DP}'. That is, the derivation of (113) must contain an indefinite DP with two possessors, argument *Jean* and quasi-argument *il*. This is not implausible (as an instance of recursion), in particular given the existence in English of the quite acceptable (to me):

- (114) (?)This painting of yours of mine is now quite valuable.

in the sense of 'this painting that you did that I own'.⁴⁰

Returning to French (99), repeated here:

- (115) Jean (*y) a une soeur. ('J (there) has a sister')

I think the answer to why it is impossible with expletive *y*, as opposed to Italian (110) being possible with expletive *ci*, lies in the following (unidirectional) comparative syntax correlation:

- (116) If a Romance language allows a clitic counterpart of expletive *there* in its possessive sentences, then its existential sentences have the verb *be* (and not *have*).

Particularly striking here is Catalan, whose deictic clitic *hi* is in other ways very much like Italian *ci*. Yet Catalan seems to be like French, rather than like Italian, with respect to (115). (116) claims that Catalan lacks expletive *hi* in its possessive sentences because Catalan has 'have' in its existentials, like French.

The next question is why (116) should hold. What I would like to propose as an answer to that question depends on a strong 'uniformity'⁴¹ assumption about existential sentences (and hence about possessive sentences, given my adoption

⁴⁰ The fact that (114) is so much better than:

i) *My your painting is valuable.

which presumably has something to do with *of*, needs to be elucidated.

⁴¹ Cf. Chomsky (2001, 2).

and extension of Szabolcsi's analysis), namely that all (Romance) languages have a quasi-argument possessor in their existentials (and hence in their possessive sentences), of the sort seen overtly in French *il*. (This implies that an existential sentence in which the associate contains a full argument possessor actually has two possessors.)

Returning to (116) and to the unacceptability of (115) with expletive *y*, we can now understand (116) as follows. A language that allows an expletive deictic clitic in its possessive sentences, as do Italian and Paduan, must of necessity be a language in which the presence of that expletive clitic does not force subject position to be filled by the quasi-argument possessor that by hypothesis is found in all simple possessive sentences.⁴² But in existentials, French and Catalan do have the quasi-argument possessor raising to subject position. (In French, the quasi-argument possessor must generally be pronounced, as opposed to Catalan.) Consequently, we can exclude French (115) with expletive *y* by taking the raising of the quasi-argument possessor in French to be more general:

- (117) In French (and similarly for Catalan), the quasi-argument possessor must, if expletive *y* is present, raise to subject position.

This will exclude (115), as desired.

A more general formulation of (117) would be:

- (118) If a language has quasi-argument possessor raising in the presence of an overt deictic expletive clitic in some cases (in particular in existentials), then it has it in all cases (thereby blocking full argument possessor raising in the presence of the overt expletive).

Again, (115) is correctly excluded.

If *y* is not pronounced, then the French (and Catalan) quasi-possessor does not (and cannot, for reasons to be determined) raise to subject position, in which case nothing blocks the raising of the full argument possessor *Jean*, yielding the acceptable variant of (115).

Note that in the derivation (112) what is raised into subject position cannot, even in the absence of overt *il*, be the associate itself:

- (119) *Un livre *y* a sur la table.

This might be due to the fact that in that derivation *un livre* is not a full DP argument, having been raised out in the first step from within the argument phrase containing

⁴² At least in possessive sentences of the type under discussion, with an indefinite possessee. Probably the text approach should be extended to cases like:

i) John has it/your pencil in his pocket.

though with additional structure—cf. in part note 21.

y;⁴³ alternatively, there might be an intervention/relativized minimality effect, with *y* constituting a block.

In Italian and in the dialects of Italy, the verb in existentials is *be* rather than *have*. I interpret this to mean that in those languages the quasi-argument possessor has not raised to nominative subject position. The fact that it does not have to, even in the presence of expletive *ci* or *ghe*, will make it possible for the full argument possessor to do so even in their presence, yielding sentences like (110), in a way compatible with (116). (On the fact that English acts differently, despite having *be* in existentials, see the discussion of (96).)

12. Other languages and no languages

Some Scandinavian languages are like English in having existentials with *be* and with a counterpart (*der*) of subject *there*.⁴⁴ This *der* can be taken to originate as a deictic modifier of the associate, as discussed for English. Other Scandinavian languages can have *be* with a subject (*det*) that seems more like English *it* or *that*.⁴⁵ This *det* might be akin to French *il*, i.e., it might be a quasi-argument possessor, though that would leave open (for the time being) why the verb is *be*; alternatively, this *det* might have some other status (perhaps related to the *it* of clefts) that remains to be elucidated.

In Swiss German and other southern varieties of German, existentials can have the verb *have*, with a subject *es* that corresponds in other ways to English *it* (examples from Thomas Leu):

(120) Es het es buaech uf em tisch. ('it has a book on the table')

This subject *es* looks very much like a quasi-argument counterpart of French *il*. Although in (120) there is no overt element corresponding to French *y*, Swiss German also allows:

(121) Da het s es buaech uf em tisch. ('there has it a book on the table')

with an additional *da* that may correspond to *y*. Where a Swiss German existential has *es het*... a standard German existential would have *es gibt*..., with (probably) the same *es*, but with the verb 'give'. This use of 'give' in existentials has a (non-productive) counterpart in English:

(122) What gives?

⁴³ Cf. Rigau (2005, note 22).

⁴⁴ Cf. Allan et al. (1995, sect. 407).

⁴⁵ Cf. Holmes and Hinchliffe (1994, 140).

In Spanish and Portuguese, the verb in existentials is a form of *have*, without there being any visible counterpart of French *y* (except perhaps in the present tense in Spanish). Since Spanish and Portuguese have no visible *y* elsewhere, either, they plausibly have a silent one in existentials. In addition, they are like Catalan in having no overt counterpart of French *il*.

As we can see, there is substantial variation in the form of existentials across Romance and Germanic. This should not prevent us, however, from ‘seeing’ what is not present. One gap of interest can be illustrated with an (unacceptable) English example:

(123) *There has a book on the table.

Subject deictic expletive *there* is not compatible with *have* in English. But as far as I know, no Romance or Germanic language has an exact counterpart of (123), with verb ‘have’ and a deictic element (rather than a quasi-argument) in subject position. This follows directly from the assumption made earlier that *have* requires a possessor subject,⁴⁶ whether quasi-argument (French *il*, (Swiss) German *es*) or full argument. Combined with the radically different status of *there*, which (like French *y*, Italian *ci*, Paduan *ghe*, Catalan *hi*) is a deictic modifier and not an argument or quasi-argument, this accounts for the general absence of (123).

I have been assuming that the French type of existential seen in (100), with verb ‘have’ and with deictic *y* in object clitic position and quasi-argument possessor *il* in subject (clitic) position, is closely matched by Catalan (example from Rigau (2005, 777)):

(124) Hi ha una biblioteca nova. (‘there has a library new’)

with the single difference that Catalan, in a way related to its being a null subject language, has a silent counterpart of *il*. Less immediate is the answer to the question where the quasi-argument possessor is in Italian existentials:

(125) C’è un libro sul tavolo. (‘there is a book on-the table’)

Since Italian *ci* is not in subject position, Italian could perhaps (though not if (118) is correct) be like Catalan in having a silent *il* there. Alternatively, the quasi-argument

⁴⁶ (123) contrasts with:

- i) There has to be a book somewhere.
- ii) There have been lots of problems.

indicating that auxiliary-like *have* (and similarly in other languages) does not require a possessor subject in the same way, despite other similarities with main verb *have* that led Kayne (1993) to assimilate the two to a significant degree.

possessor in Italian is silent and oblique (thinking of the fact that argument possessors are oblique in many languages⁴⁷).

13. Existentials and causers

As alluded to just above (122), German has one existential with the verb *give*:

(126) Es gibt keine Lösung. ('it gives no solution')

Since *give* is normally causative, it seems odd at first glance that (126) could have an existential interpretation. The various languages that use *have* in their existentials (French, Catalan, Spanish, Portuguese, Swiss German and others) appear not to pose a problem of this sort, insofar as *have* is normally not thought of as causative. Yet English *have* can be causative, in sentences with an agentive subject:

(127) We'll have them call you.

Somewhat similarly, although English *get* seems straightforwardly like an inchoative of *have* in:

(128) They got a large inheritance.

and like an inchoative of *be* in:

(129) They got sick.

get can also be causative:

(130) They got him arrested.

(131) They got us talking to each other.

(132) They got us to lend them money.

A possible interpretation of these facts is that (126) actually does have causative content, and so do existentials with *have* in the various languages mentioned (and arguably, then, existentials with *be* in languages like English and Italian). This causative content could be understood by thinking of a sentence like *There's no solution* as similar to:

⁴⁷ For interesting discussion, see Hoekstra (1994).

Even if oblique, the quasi-argument in Italian must be able to be a controller, given (from Burzio (1986, 174)):

i) Potrebbe esserci del pane senza esserci dell'acqua. ('could to-be there of-the bread without to-be there of-the water' = 'there could be bread without there being water')

- (133) Something has caused there to be no solution.

in which case the *es* of (126) could be taken to be a quasi-argument causer. That in turn would lead to the possibility that French *il* in existential *il y a...* is also a quasi-argument causer⁴⁸ rather than a quasi-argument possessor, and similarly for the other quasi-argument possessors postulated earlier.

Postulating the presence of a non-agentive causer where none is visible is also a tempting option in the case of what are sometimes called ‘anticausative’ verbs such as *sink*, which enter into pairs like:

- (134) The boat sank.
(135) The navy/the storm sank the boat.

In (135) the causer can be agentive (*the navy*) or non-agentive (*the storm*). At the same time, there is a well-known argument concerning a possible implicit argument in (134), based on the contrast:⁴⁹

- (136) The boat was sunk in order to collect the insurance.
(137) *The boat sank in order to collect the insurance.

The deviance of (137) does seem to indicate that (134)/(137) contains no implicit agent, contrary to (136). But it does not exclude the possibility that (134) contains an unpronounced non-agentive causer.

Saying that both (126) and (134) contain a non-obvious causer argument is of some interest, if we return to the question of the variation within Romance concerning *have* and *be* in existentials, specifically to the difference between French, which has *have*, and Italian, which has *be*. The reason for thinking this is of interest lies in the fact that French and Italian also differ with respect to verbs like *sink*, and do so in a way quite parallel to the verb difference in existentials, insofar as French, with anticausatives like *sink*, uses auxiliary *have* with past participles, while Italian uses auxiliary *be*:

- (138) Le bateau a coulé hier. (French ‘the boat has sunk yesterday’)
(139) La nave è affondata ieri. (Italian ‘the boat is sunk yesterday’)

⁴⁸ Leading to the possibility that other instances of French *il* are, too, for example, those of:

- (i) Il faut que vous partiez. (‘it needs that you leave’)
- (ii) Il me semble que vous avez raison. (‘it me seems that you...’)
- (iii) Il est important que... (‘it is important that...’)
- (iv) Il est arrivé quelqu’un. (‘it is arrived someone’)

On (ii), see Rooryck (1997).

⁴⁹ Cf. Williams (1985).

In other words, there may be a generalization that spans existentials and (past-participial) anti-causatives (a more natural class from the perspective of this section than usually assumed), to the effect that French uses *have* where Italian uses *be*.⁵⁰

14. Limitations on deictic *there* as expletive

In (my) colloquial English, expletive *there* occurs only with *be*. Although the following are possible in some register(s) of English, they are for me impossible in colloquial English:⁵¹

- (140) There exist solutions to all these problems.
 (141) There have arrived several letters for you.

In this respect, colloquial English is like both Italian and French, whose deictic expletive *ci* and *y* are limited to existentials with *be* (in Italian) and *have* (in French) and which do not occur in the counterparts of (140) and (141). In contrast, as discussed by Burzio (1986, chap. 2), Piedmontese expletive clitic *ye* is found more widely, occurring as it does with all unaccusatives.

Why Piedmontese should be freer in this regard than Italian or French is not clear (perhaps there is a link to the fact that Piedmontese object clitics generally follow past participles in a way that Italian and French object clitics do not).

Nor is it clear why *be* is singled out by Italian, French and colloquial English—perhaps it is that *be* is associated with less structure than any other verb—or even that *be* is not really a verb (thinking of Postma (1993); cf. also Baker (2003, sect. 2.4)). Considering the partial derivation given earlier:

- (142) ...[there a book]... → raising of 'a book'
 ...a book_i...[there t_i]... → merger of V
 ...is a book_i...[there t_i]... → remnant movement
 ...[there t_i]_k is a book_i...t_k...

⁵⁰ French and Italian differ in what seems to be the same fashion, when it comes to the auxiliary used with the past participle of *seem*, *appear*, *disappear* and *be* itself (i.e., French uses auxiliary *have* and Italian, auxiliary *be*)—cf. Burzio (1986, 138). Whether some or all of these should be integrated into the text discussion is left an open question, as is the question why *die* takes auxiliary *be* in both languages.

The contrast between (138) and (139) also seems to be mimicked by French vs. Italian periphrastic causatives (indirectly supporting the text proposal), in the sense that they can passivize in Italian but not in French—cf. Kayne (1985).

For more detailed discussion, see chapter 8.

⁵¹ As opposed to:

(i) There they go.

like:

(ii) Here they come.

which do not involve expletive *there*, despite having some special properties.

it might be that the landing site needed for the first movement step is unavailable in these languages except with *be*.

In Piedmontese, expletive *ye* does not occur with transitives, or even (Luigi Burzio, p.c.) with unaccusatives embedded under an overt causative. Again, it may be that the first step of (142) cannot proceed in the face of the extra structure associated with transitives.

Although French unaccusatives do not show expletive *y*, they do show a subject clitic *il* that might be taken to be a (different) kind of expletive:

(143) Il est arrivé trois lettres. ('it is arrived three letters')

Alternatively, this *il* might turn out to be the quasi-argument *il* discussed earlier—cf. the discussion beginning at (100) and note 48. (Note that this *il* is not, strictly speaking, limited to unaccusatives—cf. Pollock (1998, note 11).)

15. Datives

The last case of parametric variation having to do with expletives that I will touch on has to do with the topic that this chapter opened with, namely the deictic clitic *ghe* that is widely found in North Italian dialects in dative sentences where one might not have expected it. Put another way, these North Italian dialects differ from standard French and from standard Italian, which have retained an overt specifically third-person dative clitic.

The question how best to understand this difference in syntactic behavior rests in part on how one analyzes the *ghe* of, for example, Paduan sentences like:

(144) Ghe dago un libro (a G). ('*ghe* I-give a book (to G)')

One of the proposals made earlier was that such sentences contain a silent dative clitic:

(145) DATCL ghe dago un libro (a G)

I have also argued in favor of taking all instances of *ghe*, like all instances of *there* in English, to be the same element.

In this final section, I would like to take the more specific position that the *ghe* of (144) is the expletive subtype of deictic *ghe*, i.e., that it originates, like all the other expletive deictics so far discussed, within the associate (which in (144) is *un libro*).⁵² This proposal rests on two points, the first being that sentences like (144), with a verb corresponding to *give*, can, following a long tradition, be thought of as arising

⁵² (144) is also possible with definite *el libro* ('the book') in place of indefinite *un libro*. See notes 21 and 42, as well as the possibility, thinking of Koopman (2003; 2005), that definites are or can be built upon indefinites, in relative clause fashion.

through the embedding of a *have*-like structure within a causative one. The second is that *have*-sentences in a certain number of Italian dialects and for a certain number of Italian speakers show an overt expletive, as discussed earlier beginning with (89).

The idea, then, is that expletive *ghe* appears in (144) via ‘inheritance’. Dative sentences embed within them possessive subsentences that can contain an expletive, in turn inherited from the existential subpart of the possessive structure itself. Thus the *ghe* of (144) is in essence the familiar expletive of existentials.

Needless to say, things are not quite this simple. But we can simply illustrate the first point using French periphrastic causatives of the sort that dativize the embedded subject:

- (146) Ils ont fait avoir un prix à cet étudiant. (‘they have made have a prize to that student’)

This sentence, which has the approximate interpretation of:

- (147) Ils ont donné un prix à cet étudiant. (‘they have given...’)

embeds under the causative verb *faire* a sentence containing *avoir* (‘to-have’). The subject of the embedded verb *avoir* ends up as the ‘object’ of the (dative) preposition *à*, in a way discussed in Kayne (2004b).

Assume now that a *have*-sentence embedded under a causative can itself contain an expletive (e.g., *ghe*), as we know to be visibly possible for *have*-sentences in various dialects. Then in the relevant dialects, this expletive (deictic) *ghe* will be visible in their counterparts of (146) and, assuming a parallel derivation, of (147).

In which case we have an answer to the question we started with, namely why it is that *ghe*, an apparent locative (but really a deictic element, as argued above), appears in dative sentences like (144) in the first place. Rather than reflecting syncretism, the presence of *ghe* in (144) more precisely reflects a piece of the underlying (in part existential) syntactic structure of such sentences.⁵³

Left open is the question why we don’t see this expletive in all Romance languages (or in all languages). It does not appear to be possible to say that *ghe* can be found in dative sentences only if it is found in possessive sentences, since, as Paola Benincà points out (p.c.), Bellunese has *ghe* in datives but not in possessives.⁵⁴ Nor, thinking of Italian itself, does the converse seem to hold, since there are Italian speakers who have *ci* in possessives without having it in datives. Ultimately, the

⁵³ This will have to be extended to cover the whole range of dative sentences.

Guglielmo Cinque (p.c.) asks why expletive *ghe* can cooccur with a silent DATCL in (144)/(145), yet never seems to be able to license a silent ACC-CL. In sentences with just an accusative object, the answer should be that there is no source for expletive *ghe* (i.e., no existential substructure) in the first place. In ditransitive sentences, we had an example with a silent accusative in Sardinian in (28); the contrast with Paduan remains to be elucidated.

⁵⁴ Perhaps like Bellunese is the popular French described by Postal (1990, 188, note 19) (unless the *y* there turns out to be a dative Case morpheme).

answer will probably involve the question of whether or not clitics belonging to the embedded sentence of a causative structure such as (146) can successfully surface.⁵⁵

The question also arises as to why *ghe* (or *ci* or *y* or *there*) appears in the first place in existentials in some languages. French existentials with *il y a*... indicate clearly that filling a subject position cannot be a general answer, since in French the subject position is filled by quasi-argument *il*, so that the presence of deictic expletive *y* must rest on other considerations. Part of the answer may be that these deictic elements are an obligatory part of all DPs (including indefinites) in all languages,⁵⁶ with various factors combining to determine whether they are pronounced, in one or another language, in one or another context.

16. Conclusion

Expletive *there* and its closest counterparts in other languages are not expletives in Chomsky's sense (merged directly into a sentential Spec position). They are instead instances of deictic elements originating within their associate.⁵⁷ In some languages, e.g., Paduan, these expletives can be 'imported' into possessive sentences and (from there) into dative sentences, giving the impression in the latter case of syncretism between deictic clitic and dative clitic, but the correct, more syntactic and less morphological, analysis is that in such languages the deictic clitic is not a dative clitic, though it co-occurs with a dative clitic that is silent.

⁵⁵ For some relevant data, see Kayne (1975), Rouveret and Vergnaud (1980) and Burzio (1986).

We will also need to understand why in some dialects/languages, such as the Carmignano dialect studied by Penello (2004), *ghe* can in dative sentences precede the subject clitic.

⁵⁶ Cf. Jayaseelan and Hariprasad (2001).

How exactly to characterize the interpretive contribution to indefinites of *there* remains to be elucidated; cf. the discussion of (75).

⁵⁷ This is close to Sabel (2000) (cf. also Moro (2000, 125) and Choe (2006)), with the difference that he takes the expletive to correspond to a D-feature within the associate, whereas I have suggested a reduced relative source (cf. the discussion after (43)) that is compatible with taking *there* to be bi- or perhaps trimorphemic.

That *there* is at least bimorphemic is clearly indicated by its parallelism to *here* (and perhaps *where*—cf. note 34), by the plausibility of an initial morpheme *th-* related to the *th-* of *the*, *that*, etc., and by the relation between Dutch *daar* ('there') and Dutch *er* ('-ere').

Possibly, adapting a suggestion of Pierre Pica's, one of the morphemes (other than *th-*) making up *there* is prepositional, thinking also of the fact that the closest counterpart to *there* in Egyptian Arabic is prepositional, as brought to my attention by Maha Aboul-Ela—cf. Brustad (2000, 152).

Some Silent First-Person Plurals

1. Introduction

The first-person plural object clitic in French is *nous*:

- (1) Elle nous voit. ('she us sees')
- (2) Elle nous a donné un livre. ('she us has given a book')

Nous is also the form of the first-person plural pronoun in non-clitic contexts such as object of preposition:

- (3) Elle a parlé de nous. ('she has spoken of us')

and right- and left-dislocation:

- (4) Elle nous aime bien, nous. ('she us likes well us')
- (5) Nous, elle nous aime bien.

In literary French, *nous* is also the form found as subject clitic:

- (6) Nous avons ri. ('we have laughed')

In spoken French *nous* as subject clitic is often 'replaced', for some speakers obligatorily, by another subject clitic *on*:

- (7) On a ri. ('*on* has laughed')

Although one might be tempted to gloss French *on* as 'one', (7) can be interpreted exactly as English *We have laughed* (English *one* does not admit this possibility).

English *one* and French *on* do, on the other hand, share the ability to appear in generic sentences:

- (8) When one is happy, one sleeps well.
 (9) Quand on est heureux, on dort bien.

French also allows *on* to appear in cases where English would normally have *they*:

- (10) Jean est allé à la poste. On lui a dit de revenir plus tard. ('J is gone to the post. One him has told to return more late')
 (11) John went to the post office. They told him to come back later.

I take the three instances of the morpheme *on* illustrated in (7), (9), and (10) to be syntactically distinct from one another, in contextual ways to be determined (I will in this chapter primarily be interested in the properties of (7)). One notable difference is that (7) allows the addition of the floating universal quantifier *tous* (with a plural *-s*):

- (12) On a tous ri. ('*on* has all laughed' = 'we have all laughed')

Generic *on* does not:

- (13) En France on boit beaucoup de vin. ('in F *on* drinks a-great-deal of wine')

Tous could be added here:

- (14) En France on boit tous beaucoup de vin.

but then speakers feel that the interpretation necessarily becomes first-person plural.¹ Similarly the *on* of (10), which I will call 'indefinite', does not co-occur with *tous*. If one adds *tous* to the second half of (10), the result is acceptable, but again only with the first-person plural interpretation.

¹ This incompatibility of generic *on* with *tous* may or may not have the same source as in English:

- i) In France one (*all) drinks a great deal of wine.

English generic *one* might be analyzed as accompanied by a silent PERSON, perhaps as in 'PERSON one'.

2. Silent *nous*

The acceptability of plural *tous* in (12) and (14) with subject clitic *on* (associated with a first-person plural interpretation) is striking in that *on* in such examples (and everywhere else) requires third-person singular agreement on the finite verb. Despite the plural interpretation, neither a third-person plural verb:

- (15) **On ont tous ri*/**En France on boivent tous*...

nor a first-person plural verb:

- (16) **On avons tous ri*/**En France on buvons tous*...

is at all possible.

The acceptability of plural *tous* in (12) and (14) becomes less surprising when we consider (and similarly for (14)):

- (17) *Nous, on a tous ri.* ('us, *on* has all laughed' = 'us, we've all laughed')

Here, we have *on* and *nous* simultaneously. The obvious proposal is that the presence of *tous* in (17) is licensed as a function of the presence of plural *nous*, essentially as in:

- (18) *Nous avons tous ri.* ('we have all laughed')

in which *on* is absent. The exact character of the position of *nous* in (17) is not entirely clear; since *on* is a subject clitic,² it may be that *nous* is actually in spec of IP. Alternatively, it may be higher up, in which case its link with *tous* would (also) recall the following English sentence (acceptable to some speakers, including myself):

- (19) *These books I've all read twice.*

in which the well-formedness of postauxiliary *all* depends on the object *these books* having been moved up, given the impossibility of:

- (20) **I've all read these books twice.*

The central point now is that the presence of *tous* in (12) can be understood in exactly the same way, if we grant that (12) contains a silent counterpart (to be represented as NOUS) of the *nous* seen in (17):

- (21) *NOUS on a tous ri.*

² On French subject clitics, see Kayne (1972; 1975, sect. 2.4), Cardinaletti and Starke (1999) and Kayne and Pollock (2001, sect. 5). The earliest of these shows in most detail how French subject clitics can co-occur with true subjects, at least in the 'complex inversion' construction.

Tous in (12)/(21), then, is licensed by the presence of NOUS.³

This NOUS is also involved in disjoint reference effects (of the sort that show that Condition B cannot be reduced to a ‘side effect’ of Condition A⁴), as seen in:

(22) On te voit tous. (‘*on* you sees all’ = ‘we all see you’)

(23) *On me voit tous. (‘*on* me sees all’)

(23) is really:

(24) *NOUS on me voit tous

in which *me* does not tolerate the local c-commanding NOUS. (This point about disjoint reference goes back to Cinque’s (1988b, sect. 3.4) discussion of the close Italian counterpart of French *on* that I return to below.)

There is a contrast in French between (12)/(21) and similar sentences with a collective subject of the sort seen in:

(25) Le groupe a (*tous) protesté. (‘the group has (all) protested’)

Despite the plural reference (indirectly) associated with nouns like *group*, plural *tous* is not possible in (25), since there is no proper grammatically plural antecedent for it present, unlike the NOUS of (12)/(21).⁵ Similarly, the impossibility of *tous* with

³ On how the derivation might proceed, see Sportiche (1988) and Shionsky (1991).

The postulation of NOUS here is an updating of Kayne (1972, 95; 1975, chap. 1, note 79).

A (partially) similar analysis, but with a silent third plural, will be needed for:

(i) C’est tous des linguistes. (‘it is all of-the linguists’ = ‘they’re all linguists’)

Cf. Kayne (1975, chap. 1, note 79).

⁴ For discussion, see Kayne (2002b, sect.9).

⁵ In agreement with den Dikken (2001), I take British English (i) (with a plural verb) to contain a silent plural pronoun, as for example in (ii):

(i) The committee have all voted yes.

(ii) THEY the committee have all voted yes.

with THEY the true antecedent of *all* in (i). This is supported by:

(iii) *It have all voted yes.

the unacceptability of which can be traced back to that of:

(iv) *They it have all voted yes.

With a singular verb (as in French), my English has:

(v) The jury has (??all) voted for acquittal.

The lack of a sharp ‘*’ here may be due to the marginal availability of an adverbial reading for *all* (and/or to the lack of plural morphology on *all* (contrary to French *tous*)), as suggested by the sharper:

(vi) The jury has (*both) voted in favor of a fellowship.

generic *on* indicates that (14) with generic *on* contains no silent plural subject (and the same for the indefinite *on* of (10)⁶).

3. NOUS/*nous* and agreement

The fact that (6) is absent from (some) colloquial French, i.e., that *nous* has been lost there as a subject clitic (while being retained as object clitic and as non-clitic) lends itself to being interpreted in terms of the loss, in the relevant French, of the first-person plural agreement morpheme *-ons*. This will be so, if subject clitic *nous* needs to be licensed by *-ons*, as part of a more general fact about French, to the effect that subject clitics depend on the presence of a finite verb. That they do is shown clearly by their incompatibility with the present participle/gerund form (despite the fact that present participle/gerunds pattern with finite verbs as far as adverb positioning is concerned):

(26) Les témoins ayant menti,... ('the witnesses having lied...')

(27) *Ils ayant menti,... ('they having lied...')

The impossibility of (27) is plausibly due to the (systematic) lack of agreement suffixes on present participles/gerunds. To exclude (6), though, we need to say more specifically that a subject clitic requires the presence of a matching agreement suffix, given:

(28) Nous partons. ('we leave')

(29) *Nous partent. ('we leave_{3pl}')

Not surprisingly, subject clitic *nous* requires the presence of *-ons*; a non-1pl. agreement suffix would not suffice.

The suffix *-ons* also seems to play a licensing role in imperatives:

(30) Partons! ('(let's) leave!')

The French that has (28) has (30) as a corresponding first-person plural imperative. But the French that has (31) instead of (or in addition to) (28):

(31) On part. ('*on* leaves' = 'we leave')

⁶ The incompatibility of indefinite *they* with *all* in (11) indicates that plurality of form is not sufficient, even though it is necessary. Relevant is the fact that *all of them* does not seem to work in (11), either, in the relevant reading. Cf. perhaps:

(i) Someone_i just said they_i (*all) lost their wallet.

as well as the generic:

(ii) When people (*all) get lonely, they get unhappy.

never allows an imperative with the 3sg. verb form of (31):

- (32) *Part!

This suggests that the licensing of silent NOUS in subjectless imperatives has the presence of *-ons* as a necessary condition.⁷

Although subject clitic *nous* requires *-ons*, the subject clitic *on* that can ‘replace’ *nous* requires the 3sg. form of the verb, as seen in (31). Having *-ons* with *on* is not possible:

- (33) *On partons.

This is so even in sentences with overt *nous* in addition to *on*:

- (34) Nous, on part.

- (35) *Nous, on partons.

The sharp deviance of (35) will follow as a consequence of *on* not being properly licensed, in that 1pl. *-ons* does not match 3sg. *on*.

This kind of mismatch is not limited to subject clitic and agreement suffix. It also extends to reflexive clitics, with an interesting twist. In the presence of subject clitic *nous*, the reflexive object clitic is also *nous*:

- (36) Nous nous lavons. (‘we us wash’)

If the subject clitic is *on*, the reflexive is *se* (the usual reflexive for third person):

- (37) On se lave. (‘*on* refl. washes’)

In neither of these two cases is there another option in standard French:⁸

- (38) *Nous se lavons.

- (39) *On nous lave.

(More exactly, (39) is impossible with a first-person plural interpretation for the subject; it is possible (irrelevantly here) with the indefinite *on* of (10) and a non-reflexive interpretation akin to *They’re washing us*.)

This is particularly striking if we add overt *nous* to (37) and (39), yielding:

- (40) Nous, on se lave.

- (41) *Nous, on nous lave.

⁷ But not as a sufficient condition, since (30) is not possible as a declarative. For relevant discussion, see Zanuttini (2008).

⁸ At least some sentences like (38) are possible in the non-standard French described by Bauche (1928, 111). See also below.

(Again, (41) is irrelevantly possible with indefinite *on* as subject and a non-reflexive interpretation akin to *Us, they're washing us.*) As a reflexive sentence, (41) is sharply out; the presence of initial non-clitic *nous* cannot overcome the requirement that subject clitic *on* calls for reflexive *se*. The interesting twist is that the sharp deviance of (39) and (41) as reflexive sentences diminishes if the reflexive clitic *nous* is more deeply embedded relative to *on*:

- (42) ?*On a essayé de faire semblant de nous laver.* ('*on* has tried to make semblance of us to-wash' = 'we have tried to pretend to wash ourselves')

Although the exact conditions that make (42) better than (39) remain to be worked out, what is clear is that having reflexive clitic *nous* with *on* as antecedent, as in (42), is not possible with indefinite *on*, which suggests that a necessary component of the (relative) acceptability of (42) is the presence of silent NOUS, i.e., (42) must be:

- (43) NOUS *on* ... nous ...

in which NOUS is licensing *nous* as the form of the reflexive clitic. This is, then, another reason to take silent NOUS to be available in French in the context of subject clitic *on*.⁹

4. Italian *si*

Cinque 1988b, sects. 2.4.3, 3.4) shows very clearly that the Italian impersonal (as it is often called) *si* is actually compatible with a first-person plural interpretation in sentences like:

- (44) *Si è stati invitati tutti.* ('*si* is been invited all' = 'we have all been invited')

This interpretation, combined with the presence here of *tutti* ('all'), leads Cinque to propose that such sentences contain a first-person plural subject *pro*, which I will represent as silent NOI, emphasizing the parallel with French. (Overt non-clitic *noi* is the Italian counterpart of overt (non-clitic) French *nous*.)

In other words, we should think of (44) as:

- (45) NOI *si* è stati invitati tutti

in a way that is strongly parallel to the co-occurrence of *tous* ('all') and NOUS in French in (21). Similarly, the French sentence:

⁹ Chris Collins points out (p.c.) that the licensing of NOUS by *on* (and similarly by *si/sa* and *ci* as discussed later) argued for here contrasts with the restrictions on other than third-person silent pronouns discussed in Kayne (2001, sects. 10–12). I think this contrast is probably related to the deictic character of *on*, *s-* and *ci*. (The deictic character of *on* and *s-* is to be understood in terms of their relation to first- and second-person singular as discussed in Kayne (2003a)).

- (46) Nous, on a ri. ('us, *on* has laughed' = 'us, we've laughed')

with overt *nous* and *on* cooccurring, has a fairly close counterpart in Italian in Cinque's:

- (47) Si è stati invitati anche noi. ('*si* is been invited also us' = 'we have been invited, too')

in which *si* co-occurs with overt *noi*.

Cinque gives further evidence for the availability of silent NOI in the presence of impersonal *si*, for example from disjoint reference effects, as in the discussion of (23) earlier, and also from reflexives and control. There seems to be no doubt, then, that Italian impersonal *si* shares with French *on* the property of being compatible with a first-person plural subject pronoun (*noi* in Italian, *nous* in French) that can be silent (NOI in Italian, NOUS in French).

5. The privileged status of first-person plural

Morin (1978, 363–364) has pointed out that the local co-occurrence between *on* and *nous* seen in (46) is limited to first-person plural. Alongside (46) one does not have in French any of the following:

- (48) *Vous, on a ri. ('you_{pl} *on* has laughed')
 (49) *Toi, on a ri. ('you_{sg}...')
 (50) *Moi, on a ri. ('me...')

Subject clitic *on* can be locally linked to non-clitic 1pl. *nous*, but not to 2pl. *vous* or 2sg. *toi* or 1sg. *moi*. Nor is a third-person pronoun linkable to *on*:

- (51) *Lui, on a ri. ('him...')
 (52) *Eux, on a ri. ('them...')

The same holds for Italian, in that alongside (47), with first-plural *noi*, there is no:

- (53) *Si è stati invitati anche voi. ('...you_{pl}...')
 (54) *Si è stati/stato invitati/o anche tu/te. ('...you_{sg}...')
 (55) *Si è stati/stato invitati/o anch'io. ('...I')

Nor is there a third-person counterpart to (47), in the sense that the following are not possible, either:

- (56) *Si è stati/stata invitati/a anche lei. ('...she')
 (57) *Si è stati invitati anche loro. ('...they')

6. Reflexive *si/se* and first-person plural

Of interest is the fact that the privileged status of first-person plural relative to Italian impersonal *si* (and to French *on*) has a parallel with reflexive object clitics, if we move on to Paduan. In Italian, reflexive *si* is strictly limited to taking a third-person antecedent, as in:¹⁰

- (58) Gianni *si* lava le mani. ('John refl. washes the hands' = 'J is washing his hands')
 (59) I bambini *si* lavano le mani. ('the children...')

With a first- or second-person antecedent *si* is not possible; rather, the corresponding non-reflexive object clitic appears:

- (60) Io *mi*/**si* lavo le mani. ('I me wash the hands' = 'I am washing my hands')
 (61) Tu *ti*/**si* lavi le mani. ('you_{sg.}...')
 (62) Noi *ci*/**si* laviamo le mani. ('we...')
 (63) Voi *vi*/**si* lavate le mani. ('you_{pl.}...')

Paduan reflexive clitic *se*, like Italian *si*, also appears with third-person antecedents, and like Italian *si*, does not appear with a first-person singular or with a second-person antecedent. In other words, Paduan is just like Italian in the relevant respects as far as all of (58)–(63) are concerned, with the single exception of (62). In Paduan, when the antecedent is first-person plural, reflexive *se* does appear:

- (64) Noaltri *se* lavémo le man. ('we-others *se* wash the hands' = 'we are washing our hands')

Conversely, the normal first-person plural object clitic, which in Paduan is *ne*, cannot appear (contrary to Italian *ci* in (62)):

- (65) *Noaltri *ne* lavémo le man.

In opposition to (65), Paduan does have ordinary object clitics in reflexive sentences when the subject is first-person singular or second-person singular or plural:

- (66) Mi *me* lavo le man. ('I me wash the hands')
 (67) Ti *te te* lavi le man. ('you you you wash...')
 (68) Voaltri *ve* lavè le man. ('you-others you wash...')

(The first *te* in (67) is the second-singular subject clitic, which is not relevant to the present discussion.)

¹⁰ For an insightful discussion of the case in which the antecedent is itself impersonal *si*, see Cinque (1995b).

The way in which first-person plural stands out (against first-person singular and second person) in Paduan (64) strongly recalls the French and Italian facts of (46)–(57). In all three languages, first-person plural has a closer relation to elements of the *on* and *si/se* type than either first-person singular or second-person singular or plural.

Given that French *on* and Italian (impersonal) *si* have the ability to license a silent first-person plural NOUS or NOI (as illustrated in (21), (43), and (45)), it seems natural to integrate Paduan (64) with them by having (reflexive) *se* in (64) license a silent NE. The proposal, then, is that (64) is properly thought of as:

(69) *noaltri NE se lavémo le man*

with silent first-person plural object clitic NE in addition to *se*.

The claim that Paduan reflexive *se* can license silent 1pl. NE here in a way similar to the way in which Italian impersonal *si* licenses silent 1pl. NOI in (45) will, if it is correct, reinforce the idea that impersonal *si/se* (the impersonal is *se* in Paduan) and reflexive *si/se* are the same element, an idea emphasized by Cinque (1988b, sect. 6 and introduction).

7. The extra object clitic in reflexive sentences

The proposal in (69) implies that at least some reflexive clitic sentences in Romance have two object clitics corresponding in some sense to the same (here, dative) argument, where a single object clitic might have seemed sufficient. This implication is strongly supported by certain dialects from the Ticino area of Italian-speaking Switzerland and by certain Lombardy dialects, e.g. (from Spiess (1976, 207)):

(70) *Mi a ma sa lavi i man.* ('me I me refl. wash the hands')

Mi, a non-clitic, and *a*, a subject clitic of the sort discussed by Benincà (1983) and Poletto (2000), are not directly relevant. Important, rather, are *ma* and *sa*, both of which seem to overtly correspond to the same dative/possessive argument.

The existence of (70) in some dialects obviously increases the plausibility of (69), but in at least some of those dialects there is an even tighter connection to (69). For example, Andrea Cattaneo tells me that in his Bellinzona (Ticino) dialect, (70) is possible (as are parallel sentences with *va sa* in the second plural),¹¹ yet in the first-

¹¹ He has noted that neither *ma sa* nor *va sa* here are possible postinfinitivally. This may be related to the restrictions on postinfinitival clitic combinations and ordering discussed by Ordoñez (2002).

Restrictions in imperatives appear to be less strong—v. Nicoli (1983, 152) and Lurà (1990, 161). Cf. also Benincà and Poletto (2005).

For a different approach to comparable phenomena in Barcelona Catalan, cf. Bonet (1991) and Harris (1997, 43). Harris takes the presence of a clitic *te* intervening in Catalan between *me* and *se* to preclude a more syntactic approach than his. Note, though, that the text approach to Ticino *ma sa* does not imply that the two clitics form a constituent at every stage of the derivation—in fact the absence of postinfinitival *ma sa* suggests that preverbally *ma* and *sa* do not form a constituent—cf. also Kayne (1994a, 21).

person plural having two such clitics is still impossible. (In the first-person plural, Bellinzonese has *sa* alone, much as Paduan has *se* in (64).) Within Bellinzonese, then, the existence of *ma sa* in (70) contrasting with the first plural lends additional indirect support to the silent first plural NE of (69).¹²

8. Silent *se/si*

The French and Italian counterparts of (70) have one object clitic, rather than two:

(71) *Moi, je me lave les mains.*

(72) *Io mi lavo le mani.*

In these, *moi* and *io* are non-clitics that correspond to *mi* in (70). *Je* in (71) is a subject clitic corresponding only very approximately to the *a* of (70). *Me* and *mi* here are object clitics, but in contrast to (70) there is no additional *se/si* visible in (71) or (72):

(73) **Moi, je me se lave les mains.*

(74) **Io mi si lavo le mani.*

A plausible proposal at this point is that (71) and (72) differ from (70) not in lacking a reflexive clitic entirely, but in failing to pronounce it, i.e., (71) and (72) are really:

(75) *moi je me SE lave les mains*

(76) *io mi SI lavo le mani*

with a silent reflexive clitic in addition to the visible pronominal object clitic. (The parametric variation here remains to be elucidated.)

9. The role of *se/si/sa*

A natural question is why Romance languages would ever need two object clitics here. A natural answer is that otherwise there would be a Condition B violation. After all, apart from the special position and clitic character of *me/mi* in (71)–(72), those French and Italian sentences closely resemble the following (switching to non-possessive cases):

(77) **I never criticize me if I don't have to.*

¹² Complexities that go beyond the scope of this paper involve the fact that Bellinzonese appears to be like Italian in having *ga* rather than *na* as a first person plural object clitic, much as in the discussion of Italian *ci* below, and similarly, at least in part, for the Mendrisiotto dialect of Lurà (1990, 160). The text point is sharpest, then, in the Milanese of Nicoli (1983, 146, 151), which allows 1pl. object clitic *ne* and allows *me se* and *ve se*, yet still disallows **ne se*.

English gets around this Condition B violation with *self* (and possessive structure):

- (78) I never criticize myself if I don't have to.

The proposal in (75) and (76) amounts to saying that *ma/me/mi* are ordinary first-person pronouns (and are not reflexive in any sense), even in reflexive sentences. *Sa/se/si* or a silent counterpart SA/SE/SI are necessarily present in addition to *ma/me/mi* in such sentences in order to avoid a Condition B violation, just as *self* is in English.¹³ In some first- or second-person cases, such as (69) (and more generally in Slavic), the reflexive element *sa/se/si* is pronounced and it is the ordinary pronoun NE that is not pronounced.

It is worth noting that from this perspective,¹⁴ neither *self* nor *se/si/sa* is to be thought of as intrinsically 'reflexive'. *S-* in Romance (and Slavic and some Germanic) is a morpheme related to first-person *m-* and second-person *t-*.¹⁵ *Self* is arguably an abstract body part noun that in English (and other languages, often with other body part nouns)¹⁶ enters into a possessive structure with the ordinary pronoun.¹⁷ English *self* and Romance *s-* play a role in licensing 'reflexive' sentences by protecting the ordinary pronoun from incurring a Condition B violation (although the exact mechanism may not be identical in the two cases). But they are not themselves 'reflexive', as shown also by their other clearly non-reflexive uses, e.g., in the impersonal *si* constructions touched on earlier.

10. Third-person reflexive sentences

As far as I know, no North Italian dialect (or any other Romance language) has a counterpart of (70) with a third-person subject and a visible third-person object pronoun in addition to the reflexive *sa/se/si*. (This would seem to be related to the fact that cross-linguistically third-person pronouns (e.g., in Somali¹⁸) and third-person agreement are more readily left unpronounced than first or second.) A reasonable proposal, given the preceding, would be that French and Italian:

¹³ The fact that SA/SE/SI or *sa/se/si* is not sufficient by itself now resembles:

- i) *John thinks highly of self.

¹⁴ See Kayne (2002b, sect. 10), which converges with Jayaseelan (1997) and in part with Pica and Snyder (1997).

¹⁵ As in Kayne (2003a), which has *m-/t-/s-* as a natural class that does not include first plural *n-* or second plural *v-*, and in that respect differs from Bonet (1995, 614). That first and second plural *n-* and *v-* are more different from (primarily singular) *m-/t-/s-* than one might think is supported by Vassiliev and Larson (2001) and den Dikken et al. (2001).

¹⁶ For interesting discussion, see Pica and Snyder (1997).

¹⁷ Though the standard English third-person forms *himself*, *themselves*, and arguably *herself*, with the objective form of the pronoun, need to be accounted for (see Ghomeshi and Ritter (1996)), alongside the regular:

- i) He lost his/*him cool.

The possessive idea goes back to Helke (1971; 1973).

¹⁸ See Saeed (1993, 174).

(79) Jean se lave les mains. ('J *se* washes the hands' = 'J is washing his hands')

(80) Gianni si lava le mani.

are actually (cf. in part Jakubowicz (1992)):

(81) Jean LUI se lave les mains.

(82) Gianni GLI si lava le mani.

with an unpronounced third-person (dative) clitic, in addition to the visible *se/si*, and similarly for accusatives:¹⁹

(83) Jean LE se photographie souvent. ('J him *se* photographs often')

(84) Gianni LO si fotografa spesso.

11. Italian *ci* and the question of syncretism

Parallel to first singular *m*-, second singular *t*-, and second plural *v*-, Romance languages typically have *n*- for first plural pronouns, e.g., with non-clitics:

(85) nous (French); noi (Italian); nosotros (Spanish)

with clitics:

(86) nous (French); nos (Spanish); ne (Paduan)

and with possessives:

(87) notre (French); nostro (Italian); nuestro (Spanish)

There is a gap, however, in Italian, which despite having with *n*- non-clitic *noi* and possessive *nostro* seems to have as its first plural object clitic *ci* (whether accusative or dative):

(88) Ci amano. ('us they-love')

(89) Ci parlano. ('us they-speak' = 'they speak to us')

This *ci* is identical in form to the clitic found in locative sentences:

¹⁹ Colloquial French also allows silent third-person accusative clitics in sentences like:

i) Jean lui a donné. ('J [it/them] to-him has given')

in the context of a third-person dative clitic, as discussed by Morin (1978, 371)—cf. Grevisse (1993, sect. 635e). Something similar appears to hold for Catalan—Bonet (1995, 639).

(90) Ci vanno. ('there they-are-going')

and to that found in:

(91) Ci pensano. ('there they-think' = 'they are thinking about that')

As argued in Kayne (2004a) and in chapter 6, I take the *ci* of (90) to be the same element as the *ci* of (91), and similarly for *there* in the following two English sentences (the second archaic):

(92) They are going there.

(93) We spoke thereof.

The difference in interpretation in these two pairs is not due to a difference in *cilthere*, but rather in their syntactic context. In (90) and (92), *ci* and *there* are modifiers of a silent PLACE, much as in Katz and Postal (1964), whereas in (91) and (93) they modify a silent THING. (In (91) there is additionally a silent preposition.)

The question now is how to integrate the *ci* of (88)/(89). One might think in terms of syncretism, saying that in Italian the first-person plural object clitic has 'fallen together' with the Italian counterpart of *there*. Consider, however, the fact that *ci* has not fallen together with 1sg. or 2sg. or 2pl., a fact that recalls others discussed earlier, in particular the fact that French *on* is compatible with a first-person plural non-clitic subject, but not with 1sg. or 2sg. or 2pl., as illustrated in (48)–(50), plus the fact that Italian *si* has essentially the same property as *on*, as shown in (53)–(55).

We can unify these three instances of 1pl. vs. 1sg./2sg./2pl. involving *ci*, *on* and *si* if we treat *ci* in (88)/(89) as sharing with *on* and *si* the property of co-occurring with a first-person plural pronoun, especially keeping in mind the fact that *on* and *si* can co-occur with a silent 1pl. pronoun, as in (21), (43), and (45). These considerations lead to the following proposal, which simultaneously establishes a link to the co-occurrence of Paduan reflexive *se* with a(n obligatorily, as here) silent 1pl. object clitic (as in (69)):

(94) Italian *ci* can co-occur with a silent 1pl.

In other words, (88)/(89) are to be analyzed as:²⁰

(95) NI *ci* amano

²⁰ The co-occurrence of NI and *ci* may be related to the reasonably acceptable (in the non-standard English that has *these here cars*—Bernstein (1997)):

i) Us here guys ain't never gonna play like that.

which seems better than:

ii) *?You there guys ain't never gonna play like that.

The fact that an overt 1pl. **ni* is impossible in the text examples, just as in (69), but differently from (17), may be related to its object clitic position, i.e., there are more positions available in the left periphery for the overt *nous* of (17) to take advantage of than there are in the object clitic area.

(96) NI ci parlano

where NI is the silent first-person (object clitic) pronoun in question.

Another way to put this is to say that syncretism of the sort under consideration is nothing other than a particular kind of syntactic ambiguity. It is not that *ci* has multiple possible values. Rather, *ci*, the same *ci*, is compatible in Italian with a certain range of syntactic contexts, as illustrated by (at least) (90), (91), and (88)/(89). (90) contains a silent PLACE, (91) a silent THING, and (88)/(89) a silent 1pl. NI.

This approach to the *ci* of (88)/(89), which takes *ci* not to be a first-person plural clitic,²¹ is supported by the account it allows of certain clitic ordering facts noted by Bianchi (2005). To the extent that object clitic *mi* and object clitic *ti* can co-occur, the order in Italian is necessarily *mi ti* (% here indicates ‘accepted by some’):

(97) %Mi ti affideranno. (‘me you(sg.) they-will-entrust’)

(98) *Ti mi affideranno.

Holding first person constant, while replacing singular *mi* by plural *ci*, yields, somewhat surprisingly, a reversal in clitic order:

(99) %Ti ci affideranno. (‘you(sg.) *ci* they-will-entrust’)

(100) *Ci ti affideranno.

As Bianchi notes, the *ti ci* order here is identical to that required with ordinary ‘locative’ *ci*:

(101) Ti ci spediranno. (‘you(sg.) there they-will-send’)

(102) *Ci ti spediranno.

This is not unexpected from the perspective developed here. The *ci* of (99)/(100) is not a first-person plural clitic,²² despite appearances, but is rather the same (deictic) clitic found in (101)/(102), and, as we see, has the same position relative to *ti*.²³

²¹ Since Italian object clitic *vi* has the same initial consonant as non-clitic 2pl. *voi* and as 2pl. possessive *vostro*, it is plausible to take *vi* in contemporary Italian to be able to be a true second-person plural object clitic, in which case *vi* differs sharply from *ci*, which is only apparently first-person plural. This may be supported by the (apparent) fact (further work is called for) that deletion of the vowel of *vi* and deletion of the vowel of *ci* are not parallel (the latter seems more readily deletable, like that of *ci* in locative sentences (with PLACE)). How to integrate the locative *vi* of a more literary Italian remains open. For relevant diachronic discussion, see Reisig Ferrazzano (2003).

²² (99) (but not (101)) must in addition contain a silent 1pl. NI, as in:

i) NI ti ci affideranno.

²³ Beyond the scope of this paper is the fact that impersonal *si* follows accusative third-person object clitics:

i) Li si legge facilmente. (‘them *si* reads easily’)

while reflexive *si* precedes them:

ii) Gianni se li compra. (‘G *se* them buys’)

12. Conclusion

Silent first-person plural pronouns are present in various Romance languages in certain special contexts. An approach based on silent elements provides an alternative (one that is more tightly tied to other aspects of syntax) to an approach based on syncretism (which might have seemed plausible at least for Italian *ci*).

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A Note on Auxiliary Alternations and Silent Causation

1. Introduction

As is well known, French and Italian both have an alternation between *have* and *be* in their auxiliary + past participle construction. In the details, French and Italian are identical in certain respects. With ordinary transitives, both languages invariably have auxiliary *have*:¹

- (1) Marie a lu ce livre. (Fr: 'M has read this book')
- (2) Maria ha letto questo libro. (It: same)

In the presence of a reflexive clitic, on the other hand, both languages invariably have auxiliary *be*, even when a lexical direct object is present:

- (3) Marie s'est acheté un livre. (Fr: 'M refl. is bought a book')
- (4) Maria si è comprata un libro. (It: same)

The two languages sometimes differ, though, when it comes to intransitives:

- (5) Jean a vieilli. (Fr: 'J has become-older')
- (6) Gianni è invecchiato. (It: 'J is become-older')

¹ This holds for most of Romance. Benincà (1989, 583) notes an exception in Friulian that might be due to the presence of a silent reflexive clitic, which might in turn carry over to the Eastern Abruzzese facts discussed by d'Alessandro and Roberts (2007).

There are other intransitives whose auxiliary is the same in the two languages:

- (7) Jean est parti. (Fr: 'J is left')
- (8) Gianni è partito. (It: same)

Here both have auxiliary *be*. In the following, both have auxiliary *have*:

- (9) Jean a dormi. (Fr: 'J has slept')
- (10) Gianni ha dormito. (It: same)

Against the background of the fact that French and Italian behave identically in a number of respects as far as auxiliary selection is concerned, the question is why they do not always behave identically. Why do they differ precisely in (5) vs. (6)? More specifically still, why, with *vieillir/invecchiare* ('to-age/become old(er)'), is it French that has *have* and Italian that has *be*, rather than the reverse?

This last question has, as far as I know, not been addressed in the (extensive) literature on auxiliary selection for these languages. In this chapter, I will suggest (the beginning of) an answer.

2. The class of verbs in question

One question that has been addressed in the literature is that of determining which intransitive verbs have the differential behavior of *vieillir/invecchiare* seen in (5) vs. (6). Some others that do are as follows (cf. Legendre (2007, 149 ff)), with the French verb given preceding its close Italian counterpart:

- (11) a. grandir/crescere ('to grow')
- b. exploser/scoppiare ('to explode')
- c. augmenter/aumentare ('to increase')
- d. diminuer/diminuire ('to diminish')
- e. couler/affondare ('to sink')
- f. glisser/scivolare ('to slip')
- g. guérir/guarire ('to get-cured')
- h. empirer/peggiore ('to get-worse')
- i. brûler/bruciare ('to burn')
- j. geler/ghiacciare ('to freeze')
- k. pâlir/impallidire ('to get-pale')

All of these intransitive French-Italian pairs act like (5) vs. (6), in that French will have auxiliary *have* and Italian auxiliary *be*. Some of these pairs have transitive counterparts, in which case we have a double contrast, as illustrated here with (c):

- (12) Les prix ont augmenté. (Fr: 'the prices have increased')
- (13) I prezzi sono aumentati. (It: 'the prices are increased')
- (14) Le gouvernement a augmenté les prix. (Fr: 'the government has increased the prices')

- (15) Il governo ha aumentato i prezzi. (It: same)

The Italian intransitive example (13) has *be*, contrasting both with its French counterpart (12) and with the transitive examples in both languages, which have *have*, just as in (1) and (2).

3. Beyond auxiliary selection

Many discussions of auxiliary selection of the French/Italian sort have tended to limit themselves to auxiliary selection. But an understanding of why the two languages differ with this class of intransitive verbs and why they differ in exactly the way they do (again, why is it French that has *have* and Italian that has *be* in these pairs, rather than the other way around?) arguably requires moving beyond auxiliary selection to bring in other aspects of French and Italian syntax, in particular causatives, past participle agreement and passives.

Past participle agreement is relevant insofar as the auxiliary contrast between (5) and (6) is paralleled by the fact that past participle agreement is obligatory in Italian (6):

- (16) Maria è invecchiata/*invecchiato.

as seen by the need for the feminine form *invecchiata* ending in *-a*, whereas past participle agreement is not present in French (5):

- (17) Marie a vieilli/*vieillie.

where the form in *-e* would be the feminine one.

The relevance of causatives and passives has to do with the fact that although French causatives are by and large similar to Italian causatives, and French passives to Italian passives, they are not entirely the same. The important difference here has to do specifically with passives of causatives, which Italian allows in a way that French does not, as follows.²

Examples of French and Italian causatives containing an embedded intransitive infinitive are:

- (18) Les professeurs ont fait travailler les étudiants. (Fr: 'the professors have made work the students')
 (19) I professori hanno fatto lavorare gli studenti. (It: same)

The two languages share the property that the underlying subject of the infinitive must end up following it:

² Cf. Kayne (1985), Burzio (1986, 254), and Guasti (1993).

(20) *Les professeurs ont fait les étudiants travailler.

(21) *I professori hanno fatto gli studenti lavorare.

Yet they differ in that Italian allows passivization of such causatives:

(22) Gli studenti sono stati fatti lavorare (dai professori). (It: 'the students are been made work (by the professors)')

whereas French does not:

(23) *Les étudiants ont été faits travailler (par les professeurs). (Fr: same)

If the infinitive embedded under the causative matrix verb is transitive, then in both languages the subject of the embedded transitive must be 'dativized' (and so must be preceded by the preposition *à/a*).³ A French example is:

(24) Marie a fait manger une pomme à l'enfant. (Fr: 'M has made eat an apple to the child')

The Italian counterpart is essentially the same:

(25) Maria ha fatto mangiare una mela al bambino. (It: same)

Again, Italian allows passivization, here of the underlying embedded object:

(26) La mela è stata fatta mangiare al bambino (da Maria). ('It: 'the apple is been made eat to-the child (by M)') but French does not:

(27) *La pomme a été faite manger à l'enfant (par Marie). (Fr: same)

4. A proposal

A core proposal of this chapter is that the French-Italian difference concerning passivization of causatives seen in (23)/(27) vs. (22)/(26) is in fact related to the difference in auxiliary selection that holds for the pairs of verbs in (11), in the following way (to be revised shortly):⁴

³ Both languages also allow having the embedded subject appear in the form of an agent phrase—cf. Kayne (1975, sect. 3.5), Burzio (1986, 247)—in a way that is not important to the present discussion.

⁴ The term 'anticausative', taken over from some of the literature, is an informal one. Aspects of an analysis will be presented below.

- (28) A Romance language allows auxiliary *be* with the 'anticausative' verbs of (11) only if it allows passivization of causatives as in (22)/(26).⁵

This generalization needs to be refined, however, to take into account another fact concerning causatives (and past participle agreement). In French, causatives are odd insofar as a preceding direct object clitic does not trigger past participle agreement on the causative past participle, even for those speakers who otherwise have such agreement in non-causatives, i.e., there is a contrast between:

- (29) Jean l'a repeinte. ('J it has repainted(fem.)')

in which past participle agreement in standard French is possible (and for some speakers obligatory), and the following:

- (30) Jean l'a fait repeindre. ('J it has made repaint' = 'J has had it repainted')
 (31) *Jean l'a faite repeindre. ('J it has made(fem.) repaint')

where the agreeing example (31) is not possible, in contrast to (29).

There is a similarity between (31) and (23)/(27), to the effect that, in French, past participle agreement in the causative + infinitive construction is not possible, whether in actives like (31) or in passives like (23) or (27). As seen in the passive examples (22)/(26), Italian is different. It allows (and requires) past participle agreement there (the causative forms *fatti* and *fatta* are agreeing forms—masculine plural and feminine singular, respectively). As expected, then, Italian also allows (and requires) past participle agreement in its counterparts to (30)/(31):

- (32) (Questa tavola) Gianni l'ha fatta/*fatto ridipingere. ('this table G it has made(fem.) repaint')

When the object clitic *l'* is feminine (in agreement with its antecedent *questa tavola*, here), then the causative verb past participle *fatta* must agree, in Italian.

To integrate these facts concerning past participle agreement in non-passives such as (29)–(32), the generalization in (28) should be revised to:⁶

- (33) A Romance language allows auxiliary *be* with the anticausative verbs of (11) only if it allows past participle agreement in causatives.

⁵ Passivization of causatives here is to be distinguished from the middle construction applied to causatives, which is possible in French to a greater extent—cf. Kayne (1975, sect. 5.9).

The generalization in (28) is not to be interpreted as a bidirectional.

⁶ I have maintained this revision as a unidirectional statement, rather than a bidirectional one, thinking of the fact that (31) is attested in (dialects of) French or Occitan (cf. Tuaillon (1988), Séguy (1978, 54), Grevisse (1993, sect. 915)) in a way that I suspect is wider than the distribution of auxiliary *be* with anticausatives.

5. More on past participle agreement

That past participle agreement is of importance here is further supported by the French of speakers like Bouvier (2000), for whom passives of causatives are actually possible, but only in those cases in which the derived subject is masculine singular. Bouvier gives the following contrasting pair:

- (34) *Une jupe a été fait(e) faire. ('a skirt(fem.) has been made made')
 (35) Un pantalon a été fait faire. ('a pair-of-pants(masc.)...')

and suggests that the latter is possible by virtue of containing the default past participle form *fait*, which amounts to saying that for him there is no past participle agreement in (35).⁷

There is a partial similarity between Bouvier's judgments and the fact that Ruwet (1972, 114), in giving (36) as an example of French not allowing passivization of causatives:

- (36) *Les pommes de terre ont été fait manger. ('the potatoes have been made eat')

uses the non-agreeing form *fait*, rather than the agreeing form *faites*.

- (37) *Les pommes de terre ont été faites manger. ('the potatoes have been made eat')

presumably indicating that for Ruwet (37), with agreement, would have been even worse than (36).

6. Impersonals, leading to a further revised proposal

That auxiliary selection with the verbs of (11) is linked to past participle agreement in causatives, i.e., that there is a cluster of related properties in the familiar sense of comparative syntax, is supported by some additional data from French. For at least a number of French speakers, impersonal passives of causatives are acceptable where ordinary passives of causatives are not (cf. Bouvier (2000)).

By impersonal passive, I have in mind French sentences like:

- (38) Il a été arrêté plusieurs criminels. ('it has been arrested several criminals')

⁷ Alternatively, (35) might have the past participle agreeing with a silent expletive that has the property that its 'associate' must be masculine singular. (If so, *un pantalon* there might have been raised in a focalization-like manner.)

Indirectly relevant here is the fact that Isabelle de Crousaz (p.c.) sometimes allows non-agreement with passive past participles, while requiring agreement with adjectives. This recalls Christensen and Taraldsen's (1989, note 1) observation that Oslo Norwegian and Danish both have adjective agreement, but no past participle agreement with unaccusatives even when the auxiliary is 'be'. Why Germanic has less agreement of these sorts than Romance remains to be elucidated.

in which the underlying object does not end up in subject position, but ends up rather in a postverbal position, with the ordinary subject position being filled by expletive *il*. A corresponding impersonal passive based on a causative is:

- (39) Il a été fait distribuer trop de poupées cette année. ('it has been made distribute too-many of dolls this year')

The corresponding ordinary (non-impersonal) passive would be:

- (40) *Trop de poupées ont été faites distribuer cette année.

in which the underlying embedded object *trop de poupées* has moved to matrix subject position.

Setting aside the question why exactly the impersonal passive (39) should be so much better with causatives than the ordinary passive (40) (against the background of the fact that French readily allows ordinary passives in simpler sentences), we can see a link to the auxiliary selection question, as follows.

The French intransitive verbs in (11) take auxiliary *have*, as discussed, and normally do not allow auxiliary *be* at all, for example in the following (non-passive) sentences:

- (41) a. Enormément de neige a fondu/*est fondue le mois dernier. ('enormously (much) of snow has melted/*is melted last month')
 b. Beaucoup de bateaux ont coulé/*sont coulés le mois dernier. ('a-great-deal of boats have sunk/*are sunk last month')
 c. Peu de patients ont guéri/*sont guéris en 1996. ('few of patients have gotten-cured/*are gotten-cured in 1996')
 d. Peu de maisons ont brûlé/*sont brûlées dans l'incendie de la semaine dernière. ('few of houses have burned/*are burned in last week's fire')

Yet for Jean-Yves Pollock (p.c.), the corresponding impersonal sentences with the same verbs of (11), but with auxiliary *be* (with subject expletive *il* and with the DP argument postverbal), are often improved:⁸

- (42) a. (?)Il est fondu énormément de neige le mois dernier.
 b. (?) Il est coulé beaucoup de bateaux le mois dernier.
 c. (?)Il est guéri peu de patients en 1996.
 d. ?? Il est brûlé peu de maisons dans l'incendie de la semaine dernière.

⁸ Unlike English:

- i) ?There has/*is melted a great deal of snow this week.

presumably indicating that (42) depends on French having auxiliary 'be' in (7) and/or (3).

Not surprisingly, (42) does not carry over to unergatives or transitives.

The fact that (42) is marginal as compared with (39) is very likely related to the unidirectional character of (28).

That the improved and acceptable status of the impersonal passive in French causatives seen in (39) vs. (40) finds a (marginal) parallel in (42) vs. (41) makes it clear, I think, that the impossibility of auxiliary *be* in (41) is not simply a fact about auxiliary selection per se, but is rather connected in some way to the impossibility of (ordinary) passives of causatives in French, of which (40) is one example. More specifically, it suggests that the generalization given in (33) should be further revised to:

- (43) A Romance language allows auxiliary *be* with the anticausative verbs of (11) only if it allows past participle agreement in corresponding causatives.

This revision, adding the word ‘corresponding’, is to be understood as having two subcases:

- (44) A Romance language allows auxiliary *be* with the anticausative verbs of (11) in non-impersonal sentences like (16) and (13) only if it allows past participle agreement in non-impersonal causatives like (32) and (26)/(22).⁹
 (45) A Romance language allows auxiliary *be* with the anticausative verbs of (11) in impersonal sentences like (42) only if it allows past participle agreement (with subject expletive *il*) in impersonal causatives like (39).

The formulation in (45) is inspired by Christensen and Taraldsen (1989, 71), who provide evidence that passive past participles in Swedish can agree with an expletive subject.¹⁰ Transposing this conclusion to French amounts to saying that in (42), as well as (39) and (38), the past participle agrees with subject *il*.

7. The beginning of an analysis

Why should (43)–(45) hold? Why should there be a close link between the choice of auxiliary in anticausative sentences like:

- (46) La nave è affondata ieri. (It: ‘the ship is sunk yesterday’)

vs. its French counterpart:

- (47) Le bateau a coulé hier. (Fr: ‘the ship has sunk yesterday’)

⁹ The unidirectional formulation of (44) implies that past participle agreement with an object clitic in causatives is more widespread than auxiliary *be* with the anticausatives of (11) (which seems to be true). This recalls the claim made in Kayne (1989, sect. 3.3) to the effect that clitic climbing (in non-causative restructuring sentences) is more widespread than having the auxiliary determined by the embedded infinitive; cf. Cinque (2006a, 33, 59).

¹⁰ Christensen and Taraldsen’s (1989, 75) proposal for a silent agent in impersonal passives might (if that agent is indefinite) provide, from the perspective of chapter 6, a source for the *der*-type (‘there’-type) expletive that occurs in such passives in some Germanic.

on the one hand, and properties of full causative sentences with an embedded infinitive, on the other? Examples of the latter that contain the verbs of (46) and (47) are:

- (48) Il temporale ha fatto affondare la nave. (It. 'the storm has made sink the ship')
 (49) L'orage a fait couler le bateau. (Fr: same)

The answer is arguably contained in the second half of the term 'anticausative' often used for (46) and (47) (though obscured by the prefix 'anti-'). While (48) and (49) are clearly biclausal,¹¹ (46) and (47) look monoclausal. I will, however, in agreement with Alexiadou et al. (2006),¹² take the position that that is misleading. Put another way, part of the answer to why (43)–(45) should hold is:¹³

- (50) Anticausative sentences like (46) and (47) are biclausal causatives.

¹¹ For recent discussion, cf. Kayne (2004b); also Kayne (1975, chap. 6) and Cinque (2006, 79) on the iterability of causatives.

¹² In addition to work going at least as far back as Chomsky's (1965, 189) suggestion concerning *frighten*; see also Pesetsky (1995, 67 ff.).

¹³ (50) is not incompatible with the well-known pair (cf. Alexiadou et al. (2006, 188) and references cited there):

- (i) The boat was sunk in order to collect the insurance.
 (ii) *The boat sank in order to collect the insurance.

which shows only that anticausatives (contrary to passives) lack a silent agent. (Other arguments against a silent agent in anticausatives are given by Ruwet (1972, 116 ff.). On why anticausatives could not have a silent agent, cf. Collins (2005).)

The absence of a silent agent in (ii) does not imply the absence of a silent non-agentive causer, of the sort visible in (48) and (49) and in:

- (iii) The storm sank the boat.

In other words, anticausative sentences like (46) and (47) may contain a silent non-agentive causer along with a silent causative verb.

In some cases, non-agentive causers in English are found following *from* (cf. Alexiadou et al. (2006, 194) and references cited there):

- iv) The ice melted from the heat of the sun.

in which case they cannot be controllers:

- iii) *The ice melted from the heat of the sun with extreme care/on purpose/before melting the copper.

and cannot parallel passive *by*-phrases:

- iv) *The ice had been melted from the heat of the sun.

To some extent, such *from*-phrases can co-occur with causative verbs:

- vi) His poor health allowed/?caused him to die from the pneumonia that he had caught.
 vii) The lack of sunscreen (is what) allowed/(?)caused his skin to shrivel up from the heat of the sun. See also Pesetsky (1995).

‘Clausal’ here must include ‘small clauses’.

In addition, we can adopt Marantz’s (2005) idea that causation can (and perhaps must) be expressed by an activity *v*.¹⁴ This fits well with French and Italian, whose causative verbs, as in (48) and (49), are in fact verbs that otherwise correspond to English *do*, as in:

- (51) Che hai fatto? (It: ‘what you-have done’ = ‘what have you done?’)
 (52) Qu’as-tu fait? (Fr: ‘what have you done’ = same)

Putting all these strands together leads to the conclusion that (46) and (47) contain a silent counterpart of the causative/activity verb seen overtly in (48) and (49). Using the capitalized form of the French root FAI-¹⁵ (‘do’) to represent this silent verb (in both languages), we have, leading to (46) and (47), at least the following:¹⁶

¹⁴ The term ‘activity’ must be understood broadly, to allow for (French) causatives like:

- i) La peur de la police a fait se dénoncer le cambrioleur. (Fr: ‘the fear of the police has made/done refl. denounce the burglar’ = ‘fear of the police made the burglar turn himself in’)

as well as English cases in which *do* does not convey a standard activity:

- ii) Fear does funny things to people.

On a possible link between the *do* of (51)/(52) (and by extension the other instances of *do* under discussion here) and that of *do*-support, see Haddican (2007). (Cf. also, perhaps, the *done* of AAVE.)

English *do* cannot occur in causatives in the way Italian *fare* and French *faire* can:

- iii) The high winds made/*did the boat go down quickly.

though the following seems close to causatives:

- iv) They did him out of his inheritance.

¹⁵ In addition to *fai-* (plus participial *-t* in *fait*), this root sometimes appears as just *f-*, sometimes as *fais-*. How best to understand this alternation is almost certainly not germane to the text discussion. Similarly for Italian *fa-* and *fac-*, whose final consonant is related to the gemination of *-t-* seen in (48) and (51).

¹⁶ That (46) and (47) contain a small clause (cf. Williams (1975) and Stowell (1991)) embedded under the causative may provide a way of understanding the interpretive difference between:

- i) The storm made the boat sink.
 ii) The storm sank the boat.

Fodor (1970) and Ruwet (1972, chap. 4), among others, argued against having a silent (deleted) causative verb in (ii) in part on the grounds that (i) is more compatible with indirect causation than (ii) is.

It may be that indirect causation requires an embedded clause that is ‘bigger’ than (i.e., contains a superset of the functional heads of) the small clause in (ii). Cf. the difference in interpretation between:

- iii) They got John to be angry.
 iv) They got John angry.

with the latter small clause example feeling more ‘direct’ than the former.

The incompatibility of an embedded small clause with indirect causation may also underlie the contrast discussed by Chomsky (1970, 221):

(53) ...FAI-...affondata... (It.)

(54) ...FAI-... coulé... (Fr.)

8. An aside on past participles

French and Italian differ in their past participle morphology. The Italian form *affondata* in (46) shows a participial *-t-* that the French form *coulé* does not show.¹⁷ This *-t-* appears orthographically in French in the *fait* (= *fai+t*) of (49) and (52), although it is not pronounced there. It is pronounced when such participles are in a context that allows feminine past participle agreement, e.g., with a preceding direct object clitic, as in:

(55) Je l'ai refaite. ('I it have redone')

(56) Il l'a repeinte. ('he it has repainted')

(57) Tu l'as dite belle. ('you her have said beautiful')

(58) Tu l'as cuite. ('you it have cooked')

and similarly in passives, e.g.:

(59) La maison a été refaite/repeinte. ('the house has been redone/repainted')

and in actives with auxiliary 'be':

(60) Elle est morte hier. ('she is died yesterday')

Past participles in which this *-t-* can be pronounced are few in number; in particular, the largest (first conjugation) class of French verbs is like *coulé* in (54), in which the participial *t* is not even orthographically present and is not pronounced even in contexts like (55)–(60). Nevertheless, it seems plausible to take all French verbs to co-occur with a past participial morpheme in the relevant cases, i.e., to take *coulé* to be 'coulé + T', where 'T' is a silent counterpart of *-t-*.¹⁸ (In Italian, this participial

v) They're growing tomatoes/*their children.

Cf. also the discussion of 'internal causation' in Alexiadou et al (2006).

¹⁷ Strictly speaking *affonda-* also contains the theme vowel *-a* distinct from the stem/root *affond-*. For recent discussion of such verbal theme vowels (which do not seem central to the text discussion), see Massuet (2000). In addition, *affond-* itself is almost certainly to be analyzed as *a-ffond-*, where *a-* is prepositional—see Di Sciullo (1997, 66), who notes that such prefixal prepositions are more common in Italian than in French, in a certain class of cases. French does have some anticausatives of that form, e.g., *embellir* ('em+bell+i+r' = 'in+beautiful+theme vowel+infin.' = 'to become beautiful') and similarly for *enlaidir*, with *laid* = 'ugly'; also *empirer* ('em+pir+e+r' = 'in+worse+theme vowel+infin.' = 'to worsen'), whose Italian counterpart *peggiorare* lacks the prefix, at least overtly, with no effect on the choice of auxiliary.

¹⁸ Partially similar is the case of French infinitival *-r*, which is also not pronounced with first conjugation verbs, except in 'liaison' contexts, and when part of the future/conditional.

-*t*- is always pronounced when it appears orthographically (the general case), as in (48) and (51).)

9. Past participles and *v*.

The parallelism between the causative/activity verbs of (48) and (49), on the one hand, and little *v*, on the other, must be understood with sufficient flexibility as to allow for the fact that the verbs embedded under *fatto/fait* in (48) and (49) are infinitival in form, i.e., show an infinitival suffix that was not included in (53)/(54) for the simple reason that there is no infinitival suffix to be seen in (46) or (47). The lexical verb in (46) and (47) is rather in past participial form, as given in (53)/(54).

A key question now is how the silent causative/activity FAI- of (53)/(54) (and (46) and (47)) stands with respect to infinitival and past participial morphemes. There is no reason to think that this FAI- should be accompanied by an infinitival suffix,¹⁹ if only because the auxiliaries (*è* and *a*) seen in (46) and (47) are never directly followed by overt infinitives, in French and Italian. More plausible would be to postulate the presence of a past participial morpheme following FAI-. This would lead us to revise (53) to the following, as a partial analysis of the Italian example (46):

- (61) la nave è FATTA affondata ieri ('the boat is DONE sunk yesterday' = 'the boat (has) sunk yesterday')

Like all proposals involving little *v*, this one leads to the question why *v* is not pronounced more often, or even systematically. With respect to (61) itself, this question becomes that of understanding why the following is not possible with overt *fatta*:²⁰

- (62) *La nave è fatta affondata ieri.

There might be a link to the idea of chapter 4 that silent elements and their overt counterparts never occupy the same position (so that more movements must take place than meet the eye). And/or there might be a link between (62) and the well-known fact that English *do*-support is not found in the absence of special factors such as negation, stress, etc.:

- (63) Why the boat sank/*did sink is unclear.

Similarly for the non-finite *do* of British English:²¹

¹⁹ Italian *-re* may well be two morphemes, as in Cardinaletti and Shlonsky (2004).

²⁰ Cf. perhaps Baker (1993). One will also need to understand the restrictions on the distribution of silent FAI-.

²¹ Cf. Chalcraft (2006), in the context of a striking argument for taking RNR to be an instance of ellipsis.

- (64) The boat might have done. vs. *The boat might have done sink.

I leave this question open.

A different question involves understanding why the lexical verb in (61) could not be in infinitival form:

- (65) *La nave è affondare ieri. ('the boat is sink(infin.) yesterday')

It looks as if the two past participles of (61) (more exactly, the two past participial *-t*-morphemes) are in an agreement (or reduplication) relation, in a way that recalls the Faroese phenomenon of 'attracted supines'—Lockwood (1977, p 141)—in which the supine form (closely related to past participles—cf. Christensen and Taraldsen (1989, 71) on non-agreeing past participles) can be preceded by the infinitival marker *at*.²² This in turn will lead to asking whether in (61) it is the first or second participial *-t*- that is interpretable, or whether it might not be the case that both are interpretable.²³

10. Back to auxiliaries and past participle agreement

More central to the auxiliary question than the interpretability one is the past participle agreement that I have indicated in (61) as holding of both past participles, including the silent one FATTA. In Italian passives, double past participle agreement is well known:

- (66) La nave è stata affondata. ('the boat is been(fem.) sunk(fem.)' = 'the boat has been sunk')

The proposal conveyed by (61) is that such double past participle agreement is also found in non-passives.

In addition to the reasons given earlier, past participle agreement is important to the auxiliary alternation question insofar as the analysis of auxiliary alternations in Kayne (1993) turned out not to be in the spirit of later proposals concerning prepositions made in Kayne (1999; 2004b) (where some prepositions are merged outside VP). In part for that reason, I would like to sidestep certain aspects of the general question of auxiliaries by approaching it indirectly through the following generalization:²⁴

²² Cf. Anward (1988) and Wiklund (2005, 6).

²³ For relevant discussion, see Pancheva and von Stechow (2004) and references cited there.

²⁴ Stated as unidirectional because some Romance languages (unlike French) have past participle agreement with auxiliary 'have' in (some) cases that resemble (69)—cf. Kayne (1993, sect. 2.2).

(67) does not hold of Germanic. Whether certain Germanic languages could be analyzed as having unpronounced past participle agreement is unclear.

- (67) In a Romance language, past participle agreement is obligatory in non-reflexive²⁵ anticausative sentences like (46)/(61) whenever the auxiliary is 'be'.

In other words, the following contrast is typical:

- (68) *La nave è affondata/*affondato ieri.* ('the ship(fem.) is sunk(fem.)/*sunk(no agr.) yesterday')

In French, the auxiliary would be 'have', with no past participle agreement:²⁶

- (69) *La barque a coulé/*coulée.* ('the boat(fem.) has sunk(no agr.)/*sunk(fem.)')

A direct French counterpart of the acceptable half of (68), with auxiliary 'be' and with past participle agreement, is impossible:

- (70) **La barque est coulée hier.*

This would have had to have, transposing from (61), an analysis like:

- (71) **la barque est FAITE coulée hier* ('the boat is DONE sunk yesterday' = 'the boat (has) sunk yesterday')

Assume now that in French (70)/(71) past participle agreement is blocked for some reason independent of the presence of auxiliary 'be'.²⁷ It would then follow that anticausatives like (70)/(71) could not have auxiliary 'be' in French, since, if they did, (67) would compel them to have past participle agreement, which by assumption is not possible. In other words, we can take the impossibility of auxiliary 'be' with French anticausatives to be a side effect of the impossibility of past participle agreement in French anticausatives.

That past participle agreement in (70)/(71) is indeed blocked independently of the presence of auxiliary 'be' is made highly plausible by the similarity between (71) and the fact that French does not allow such agreement with overt causatives, as we saw in (30)/(31), repeated here:

- (72) *Jean l'a fait repeindre.* ('J it has made/done repaint' = 'J has had it repainted')
- (73) **Jean l'a faite repeindre.* ('J it has made/done(fem.) repaint')

in which there is no 'be' at all.

²⁵ In reflexive anticausatives (which this chapter is setting aside), past participle agreement is not obligatory in (some) French—cf. Kayne (1975, sect. 5.8).

²⁶ In standard French, this is an orthographic fact with no phonetic counterpart; the conjecture is that the orthography in this case accurately reflects the syntax.

²⁷ Legendre (2007, 176) gives *La neige fondue, toutes les stations ont fermé* ('the snow melted, all the resorts have closed'), but that may well be an example of a reduced (adjectival) passive.

Put another way, the absence of past participle agreement in French in (69)–(73) is a single fact about past participle agreement that interacts with but is at bottom independent of the question of choice of auxiliary. Neither overt agreeing *faite* in (73) nor silent agreeing FAITE in (71) is admissible in French, in either type of causative. Combined with (67), this property of causative *faite*/FAITE prevents French from having auxiliary ‘be’ with anticausatives.

Conversely, the presence of past participle agreement in Italian in (68)/(61) and in the Italian counterpart of (73), namely:

(74) Gianni l’ha fatta ridipingere.

is a single fact about past participle agreement that sharply distinguishes Italian from French. Combined with (67), this property of Italian, i.e., the admissibility of agreeing causative *fatta*/FATTA, produces a difference in auxiliary choice as compared with French, in that it allows Italian, unlike French, to have anticausatives with auxiliary ‘be’.²⁸

In summary, the present proposal reduces the French-Italian difference concerning auxiliaries in anticausatives to the independent French-Italian difference concerning past participle agreement in full causatives (as illustrated in part by (73) vs. (74)).

11. Other Romance languages

This cross-Romance linkage between auxiliaries in anticausatives and past participle agreement was expressed earlier in (43), repeated here:

(75) A Romance language allows auxiliary *be* with the anticausative verbs of (11) only if it allows past participle agreement in corresponding causatives.

²⁸ That a Romance language can be allowed to have ‘be’ with anticausatives without being required to do so is shown by Paduan, which has, as a first approximation, both ‘be’ and ‘have’ (with the expected difference in past participle agreement—v. Benincà (1984)). For relevant recent discussion, see Cennamo and Sorace (2007).

Burzio (1986, 123) gives a Piedmontese anticausative example with auxiliary ‘be’ that is notable for also containing, postparticipially, an ‘expletive’ object clitic *ye* (‘there’) that French and Italian lack in such cases. In apparent indirect contrast to Piedmontese, French prohibits its expletive *y* from occurring with ‘be’ in:

i) *Il y est un livre sur la table. (‘it there is a book on the table’ = ‘there’s a book on the table’)

Possible is:

ii) Il y a un livre sur la table.

with ‘have’ instead of ‘be’. In a more literary French (i) becomes possible if *y* is removed.

The expectation is therefore that if we find a Romance language that allows auxiliary 'be' in anticausatives, it will necessarily allow past participle agreement in full causatives. I do not know of any counterexample.

A case of the converse sort that is compatible with (75) in a striking way is Sardinian. Sardinian is more like Italian than like French in certain very visible respects, in that it is a null subject language, it has clitic climbing with non-causative infinitives,²⁹ and its adverbs position themselves with respect to non-finite verbs in some Italian-like ways.³⁰ Yet according to Jones (1993, 107, 272, 276) Sardinian seems to be more like French both in having auxiliary 'have' with anticausatives³¹ and also in disallowing past participle agreement in full causatives.

12. Past participle agreement in full causatives (and anticausatives)

Although Sardinian is like Italian in having robust clitic climbing, it differs from Italian in that Sardinian, in modal constructions, requires the clitic to climb (Jones (1993, 142)), whereas Italian generally allows it to fail to climb. Possibly, this is relevant to a question not yet addressed, namely why French and Italian differ with respect to past participle agreement itself in full causatives (and in anticausatives). For example, it might be that the 'optionality' of clitic climbing in Italian (absent, in different ways, in Sardinian and in French) reflects a stepwise clitic movement available to Italian but not to Sardinian or French. If such stepwise movement had a counterpart in Italian in the case of causatives, with DP-movement of the kind involved in past participle agreement, we might be able to say that past participle agreement in causatives requires stepwise movement of the DP (starting from a post-lexical-verb position) and that that movement is unavailable in Sardinian and in French, in a way somehow related to the absence in those two languages of stepwise clitic climbing.³²

If, as suggested earlier, the past participle agrees with expletive *il* in the impersonal passive of (39) and in the (marginal) impersonal anticausative of (42), then the

²⁹ These two properties may be related—cf. Kayne (1989).

A plausible conjecture is that French has fewer available clitic combinations than other Romance languages as a result of its having less clitic climbing.

³⁰ Cf. Cinque (1999, 146) and Kayne (1991, sect. 1.1).

³¹ Jones (1993, 111) notes that in some cases of anticausatives the addition of a possessive dative licenses 'be'; it remains to be understood how.

³² There is a sense in which the proposed link between past participle agreement and auxiliary 'be' is supported by Spanish, which has no past participle agreement at all with object clitics, and also no auxiliary 'be' at all with unaccusatives (of any type). The status of passives of causatives in Spanish seems not to be clear—cf. Guasti (1993, 85).

Conversely, there would appear to be speakers of French for whom past participle agreement with object clitics is absent in the spoken language, but for whom *be* with (certain non-anticausative) unaccusatives is robust (similarly in part for the dialect described by Dupraz (1938, 289–294)).

stepwise movement in question must be more readily available to expletive *il* than to lexical DPs.³³

13. Other unaccusatives

Although French does not allow auxiliary 'be' with anticausatives (except to some extent in impersonals), it requires auxiliary 'be' with certain other unaccusatives, such as *mourir* ('die'), *sortir* ('go out'), *partir* ('leave'), *arriver* ('arrive'), *venir* ('come'), *intervenir* ('intervene'), *devenir* ('become'), *rester* ('remain').³⁴ Recalling the proposal for Italian anticausatives from (61), repeated here:

- (76) la nave è FATTA affondata ieri ('the boat is DONE sunk yesterday' = 'the boat (has) sunk yesterday')

and for its French counterpart:

- (77) le bateau a FAIT coulé hier ('the boat has DONE sunk yesterday')

both containing a silent causative/activity verb FATTA/FAIT, the natural claim to make about those French unaccusatives that do take auxiliary 'be' would be that they are not associated with a silent FAIT.

Postulation of a silent causative verb in anticausative sentences amounts to claiming that anticausative sentences like:

- (78) The boat sunk.

are close to overt causatives like:

- (79) Something made the boat sink.

i.e., that anticausatives can be understood as containing a silent causer (whose position at various stages of the derivation I have left open). To say that French *partir* or English intransitive *leave*, for example, does not have this kind of analysis is to say that:

- (80) The student left.

is not equally close to:

³³ On the derivation of (certain other instances of) expletive *il*, cf. chapter 6.

³⁴ With main verb *être* ('be'), however, French has auxiliary 'have', perhaps for reasons along the lines of Postma (1993). Whether Postma's proposal could be relevant to the fact that French also has 'have' with its counterparts of *seem* and (to a certain extent) *appear* and also *disappear* remains to be seen. On *seem* and *appear*, see Rooryck (1997).

- (81) Something made the student leave.

and similarly for French. It is as if the autonomy of *the student* in (80) precludes attributing to (80) a derivation that would track that of (81). Since French *mourir* is like *partir* in requiring auxiliary 'be', the same must, by this reasoning, even hold of:

- (82) The patient died.
(83) Something made the patient die.

i.e., the language faculty must be treating the argument of *die* as autonomous to a degree sufficient to preclude (82) from being attributed a derivation close to that of (83).

Of interest in this regard is the apparently synonymous French pair:

- (84) Le mur a noirci. ('the wall has blackened')
(85) Le mur est devenu (plus) noir. ('the wall is become (more) black')

(84) is a typical anticausative and has auxiliary 'have', as earlier, with a representation like (77):

- (86) le mur a FAIT noirci

in which the presence of causative FAIT ensures that (in French) the auxiliary will be 'have'. (85), on the other hand, contains the French counterpart of *become*, plus an adjective (phrase) and has auxiliary 'be', which implies, from the present perspective, that it does not contain causative FAIT, i.e., it is not:

- (87) *le mur est FAIT devenu noir

Transposing back to English, the conclusion is parallel to the one drawn for (82) vs. (83), namely that the language faculty must be treating:

- (88) The wall became black(er).

as not being able to have a derivation close to that of:³⁵

- (89) Something made the wall become black(er).

as opposed to the following, which is close to (89):

- (90) The wall blackened.

in the same way that (78) is close to (79).

³⁵ Despite the possibility of (i), with an overt causer of a certain sort following *from*:

- (i) The wall became black(er) from the coal dust.

As for the reason for the difference between (86)/(90) and (87)/(88) with respect to the presence vs. absence of a silent causative/activity verb, there might be a link to:³⁶

(91) *Something became the wall black.

vs.

(92) Something blackened the wall.

but I will leave the question open.

14. Conclusion

Italian anticausatives take auxiliary 'be' with past participles, while French anticausatives take auxiliary 'have'. This is not an isolated difference between the two languages that concerns only auxiliaries; it is related to other differences having to do with causatives, passives, and past participle agreement. Expressing this relation (clustering of properties) requires attributing to anticausatives (but not to all unaccusatives) a derivation involving a silent causative/activity verb.

Acknowledgments

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³⁶ Cf. also:

i) The sheets will whiten up.

vs.

ii) *The sheets will become up white.

iii) *The sheets will become white up.

(ii) is possible with *come* in place of *become*, recalling *deck* vs. *bedeck*, which supports taking *become* to be *be-+come*; on this *be-*, v. Mulder (1992).

Antisymmetry and the Lexicon

In this chapter, I will try to show that what we think of as the noun-verb distinction can be understood as a consequence of antisymmetry, in the sense of Kayne (1994a). (I will also make some remarks (in the first two sections) concerning counterparts of the human language faculty in other species.¹) Properties of nouns will, from this perspective, lead me to suggest that sentential complements (and derived nominals) involve relative clause structures.

1. Recursion

Hauser, Chomsky, and Fitch (2002, 1578) consider the “hypothesis that recursion evolved to solve other computational problems such as navigation, number quantification” and consider that it is “possible that other animals have such abilities.”

Assume, then, that recursion is not unique to humans but that FLN (faculty of language narrowly understood) in their sense is. We can ask what other more specific property or properties of FLN might keep it from appearing in other species. Or put the other way round, what is it about non-human species that makes FLN unavailable to them? Some possible properties more specific than recursion that might be conjectured to characterize non-human species (as opposed to humans) are as follows.

¹ This chapter (with a different title) originated as a talk given in June 2007 at the conference “Biolinguistics: Language Evolution and Variation” (University of Venice).

First, it might be that in non-human species recursion is available with spellout to PF, but there is no compositional interpretation available, i.e., no mapping to LF (and correspondingly no notion of idiom).

Second, it might be that external merge is available, but no internal merge.

Third, counterparts of language in non-human species might allow branching of arbitrary degree, rather than just binary branching.

Fourth, recursion might be available, but without any notion of phase, in which case, if chapter 4 is on the right track, non-human species might lack the possibility of having pronounceable elements be unpronounced in certain contexts.

Fifth, counterparts of human language in non-human species might more generally have no silent elements at all, including in particular elements that are invariably silent. (For example, there might be no contentful pauses in birdsong.)

Sixth, it might be that parametric differences are absent within any given non-human species (assuming a sufficiently clear way to individuate species). For example, there might be no parametric differences in birdsong (within a given species) comparable to the parametric differences present in human language. (Related to this is the question why parametric variation exists in humans (and why only certain kinds).²)

2. Antisymmetry

The antisymmetry property that Kayne (1994a) attributed to the human language faculty might or might not have counterparts in other species.

Informally speaking, a relatively weaker interpretation of antisymmetry has it that no two human languages can be mirror images of one another, i.e., no pair of languages can have the property that one is the exact mirror image of the other (in the sense that each grammatical sentence of one has a grammatical counterpart in the other that is its mirror image, counting by morphemes, say). Put another way, take some human language, e.g., English, and construct mirror-image English by taking the mirror image of each grammatical English sentence and ‘putting it into’ mirror-image English. Though perfectly easy to imagine, such a mirror image of English is not a possible human language (if antisymmetry is correct).

Correspondingly (in part), one could ask whether a given species of bird could have two songs that are mirror images of one another.

Again informally speaking, a stronger interpretation of antisymmetry has it that if some subtree (with both hierarchical structure and precedence relations specified) is well formed in some human language, then its mirror image is well formed in no human language.

The similar question for birdsong would be: Can two subparts of songs (in a given species) be mirror images of one another, with hierarchy preserved?

These questions can also be asked in a cross-species fashion. Again taking birdsong as an example, could a whole song from one species be the mirror image of

² For some discussion, cf. Baker (2001, chap. 7).

a whole song from another species? Taking hierarchical structure specifically into account, could a well-formed subpart of a song from one species have its mirror image be well formed in some other species?

A conjecture would be that antisymmetry holds both within and, in the above sense, across species. (Whatever the exact extent to which it holds, we would need to further ask why it holds.)³

Assuming antisymmetry to be related to sequence in time, one can ask to what extent sequence in time is a PF interface property, as opposed to holding more fundamentally of internal ‘thought’ (in which case linearization/precedence would not need to be restricted to PF/spellout).

3. Antisymmetry and antioptionality

In the early years of generative syntax, transformations were commonly taken to divide into optional transformations and obligatory ones.⁴ Starting in the 1980s, Chomsky, for example in his ‘last resort’ proposal,⁵ began to move away from the idea that transformations/movement operations were free to vary between optional and obligatory, and toward the idea that derivations do not countenance (a certain kind of) optionality. Antisymmetry can itself be (informally) thought of as reflecting a particular dimension along which the human language faculty rejects optionality—in the case of (temporal) order (for a given hierarchical arrangement).

Important to the present chapter is a question involving the optionality of projection, thinking of Chomsky (2005, 14), who emphasized the (widely agreed upon) fact that when a head is merged with a phrase it is the head that projects—there is no choice/option. In agreement with Chomsky, I take this lack of optionality to be desirable.

Chomsky’s discussion left open the question of initial derivational steps in which one head is merged with another. Contrary to the case of head-phrase merger, where the identity of the projecting element is plausibly fixed by general principle, it seems at first glance that in head-head merger the language faculty must countenance optionality, allowing either of the two heads to project.

This problem with respect to projection recalls the one that seemed to arise for antisymmetry if one tried to reconcile antisymmetry (in particular the LCA-based formulation of it from Kayne (1994a)) with Chomsky’s (1995, chap. 4) bare phrase structure proposal. The LCA approach, while deriving various other properties of X-bar theory, took over intact from X-bar theory the idea that one could have non-branching projections, something that bare phrase structure prohibits.⁶ Non-branching

³ Asking a cross-species question of the sort mentioned amounts to asking a question concerning what the brains of different species might have in common, and what the limitations might be on what such brains can do.

⁴ Cf. for example Kayne (1975); on clitic movement, cf. also Kayne (2000, chap. 9).

⁵ Cf. Chomsky (1986; 1995).

⁶ Cf. Chomsky (1995, 246).

projections were necessary for the LCA to work properly precisely in the case of what bare phrase structure would now call the merger of two heads, insofar as two sister nodes both of which are pure heads would involve no asymmetric c-command and would therefore, according to the LCA, not be properly linearized.

A solution to the challenge of reconciling the LCA with bare phrase structure was proposed by Guimarães (2000), who suggested that the language faculty should be taken to allow what he called Self-Merge, where some head x is merged with itself, yielding $\{x\}$. Let me follow more closely Chomsky's (2005, 16) formulation (from a different context) of a similar idea. Without saying that x can merge with x (which leads to questions about how to distinguish occurrences of x and what to say about 3 or more x 's merging all at once), let us say only that one option for merge, taken to be set-formation, is the direct formation of the singleton set $\{x\}$.⁷

From an LCA perspective, this works informally as follows.⁸ Whereas having heads y and x as sisters yields a linearization problem (since neither y nor x asymmetrically c-commands the other), having y the sister of $\{x\}$ does not. In this configuration, y asymmetrically c-commands x (and so y will be ordered before x). (I am assuming that c-command has the property that a head c-commands each member of the set it merges with.)

4. Antisymmetry of projection

Another way to put this Guimarães (2000) type proposal is to say that antisymmetry compels the language faculty to have recourse to singleton set formation in the relevant case.⁹ From this perspective, we can now say that antisymmetry, by inducing singleton set formation, has simultaneously provided a solution to the head-head projection problem (even though that problem had nothing to do with linearization/pronunciation),¹⁰ tying it to various other ramifications of antisymmetry (cf. also Kayne (2005c, chap. 9)).

The problem, again, was that merging distinct heads y and x seemed to lead to an option with respect to projection—either y could project or x could, with distinct results. But merging y with $\{x\}$ reduces to the general case of merging a head with a phrase (set), for which there is no ambiguity of projection (it is always the head,

⁷ It seems unlikely that $\{x\}$ (or Guimarães's (2000) self-merge) could be the source of what is called morphological reduplication. Gulli (2003) has proposed that syntactic reduplication is found only in remnant movement configurations, where neither copy c-commands the other. A plausible conjecture is that exactly the same holds of what we think of as morphological reduplication.

Alongside $\{x\}$, there seems to be no need for $\{\{x\}\}$, which would be unavailable in principle if every merge operation must directly involve a head.

⁸ Full integration of the LCA with bare phrase structure will require reformulating the LCA without recourse to non-terminals.

⁹ I agree with Guimarães's arguments that neither Chomsky's (1995, 337) nor Moro's (2000) attempt (cf. also Babyonyshev (2004)) to use obligatory movement of one of the two heads in $['y\ x']$ to solve the problem is sufficiently general.

¹⁰ Bare phrase structure alone, without antisymmetry, would not have solved the problem.

here *y*, that projects).¹¹ Put another way, a language faculty that respects antisymmetry is not, given Guimarães (2000) proposal, subject to the optionality of projection problem.

If it should turn out that antisymmetry itself is ultimately derivable from some more general (and precise) notion of antioptionality (one compatible with the presence in the language faculty of certain instances of optionality, such as parameter setting and such as the optionality involved in choosing items to be drawn into the numeration from the lexicon and into the derivation from the numeration (or into the derivation directly from the lexicon)), then the title of this chapter would be appropriately changed to “Antioptionality and the Lexicon,” without, I think, affecting the core claim to be made beginning with the next section, namely that the existence in the language faculty of a noun-verb distinction is a consequence of antisymmetry (or, then, antioptionality) rather than an intrinsic property of anything called the lexicon.

5. The closed class vs. open class distinction

From the preceding discussion, we can see that in a given derivation, some lexical items *x* will appear as part of {*x*}, others (the ‘*y*’s) will not. That is, some lexical items will be involved in singleton set formation, others will not.

It is a commonplace that some categories are open, in the sense of (having a large number of members and) allowing (further) expansion, while others are not. Why should this be? Why are there closed categories at all?

Let me suggest an answer based in part on Chomsky’s (2001, 15) proposal that unvalued (uninterpretable) features have to be valued immediately upon entering the derivation,¹² and in part on the idea that the set of parameters is fixed. Assume, crucially for what follows, that singleton-set formation is part of the derivation; together with Chomsky’s proposal, this would then yield the conclusion:

- (1) If *x* participates in singleton-set formation (yielding {*x*}), then *x* cannot have an unvalued feature.

This is so, since the initial derivational step that forms {*x*} will have no way of valuing such a feature, given that that derivational step involves no *y* distinct from *x*. Thus Chomsky’s requirement can be met only if *x* has no features in need of valuation.

¹¹ If, in merging a head *y* and a phrase *XP*, it was the phrase that projected, we would have *y* as the specifier of the head of *XP*, which is excluded by antisymmetry—Kayne (1994a, sect. 3.7).

Note that just as the solution to the optionality problem for head-head merger is that the merger of two distinct heads is in fact never possible, there is a sense in which two phrases never merge directly with one another, but only via the intermediary of the head of one.

¹² An open question is whether the existence of a distinction between valued and unvalued features could itself follow from antisymmetry/antioptionality. (The reverse seems less likely.) On the possibility that unvalued features could be reinterpreted as a subtype of doubling, see chapter 11.

Collins (2005, 117) suggests that parametric variation is limited to uninterpretable features, which is very close to:

- (2) Parametric variation is a property of unvalued features only.

If this holds, then combining it with (1) yields:

- (3) If *x* participates in singleton-set formation, then *x* is not the locus of parametric variation.

Strengthening (1) would lead to:

- (4) If *y* remains bare (i.e., does not participate in singleton-set formation), then *y* must have an unvalued feature.

A parallel strengthening of (2) would give (cf. Kayne (2005c, 285)):

- (5) All unvalued features are associated with parametric variation.

Assume further that parameters are hard-wired, i.e.:

- (6) Parameters (though not their values) are fixed by the language faculty, i.e., they constitute a closed set.

Now by (4) + (5), a bare *y* must be associated with parametric variation. Therefore, by (6), the set of such *y* must be closed, i.e., the category that *y* belongs to must constitute a closed class. (This constitutes an answer to the question raised toward the beginning of this section, with the next question being why (6) should hold.)

By standard assumption, the lexicon as a whole is not closed. If so, it follows from the present perspective, which has lexical elements necessarily being either of the *y* type or of the *x* type, that the category that *x* belongs to must constitute an open class.

6. Nouns and verbs

The antisymmetry-driven picture of the lexicon we have arrived at is that there are lexical items of category *x* and lexical items of category *y*, with the following properties:¹³

- (7) *x*: open class, singleton-set formation, initially valued features, not locus of parametric variation
 (8) *y*: closed class, no singleton-set formation, initially unvalued features, locus of parametric variation

¹³ If a non-human species lacked antisymmetry, then it should lack the *x* vs. *y* distinction—necessarily so if antisymmetry is the only possible source of this bifurcation.

Part of my proposal is:

- (9) An *x* is what we call a noun.¹⁴

That is, nouns match the properties listed in (7).

Related to these, we might have:

- (10) An element can ‘denote’ only if it enters the derivation with no unvalued features.

from which it would follow, given (7) and (8) (cf. in particular Baker’s (2003, 118) kind-denotation¹⁵):

- (11) The only lexical elements that can denote are nouns.¹⁶

Paired with (9) is the proposal:

- (12) A *y* is what we call a non-noun.

Falling under ‘non-noun’ are at least verbs (and aspectual heads), with the apparent paradox that verbs are normally thought to belong to an open class.

That paradox needs to be rethought, however, in light of Hale and Keyser’s (1993, 55) proposal concerning *laugh* and similar items. For Hale and Keyser there,¹⁷ English *laugh* is a noun that in some sentences co-occurs with a light verb that is unpronounced, giving the (misleading) impression that *laugh* in English can also be a

¹⁴ From this perspective there may be no need for a category-creating *n* such as in Marantz (forthcoming). (The text discussion uses ‘noun’ where one might want to speak of ‘nominal root’.) On gender and on Harris’s (1991) notion of word marker, both of which I will be leaving aside (perhaps wrongly), see also Ferrari (2005).

If classifiers are nouns, then parametric variation involving classifiers must be reinterpreted in terms of properties of other heads that are non-nominal, and similarly for measure nouns and for parametric variation with *at the age of five* (cf. Kayne (2005c, chap. 10)).

¹⁵ Also, Déprez (2005) and Vergnaud and Zubizarreta (1992).

Parallel to (10) and linked to Baker (2003, 95) would be:

- i) An element can have *criteria of identity* only if it enters the derivation with no unvalued features.

As Terje Lohndal (p.c.) points out, the absence of unvalued features on nouns is incompatible with Pesetsky and Torrego (2004). It may rather be that Case morphemes are always a subtype of adposition, with the widespread absence of visible nominative (cf. Bittner and Hale (1996)) then linked to the widespread absence of PP subjects.

Note that Pesetsky and Torrego’s proposal shows that in the absence of antisymmetry/antioptionality nothing in the theory of uninterpretable features by itself leads to a fundamental noun-verb distinction of the sort proposed here.

¹⁶ One might ask whether it is *x* or {*x*} that denotes.

¹⁷ Hale and Keyser (2002, 98) move away from that position.

verb. Strictly speaking, though, *laugh* is invariably a noun, even when it incorporates (in some sense of the term) into a (silent) light verb (for example, by adjoining to the light verb,¹⁸ or perhaps by moving to some Spec position related to the light verb).¹⁹ Put another way, if Hale and Keyser (1993, 55) are right, which I take them to be, *laugh* must be subtracted from the set of English verbs.

Without addressing any of the various challenges that arise for the Hale and Keyser proposal,²⁰ let me jump to the following claim:

- (13) All verbs are light verbs.

This amounts to the conjecture that if we pursue the Hale and Keyser approach consistently, we will see that most of what we call verbs are really like *laugh*, and actually involve a noun and a silent light verb (or more than one silent light verb).²¹

If so, we are led to the conclusion:

- (14) The class of verbs is closed.

in which case the paradox under discussion disappears, and we can maintain the conclusion that the antisymmetry-driven distinction between (7) and (8) is what underlies the distinction that we are used to calling the noun-verb distinction. (Put another way, a basic property of (what we think of as) the lexicon is called into being by a property (antisymmetry) of the language faculty that is not intrinsically a property of the lexicon.)

7. Other categories

Questions arise about other traditional categories. Take adpositions, for example. If there is a core *x* vs. *y* (noun vs. non-noun) distinction, then, if an adposition is simplex it must be either of category *x* or of category *y*, i.e., either nominal or not. It seems virtually certain that, as many authors have suggested, some adpositions are (simplex

¹⁸ On incorporation, cf. Baker (1988).

¹⁹ Cf. Kayne (2005c, chap. 9, note 5). In bare phrase structure, there is no way for a noun to derivationally ‘become’ a verb.

²⁰ For a proposal concerning cognate objects that is compatible with a strong form of the Hale and Keyser position, see Real Puigdollers (2007).

²¹ In languages like English, ‘incorporation’ can also involve phrases, as in:

- i) Don’t Monday-morning-quarterback him so much.

Other instances involve adjectives:

- ii) You need to thin the soup.

If *download* is phrasal (cf. Koopman and Szabolcsi (2000)), then English also has phrasal ‘incorporation’ into a nominal structure, in:

- iii) the downloading of the program

and) nominal.²² Adpositions that are not nominal, i.e., not of the x type, must be of the y type. Determiners might be uniformly of one type, or perhaps some determiners are x and others y,²³ and similarly for other categories. Another possibility is that some categories that look simplex actually are not. For example, Amritavalli and Jayaseelan (2003) have suggested that adjectives might cross-linguistically be analyzed as resulting from the incorporation of a noun to a (silent) Case morpheme.²⁴

8. Lexical specialization

The question arises as to whether lexical items are necessarily specialized relative to the x vs. y distinction, or not. Could there be a lexical item with the property that in some derivations it acts as an x and in other derivations as a y? The antisymmetry/antioptionality perspective that I have been taking suggests not. Two more specific considerations that point in the same direction are as follows.

First, given the open vs. closed class distinction that matches x vs. y, it is clear that not all items of type x could alternatively act as type y, otherwise the set y would not be closed. There remains the question whether a closed subset of x could have the property of appearing as y in some derivations. This second question can be made more concrete by thinking of a particular x, say *thing*. Could *thing* act as a y (non-noun) in some derivations? The answer would seem to be a clear no. The most plausible conclusion, then, is that the x's and the y's constitute disjoint sets of lexical items.

Although not found with *thing*, there are of course sentences (in English) such as:

- (15) John impersonated Bill.

but these (like many others) will have an incorporation type derivation, including the presence of a (silent) light verb and in this case a prepositional element *im-*, in addition to *person*, which can therefore be taken to be an x here, as in general.²⁵

Similarly, there are (in English) even some cases in which light verbs might be thought to act as nouns:²⁶

²² With a reduced amount of functional structure above them, as compared with ordinary nouns—cf. Collins (2007).

²³ This question is relevant only for those determiners that are monomorphemic. Leu (2008b) argues that most are in fact phrasal.

²⁴ As opposed to Baker's (2003) approach to adjectives. Case morphemes are probably a subtype of adposition.

²⁵ Concerning the well-known contrast:

- i) They rang/*ringed us up.
- ii) The soldiers ringed/*rang the city.

it may be that both involve denominal verbs (i.e., noun and light verb), with the difference due to the fact that (ii) has a (complex) locative structure that the first does not have.

²⁶ Beyond the scope of this chapter is the question (which cuts across the silent vs. pronounced dimension) how best to distinguish one light verb from the next, one consideration being that light verbs themselves are not (all) simplex.

- (16) You should give it a go/*be/*have.

But a plausible alternative is that *go* here is a *y* embedded in a structure much of which is silent, perhaps partially parallel to what is seen overtly in:

- (17) We gave them the go-ahead.

which is in turn similar to the control sentence with obviously verbal *go*:

- (18) We gave them permission to go ahead.

Similar considerations hold for cases like:

- (19) Neither the haves nor the have-nots will be happy about this.

alongside:

- (20) Neither those who have nor those who do not have...

The conclusion that the *x*'s and the *y*'s must be disjoint in a given language leads to the question of cross-linguistic consistency. If some lexical item is an *x* in one language, must its counterpart in the next language also be an *x*?²⁷ The Hale and Keyser (1993, 55) discussion of English *laugh* and its Basque counterpart lends itself to thinking that the answer is yes, that lexical items do distribute consistently across languages as far as the noun-verb distinction goes.²⁸ I agree with a strong version of this (but will not pursue the question).

9. Nouns do not project

The complement of a head is that phrase that the head initially merges with. When *y* merges with {*x*}, {*x*} is the complement of *y*. However, elements of type *x* cannot themselves have a complement, since when they enter the derivation they invariably undergo singleton-set formation, rather than merging with a phrase/set. (As in the previous section, *x*'s and *y*'s have disjoint properties.) In more familiar terms, this yields the conclusion that nouns must not have complements.

Can *x* ever have a specifier? This amounts to asking whether {*x*} can merge with some phrase in such a way that *x* projects (is the label of the resulting larger

²⁷ The identification of lexical counterparts across languages (with silent elements playing an important role) is central to comparative syntax. For relevant discussion, see Cinque (1999) and Kayne (2005c, chap. 12).

²⁸ In the present framework, it is clear that every language must have a distinction between *y* and *x* (between non-noun and noun). This agrees with Baker's (2003, 169) argument that all languages have nouns.

How best to express the difference between English and Basque with respect to *laugh* is left an open question.

phrase). Relevant here (and perhaps also to the question of complements) is our earlier conclusion in (1) that *x* cannot have any unvalued feature. If an unvalued feature is necessary to the derivational coming into being of a specifier, then *x* can have no specifier. I will take this to be valid.²⁹

Let me therefore add this difference concerning projection to the set of differences between *x* and *y* given earlier in (7) and (8), which yields:

- (21) *x*: open class, singleton-set formation, initially valued features, not locus of parametric variation, no complement or specifier
- (22) *y*: closed class, no singleton-set formation, initially unvalued features, locus of parametric variation, complement and specifier possible³⁰

10. A consequence of nouns not projecting: *the fact that...*

If nouns never project,³¹ then in:

- (23) the fact that they're here

that they're here cannot be a complement (or specifier) of *fact* if *fact* is a noun (an *x*).³² Since it is unlikely that *fact* is a verb (a *y*), there appears at first glance

²⁹ This agrees with Baker (2003, 23) on verbs vs. nouns.

³⁰ And perhaps obligatory, though I will not pursue that here, and similarly for the question whether {*x*} can itself be the specifier of another head.

³¹ Ghomeshi (1996, 63) takes this position for Persian.

³² Little would change in the text discussion if *fact* turned out to be phrasal, as suggested perhaps by its German counterpart *Tatsache* ('deed thing'), though that might perhaps help with the potential gender problem (depending on one's analysis of complementizer *that/dass*) of *die Tatsache, dass/*die sie intelligent ist* ('the fact that she intelligent is') brought to my attention by Luka Szucsich, which recalls French *quelque chose de beau/*belle* ('some thing of beautiful').

It is unlikely that Stowell's (1981, chap. 3, sect. 7) appositive proposal for finite clauses in derived nominals could (if correct) be generalized to *fact*, given:

- i) The (very/mere) fact that they lied is scandalous.
- ii) *?The (*very/*mere) fact, (namely) that they lied, is scandalous.

Also:

- iii) His claim to the effect that he's innocent is hard to believe.
- iv) The fact (*to the effect) that he is innocent is well-known.

as well as:

- v) ?That man we deplore the fact that she's in love with.
- vi) *That man the fact is (that) she's in love with.

(v) recalls the extraction out of relatives discussed by Taraldsen (1981) and Chung and McCloskey (1983).

to be a problem. The solution, I think, involves taking (23) to be a relative clause structure.³³

There are, needless to say, differences as compared with more familiar relative clauses:

- (24) *the fact which they're here
- (25) the fact which they mentioned

If (23) contains a relative clause, why is *which* not possible?

An answer is to be found in the realm of *way*, which occurs in ordinary relative clauses like:

- (26) the way in which they solved the problem

Way also appears in:

- (27) the way (that) they solved it

which is uncontroversially a relative clause structure with the preposition *in* unpronounced, as it can (optionally) be elsewhere:

- (28) They solved it (in) this way.

What is notable is that when *in* is unpronounced, *which* is impossible.³⁴

- (29) *the way which they solved it

despite being possible in (26).

The suggestion, now, is that (24) is impossible for the same reason as (29). If so, then (24) is not incompatible with a relative clause analysis of (23), since (29) shows that *which* is not automatically available in English, even when the head of the relative is inanimate.

Linking (23) vs. (24) to (27) vs. (29) rests in part on the proposal that the former pair has in common with the latter the presence of silent *in*, i.e., that (23)/(24) is to:

- (30) They're here, in fact.

³³ For related discussion, see chapter 10. Partially similar proposals can be found in Aboh (2005) and Arsenijević (2007).

³⁴ The absence of a following lexical noun, in combination with the non-pronunciation of *in*, seems at be at issue, to judge by:

- i) (There are many known ways of solving this equation) ??In which did they solve it this time?
- ii) *Which did they solve it this time?

as (27)/(29) is to (28). In other words, (23) contains a relative clause in which what has been relativized is the object of the (silent) *in* of (30).³⁵ That *which* is not possible in (24) reflects a broader incompatibility between *which* and silent *in*, as shown by (29).

A further apparent problem lies with the unacceptability of:

- (31) *the fact in which they're here

and the contrast between it and (26). A possible solution would involve relating this contrast to others having nothing to do with relatives, e.g.:

- (32) In what/?which way did they solve it this time?

- (33) *In what/which fact are they here this time

i.e., to the substantially greater restrictions on determiners found with *fact*,³⁶ as also seen in:

- (34) We solved it in another way.

- (35) *We're here, in another fact.

and arguably in:

- (36) In ways, they're right.

- (37) In fact(*s), they're right.

which may correlate in turn with:

- (38) (?)the ways that they're right

- (39) the fact(*s) that she's right and (that) he's wrong

³⁵ Or possibly that of:

- i) They're in fact here.

(with no pauses around *in fact*) or of:

- ii) In fact, they're here.

³⁶ Also greater than with nouns like *rumor*:

- i) There's a rumor/*fact that John is ill.

which also differ from *fact* with respect to:

- ii) the rumor/*fact according to which John is ill

- iii) the rumor/*fact to the effect that John is ill

Possibly, (iii) is to be linked to:

- iv) John is ill, in effect.

though one will need to understand:

The contrast between (24) and (25), which I have been arguing to be compatible with the idea that both are relative clause structures, has a counterpart in:³⁷

- (40) The fact ?(that) they're here is irrelevant.
 (41) The fact (that) they mentioned is irrelevant.

Having no relative marker at all is difficult in the first, as opposed to the second. That (40) is marginal may, though, be related to the marginality of the following, which clearly involves a(n extraposed) relative clause:

- (42) The very person walked in ?(that) they used to know in high school.

in which case (40), too, is compatible with the idea that *the fact that...* always contains a relative clause.

The two subtypes of relative clause found with *fact* (one based on adjunct-like *in fact*, the other not) also differ with respect to *one*:

- (43) the fact that they're right and the fact/*one that you're wrong
 (44) the fact that they mentioned and the fact/one that you mentioned

As earlier, we find that the *in fact*-based relative has a counterpart with (clear cases of) relative clauses based on *way*:

- (45) the way that they solved it and the way/*one that you solved it

The restriction in question depends in part on the preposition not being pronounced (in both (43) and (45)), in a way that recalls (29):

- (46) They solved it this way and you solved it that way/*one.
 (47) They solved it in this way and you solved it in that way/?one.

Luigi Rizzi (p.c.) points out that what from my perspective are two cases of relative clauses with *fact* differ in Italian in that the one that I take to be related to *in fact* allows subjunctive, while the other does not. Let me give polarity-like examples from (my) English that I think mimic the Italian contrast (cf. perhaps the *ever* of *Why ever did they run away?*):

-
- v) John is indeed ill.
 vi) *the deed that John is ill
 (ii) and the following show (along with relativization based on *in fact*) that there is no general prohibition against relativizing (high) adjuncts:
 vii) the scandal as a result of which they resigned
 viii) the reason why they resigned

³⁷ Cf. perhaps the *som* ('as') vs. *at(t)* ('that') contrast found in Scandinavian languages, which needs to be elucidated.

- (48) The fact that they could ever have run away disturbs me.
 (49) *The fact that they could ever have mentioned disturbs me.

It may be that ‘ordinary’ relatives like the one with *mention* always have a (sometimes silent) demonstrative, as opposed to the *in fact*-based relative, which does not, and that the *ever* of (48) (along with subjunctive in Italian) is incompatible with relatives whose head has a demonstrative.

In conclusion of this section, then, a relative clause analysis of (23) is more plausible than it might initially seem to be. If so, then (23) is compatible with the idea that nouns do not have complements.³⁸

11. Derived nominals

If *removal* is a noun, then there might appear to be a problem with:

- (50) the removal *(of) the evidence

insofar as *the evidence* looks like the complement of *removal*. One response could be to deny that *the evidence* is a complement, by arguing, for example, that if it were, there shouldn’t be any need for *of* (one would then call the inability of nouns to assign (accusative) Case a stipulation). Yet if *the evidence* is not a complement of *remov(al)*, how does one express the obvious parallelism with:

- (51) They removed the evidence.

A second approach, of a familiar and plausible type, is to factor out *-al* and to say that *the evidence* is indeed a complement in (50), but not exactly of *removal*. Rather, it is a complement of *remov-*.³⁹ Since *remov-* is presumably not a noun, the potential problem disappears. But it comes back in a different form, if one asks about *-al* itself. If *-al* were a y (a non-noun), then there would be no problem, except that if neither *remov-* nor *-al* is nominal, the presence of the initial *the* in (50) becomes hard to understand, along with the presence of *of* and the possibility of having an adjective:

- (52) the sudden removal of the evidence

If *-al* in our terms is an x (a noun) (cf. Williams (1981)), the presence of *the sudden* here becomes more straightforward, but the original problem returns as soon as one asks what the relation is between *-al* and *remov- the evidence*. If, as seems plausible, *-al* is merged directly with *remov- the evidence*, then the (suffixal) noun *-al* has a complement, contrary to present expectations.

³⁸ Stowell’s (1981) appositive idea (or den Dikken’s (2006, 244) updated version of it) would, if extended to *fact*, also be compatible with *fact* not taking complements. See, however, note 30.

³⁹ Cf. Pesetsky (1995, 131).

The alternative is to take *-al* (and similar nominalizing elements) to have an analysis partially similar to what was proposed above for *fact*. Suffixal *-al* will be merged as the object of a silent preposition and then relativized.⁴⁰ (Thinking of Lees' (1963) discussion of the interpretation of derived nominals, *-al* could (sometimes) be a suffixal counterpart of *fact* or of *way*.) The suffixal character of *-al* will translate into the requirement that the relative be a non-finite small clause of a certain sort and into the need for *remov-* to raise past *-al* (making (50) have something in common with internally headed relatives). The derivation might (very sketchily) look like this:

- (53) *remov-* the evidence P *-al* → Case-related movement
 the evidence_i *remov-* t_i P *-al* → relativization of *-al*, pied-piping P
 [P *-al*]_j the evidence_i *remov-* t_i t_j → remnant movement
 [*remov-* t_i t_j]_k [P *-al*]_j the evidence_i t_k

From this perspective, *of* in (50) occurs between the 'head' of the relative, which is *-al* and the relative clause proper, which begins with *the evidence*. (There is no complementizer or relative pronoun in this kind of non-finite relative.) Expanding (53) to include merger of *of* yields:⁴¹

- (54) *remov-* the evidence P *-al* → Case-related movement
 the evidence_i *remov-* t_i P *-al* → merger of *of*
 of the evidence_i *remov-* t_i P *-al* → relativization
 [P *-al*]_j of the evidence_i *remov-* t_i t_j → remnant movement
 [*remov-* t_i t_j]_k [P *-al*]_j of the evidence_i t_k

Having relativization move a phrase to the left of (into the Spec of) *of* also seems called for (in a partially similar case) by the parallelism (cf. (43) and (45)) between:

- (55) the way/*one they solved the equation

and:

- (56) that way/*one of solving it
 (57) the other way/*one of solving it

supporting the idea that the *of* of (56)/(57) introduces a (non-finite) relative. Similar to (56)/(57), with an interesting twist, is:

⁴⁰ Cf. Collins (2006). The text discussion is in the spirit of the head-raising approach to relatives. Conceivably it is *-al* that is adpositional, in which case its object would be silent FACT or WAY or some other comparable noun.

⁴¹ Since extraction from relatives is not in general impossible—cf. Taraldsen (1981), Chung and McCloskey (1983)—the existence of:

- i) the evidence that we condemned the removal of

is not entirely surprising, though the extraction in (i) may be facilitated by the application of Case-related movement.

- (58) You have a funny way/*one of wording your letters.

which is missing, in the gerund clause, the manner adverb that *word* normally requires, and which we can take here to have been relativized. That *way* has actually been raised into the pre-*of* position in (58) is supported by:⁴²

- (59) *You have a funny way.

whose unacceptability, compared with the acceptability of (58), can be attributed to *way* in (59) having no source, since there is no relative clause present. Note in addition:

- (60) You have a different way of wording each type of letter, don't you?

in which *different* readily scopes under embedded *each*, most straightforwardly as the result of a reconstruction effect keyed to the original position of (a) *different way* within the gerundial relative, much as in the infinitival relative example:

- (61) You have a different book to offer each of the students, don't you?

where again *different* readily scopes under the *each* embedded in the relative.

12. Restrictions on derived nominals

When related to verbs in English that take a direct object plus a prepositional object, derived nominals show divided behavior. There is a broad contrast between cases in which the P is *from* or *to* and cases in which it is *with* or *of*:

- (62) the removal of the money from the children
(63) the gift of the money to the children

as opposed to:⁴³

- (64) *the deprivation of the children of their money
(65) *the provision of the children with money

For me, these different kinds of PPs behave differently under PP-preposing, too, in particular of the non-contrastive (and non-wh) kind:⁴⁴

⁴² One will ultimately need to fit in:

i) You have a funny way about you.

⁴³ Cf. Kayne (1981b, sect. 4). I have found one speaker who accepts these, along with the example of note 45. What the parametric difference is remains to be elucidated.

⁴⁴ Hinterhölzl (2006) shows that contrastive/stressed scrambling in German is freer than non-contrastive/non-stressed scrambling.

(66) ?From so many poor children, they've stolen so much money!

(67) ?To so many poor children, they've given so much money!

as opposed to:

(68) *Of so much money, they've deprived so many people!

(69) *With so much money, they've provided so many people!

The hypothesis that derived nominals are derived as in (53)/(54) fits these facts as follows. Transposing (54) to *the removal of the money* (without the *from*-phrase for the time being) gives:

- (70) remov- the money P -al → Case-related movement
 the money_i remov- t_i P -al → merger of *of*
 of the money_i remov- t_i P -al → relativization
 [P -al]_j of the money_i remov- t_i t_j → remnant movement
 [remov- t_i t_j]_k [P -al]_j of the money_i t_k

To have *from the children* in (62) end up after *the money* in a way compatible with the application of remnant movement as the final step in (70), *from the children* must be scrambled at an early stage:⁴⁵

- (71) remov- the money from the children P -al → scrambling
 [from the children]_k remov- the money t_k P -al → Case-related movement
 [the money]_i [from the children]_k remov- t_i t_k P -al → merger of *of*
 of [the money]_i [from the children]_k remov- t_i t_k P -al → relativization
 [P -al]_j of [the money]_i [from the children]_k remov- t_i t_k t_j → remnant movement
 [remov- t_i t_k t_j]_m [P -al]_j of [the money]_i [from the children]_k t_m

If the scrambling in this derivation is of the same type as the movement operative in (66), then that makes it possible to relate the (surprising) deviance of (64)/(65) to that of (68)/(69), by virtue of the movement in question not being applicable to certain types of PP.⁴⁶

Derived nominals are also impossible with double objects:

- (72) *the gift of the children (of) a book

The indirect object might be incompatible with the Case associated with *of*, and/or the second object might have a problem with Case licensing. Instead, or in addition, scrambling of the second object might be at issue.⁴⁷

⁴⁵ If Kayne (2000, chap. 14; 2005c, chaps. 5, 7) is on the right track, the first line of this derivation itself has a non-trivial derivational history that must ultimately be integrated with the present proposal.

⁴⁶ There is a link here to Kayne and Pollock (2001, section 13).

⁴⁷ Note that some English (not mine) allows (some) DPs like (cf. Jespersen (1970, sect. 8.4₉)):

i) the giving of children books

Cf. also Wik (1973, 136).

Assume that the Case-related movement in (71) is limited to DPs. Then in:

- (73) the discussion with the children

with the children must (in order to sidestep the subsequent application of remnant movement that places *discuss-* to the left of *-ion*) have moved past *discuss-* via scrambling (parallel to *from the children* in (71)):

- (74) discuss- with the children P -ion → scrambling
 [with the children]_i discuss- t_i P -ion → relativization
 [P -ion]_j [with the children]_i discuss- t_i t_j → remnant movement
 [discuss- t_i t_j]_k [P -ion]_j [with the children]_i t_k

This point generalizes to all cases of derived nominals followed by a PP other than ‘*of* + direct object’.

The proposal that scrambling is necessarily involved in derived nominals like (73) leads to the expectation that phrases that do not scramble will be excluded from derived nominals. This may provide an account of:⁴⁸

- (75) *your appearance to have made a mistake

in terms of the non-scramble-ability of raising infinitives in German mentioned by Hinterhölzl (2006, 16), which has a (somewhat faint) reflex in English:⁴⁹

- (76) ?the kind of mistake to avoid which he always tries
 (77) *the kind of mistake to have made which he definitely appears

where preposing a control infinitive is less bad than preposing a raising infinitive.

Like (77) is:

- (78) *the kind of mistake to have made which he is definitely believed

despite the well-formedness of:

- (79) He is definitely believed to have made that kind of mistake.

Like (75), then, is:⁵⁰

⁴⁸ Which would make unnecessary Kayne’s (1981b) use of government or Pesetsky’s (1991; 1995) zero affix approach, neither of which appear to carry over to the scrambling facts.

⁴⁹ As opposed to clefts (to some extent), focalization and topicalization in Italian—see Cinque (2006, 41, 48).

⁵⁰ Also:

- i) He is considered intelligent.
 ii) *his consideration intelligent

suggesting that small clauses cannot scramble in the necessary way, with the details to be worked out.

- (80) *his belief to have made a mistake

The verb *claim* is unusual in English in allowing both control and raising:

- (81) He claims to be a genius.
 (82) He is claimed to be a genius.

Preposing/scrambling distinguishes them:

- (83) ??the kind of genius to be which he has never claimed
 (84) *the kind of genius to be which he has never been claimed

As expected now, there is also a difference in derived nominals:

- (85) his claim to be a genius

which can have the control interpretation of (81) but not the raising interpretation of (82).

The parallelism between derived nominals and scrambling/preposing may extend to:

- (86) his eagerness to introduce you to people
 (87) *his easiness to introduce to people⁵¹

given the (arguably parallel) contrast:

- (88) ?those people, to introduce you to whom he would certainly be eager
 (89) *those people, to introduce to whom he would certainly be easy

13. More on the absence of complements to nouns

One will ultimately need to address, of course, the entire range of examples given by Chomsky (1970, 196) in favor of his idea that nouns take complements just as verbs do. Another type of example that might lend itself to a relative clause analysis would seem to be:

- (90) the reason for his departure

insofar as there is a close relation to:

- (91) the reason for which he departed

In the case of:

- (92) the weather in England

⁵¹ Some speakers accept such examples with *-ness* (though not with other suffixes)—cf. Pesetsky (1991, 101).

one can think of:

- (93) the weather that is found in England

with the possibility of leaving *found* unpronounced in turn related to the hypothesis that:

- (94) They are in Paris.

is really:

- (95) they are FOUND in Paris

which might give us a handle on:

- (96) *They became in Paris.

via:

- (97) Such things were/*became found in Paris.

combined with the fact that in French a normal way of expressing (94) is with the verb 'find'

- (98) Ils se trouvent à Paris. ('they refl. find in P')

In the realm of possessives, Kayne (1993, sect. 1.2; 1994a, 86) proposed that:

- (99) a friend of yours

does not have (*of*) *yours* as a complement of *friend*, but rather that (*a*) *friend* moves into the specifier position of *of*, starting from a position following *yours*, and similarly for *the sister of that linguist* and other instances involving *of*. Possessives such as *you(r)* in (99) may originate in a (non-adpositional) specifier position above and outside the projection of the noun (*friend*) or as the object of a (silent) adposition;⁵² in either case the noun *friend* itself will have no complement.

In the same vein, there may be a close relation between:

- (100) the way to Paris

⁵² See Szabolcsi (1983; 1994) and den Dikken (1997). The presence of a special possessive morpheme in Hungarian (cf. perhaps English *'s*) may reflect the possessor being neither the complement nor the specifier of the possessee, parallel to the idea that the agent is neither the complement nor the specifier of the lexical verb (as opposed to being the specifier of little *v*, as in much recent work).

I take this parallelism to extend to 'obligatoriness'. Just as agents are sometimes obligatory, e.g., with *destroy* (on passives, see Collins (2005)), so, sometimes, are possessors, e.g., with *for John's sake*, as discussed by Barker (2005), despite *John* not being either complement or specifier (cf. (21)) of *sake*.

and the relative clause structure:

(101) the way in which to go to Paris

in which case (100) will contain a silent GO of the sort shown to be needed elsewhere by van Riemsdijk (2002).

There may also be a close relation between:

(102) He's in the habit of refusing.

and:

(103) He refuses out of habit.

In other words, *the habit of refusing* may involve relativization starting from:

(104) ...refusing OUT OF habit

with the *of* in (102) akin to that of (56)/(57), as well as to that of:

(105) the very fact of his refusing

which is itself a relative clause structure based on *in fact* (i.e., on 'IN fact'), essentially parallel to (23) and (56)/(57).

Although English readily allows DPs of the form:

(106) the book on the table

these are plausibly reduced relatives, perhaps of the sort discussed by Emonds (1976, 167).

In summary of this section and the two before it, the antisymmetry/antioptionality-based approach being pursued here leads to the expectation that nouns, unlike verbs, will not have complements. If so, reanalyses of Chomsky's (1970, 196) examples of the sort just suggested should turn out to be on the right track.⁵³

14. More on possessives

The question of possessives broached at (99) is indirectly relevant to the question of derived nominals broached at (50). Like *removal* is *assassination*, as in:

(107) They were witness to the assassination of the prime minister.

⁵³ The pervasiveness of relatives from the text viewpoint recalls Koopman (2003: 2005); also Kihm's (2000) revival of the idea that possessives originate in relatives.

where we can take *-ion* to play the role of *-al*, and attribute to (107) a derivation like that given in (53)/(54). Seemingly very close to (107) is:

(108) They were witness to the murder of the prime minister.

which differs in that there is no visible suffix comparable to *-ion/-al*. Let us, then, take there to be an unpronounced one, as in:

(109) ...murder -ION of...

That an unpronounced derivational suffix of this sort is not automatically available is suggested by the contrast between (108) and:

(110) *They were witness to the punch of the prime minister.

(and similarly if either of the *thes* is replaced by *a* or if *the prime minister* is replaced by *him*). With *punch*, as opposed to *murder*, an object interpretation of the DP following *of* seems impossible.

(Irrelevantly to the present discussion, a subject interpretation of a lexical DP following *of* is to some extent possible.) Like *punch*, and unlike *murder*, are *slap*, *kick*, *pinch*, *tug*, *shove*, *push*, *kiss*, and *hug*, all of which lack a visible suffix.

Recalling that *-al* plays a key role in the derivation (53)/(54), a natural proposal is that (110) is excluded precisely because *punch* (and similarly for *slap*, etc.) could not co-occur with a silent counterpart of *-al* (even if *punch* were verbal). Without any counterpart of *-al*, the relative clause type derivation given in (53)/(54) could not go through, in the case of (110). By standard assumption, in the absence of relativization a bare verb phrase cannot be embedded directly under *the*, either. That leaves the option of taking *the prime minister* in (110) to be the complement of nominal *punch*. But that option, too, is excluded, if nouns take no complements.

The availability, in the object interpretation, of:

(111) They were witness to the punching of the prime minister.

suggests that *-ing* can play the role of *-al* or *-ion*.

Similar to (108) vs. (110) is the contrast:

(112) The desire to win is widespread.

(113) *The want to win is widespread.

The latter can be excluded parallel to (110) if *want*, like *punch*, can have no silent suffix of the *-al/-ion* sort.⁵⁴ If it cannot, then no derivation of the relative clause sort is available. Nor can *to win* be the complement (or specifier) of nominal *want*, since by

⁵⁴ As opposed to:

i) for want of a good idea

with a (partially) different sense of *want*, here similar to *lack*.

hypothesis nouns take no complements (or specifiers). The admissibility of (112), with *desire*, indicates that *desire* is like *murder* in allowing a silent counterpart of *-al/-ion*. (Like *want* are *love* and *like*.)⁵⁵ Although why *murder*, *desire*, etc. allow a silent suffix and the others not remains to be understood, it seems plausible to interpret (110) and (113) as direct reflections of the inability of nouns to take complements.

A problem may appear to arise if we bring together this discussion of (110) with a version of the Hale and Keyser approach to sentences like:

(114) Somebody punched the prime minister.

According to that approach, (114) must have a silent light verb to which the noun *punch* has incorporated. Yet (110) shows that nominal *punch* takes no complement. Where, then, does *the prime minister* in (114) come from? A reasonable answer, thinking of:

(115) Somebody gave the prime minister a punch.

with an overt light verb, is that *the prime minister* originates as the possessor of *punch* (in a way licensed by the presence of *give*, which must have no silent counterpart in (110)), in which case it is not an argument of *punch*, much as in the discussion of (99).

15. Sentential complements

Ordinary sentential complements, as in:

(116) They think (that) everything is fine.

appear not to fall under the present discussion. Recall however Rosenbaum's (1967) hypothesis that all sentential complements (in English, but his hypothesis is readily generalized to all languages) are associated with *it*, which is sometimes deleted (in present terms, is sometimes silent) and sometimes not, as in:

(117) They'll see to it that everything is in place.

If *it* is a noun, then Rosenbaum's hypothesis brings ordinary sentential complementation close to structures with *the fact that...*, which must be relative clause structures, as in section 10, in which case sentential complementation in general must rest on (partly invisible) relative clauses.⁵⁶

⁵⁵ Cf. Pesetsky (1991, 99). Note also:

- (i) His attempt/*try to solve the problem failed.
- (ii) Their hatred/*hate of losing is well known.

Pesetsky (1991) contains a great deal of relevant material that will need to be integrated; similarly for Szabolcsi (1994, part II).

⁵⁶ Cf. also chapter 10 and Manzini (forthcoming). Both take complementizers in the classic sense of the term not to exist, though in different ways.

If *it* is a determiner, as in Postal (1966), then this does not follow, unless there is necessarily present, in addition to *it*, a silent noun. If there is, then, again, all sentential complementation must involve relative clauses (in all languages).⁵⁷

16. Conclusion

The noun-verb distinction may not be a primitive property of the language faculty, but may rather be underlain by antisymmetry/antioptionality. The execution of this idea as developed here leads to the characterization of nouns as having neither complements nor specifiers. That in turn leads to the conclusion that *the fact that...*, derived nominals, and sentential complementation are varieties of relative clause structures.

Rosenbaum's hypothesis elicits the question why the language faculty would impose the presence of *it* and/or a silent noun. Kayne (1982) suggested, with verbs, adjectives and prepositions in mind, that arguments must be nominal. If so, that might provide the reason.

Infinitives and gerunds that are arguments seem to lie somewhere between derived nominals and the finite complements illustrated in this section (i.e., they must be subtypes of relative clauses). How exactly to integrate them into the present analysis is left open here.

⁵⁷ On the misleading appearance of what look like sentential complements, see also Caponigro and Polinsky (2008). On the absence of complements to nouns in Malayalam, see Jayaseelan (1988).

Notable here is the colloquial (cf. Legate (2002)):

i) They were saying (like) as how everything was fine.

with *how* arguably a relative pronoun and *as* arguably close to the *as* found in non-standard relatives like (cf. Herrmann (2005)):

ii) the man as they were talking to

The status of root clauses will depend (in part) on the status of Ross's (1970) performative hypothesis.

“Why Isn’t *This* a Complementizer?”

1. Introduction

The title question lends itself to being interpreted with an implicit “...as opposed to *that*,” and the contrast between *this* and *that* in complementizer-like contexts (and elsewhere) will constitute one strand of this chapter.

The implicit “...as opposed to *that*” conveys an assumption that *that* is a complementizer, in some cases. A second strand of this chapter will question that assumption, and will argue that the *that* that introduces relative clauses is a relative pronoun, rather than a complementizer.

A third strand will take over from chapter 9 the idea that what we think of as sentential complements (or sentential subjects or topics) are best taken to be relative clause structures, in which case the *that* that introduces sentential complements must also be a relative pronoun, not a complementizer. This will allow reducing the absence of sentential complementizer *this* to the absence of relative pronoun *this*.

2. Diachrony

Roberts and Roussou (2003, 113–120), citing work by Davidson and by Kiparsky, favor an approach to complementizer *that* that has it originating diachronically as a demonstrative,¹ in such a way that:

¹ This chapter originated as a talk presented (with a different title) at the XVIIIe Conférence internationale de linguistique historique at UQAM, Montreal in August 2007.

- (1) We say that: the earth is round.

leads to:

- (2) We say that the earth is round.

with (1) an instance of parataxis (where *the earth is round* is an independent clause) and (2) an instance of hypotaxis (where *the earth is round* is a clause dependent on *say*).

A problem for this idea is that (1) is if anything less natural than:

- (3) We say this: the earth is round.

yet *this* did not provide the source for any complementizer:

- (4) *We say this the earth is round.

The fact that *this* and *that*, though naturally paired as demonstratives, do not both give rise to a complementizer is further illustrated by:

- (5) I'm sure that/*this you're right.
 (6) That/*This you're smart is obvious.
 (7) It bothers us that/*this you're right.
 (8) We'll see to it that/*this he does the job.

I take the facts in (4)–(8) to indicate that it is unlikely that (1) was a diachronic source for (2). Nor, I will claim, has *that* in (2) and (5)–(8) ceased to be a demonstrative.²

I will have nothing very specific to say concerning the diachronic development of *that* or other complementizers in English or other languages. Rather, I will attempt to show that an understanding of (4)–(8) requires rethinking what we mean by complementizers in (synchronic) syntax. The question is in part that of the relation between demonstrative *that* and relative *that* and the complementizer *that* of sentential complementation.

² I am using the term 'demonstrative' in a way that includes (132)–(135) below, i.e., it does not imply 'pointing'.

Roberts and Roussou (2003, 111 ff.) do take non-relative complementizer *that* and demonstrative *that* to be synchronically related (differing primarily in type of complement), but without the idea that sentential complements are relative clauses and without the idea that complementizer *that* starts out together with the 'head' of a relative.

They (p. 112) take the lack of phonological reduction with demonstrative *that* to come from its deictic/ostensive character, but I find it to be necessarily unreduced even in the non-ostensive:

- i) The picture of Mary is sharper than that of John.
 ii) John's sister thinks that idiot is a genius.

I will argue that these three instances of *that* are best understood as all being synchronically instances of demonstrative *that*. Relative *that* is an instance of demonstrative *that* occurring as what we call a ‘relative pronoun’, to a significant extent as in other West Germanic languages. Sentential *that* is arguably a subcase of relative *that*, insofar as all (finite) sentential complements are relative clauses.

The absence of complementizer *this* seen in (4)–(8) will turn out to be a special case of the absence of relative pronoun *this* (in a way compatible with both complementizer *that* and relative pronoun *that* being instances of demonstrative *that*). The idea is that making sense of (4)–(8) is possible only if sentential *that* is reinterpreted as a relative pronoun.

3. Sentential *that* and relative *that*

That sentential *that* is tightly tied to relative *that* is suggested in part by the absence of relative *this*:

- (9) the only book that/*this I was thinking about

which parallels the facts of (4)–(8).

Similarly, Roberts and Roussou (2003, 112) discuss the fact that the *that* of sentential complementation has no plural counterpart:

- (10) We think that/*those you’re all wrong.

This is also true of relative *that*:

- (11) the only books that/*those I was thinking about

That relative *that* and sentential *that* are the same element is a long-held position, argued for explicitly by Klima (1964), who, more specifically, took relative *that* to itself be a complementizer, rather than a relative pronoun. The reason that Klima, in developing a unified approach to relative *that* and sentential *that*, opted for reducing the former to the latter (rather than the reverse) had to do with the fact that relative *that* differs in some respects from relative *who* (and *which*).

On the other hand, I allow reduction in:

- iii) That’s right.

and allow non-reduction in:

- iv) That you’re right is irrelevant.

Whether the reduction in question is purely phonological or not is a separate question.

Relative *who* (like relative *which*) can pied-pipe the preposition of which it is the object, unlike relative *that*:

- (12) the person to whom we were alluding
- (13) the book to which we were alluding
- (14) *the person/book to that we were alluding

Second, relative *who*, but not relative *that* (in standard English), can pied-pipe a larger DP of which it is the possessor:

- (15) the person whose book we were talking about
- (16) *the person that's book we were talking about

Third, there is the fact mentioned in (11) that relative *that* shows no number agreement (despite there existing elsewhere a plural form *those* and despite other languages (French, German...) showing number agreement with at least some relative pronouns). Fourth, relative *that* appears to be indifferent to the +/- human status of its antecedent, while *who* and *which* are not.

These differences between relative *that* and relative *who/which* are real. The question is whether they really exclude taking relative *that* to be a relative pronoun in essentially the same sense in which we take *who* and *which* to be relative pronouns. I will now go through these four considerations (beginning with the second), arguing in each case that their weight can be overestimated, i.e., that they are in fact compatible with taking *that* to be a relative pronoun.

4. Relative *that* is less different from other relative pronouns than it seems: Possessors

An initial reason for wondering about the import of (16) comes from the fact that relative *which* cannot be a possessor, either:

- (17) the book whose first chapter is so well known
- (18) *the book which's first chapter is so well known

Thus the unacceptability of (16) for many/most speakers does not clearly set *that* aside from other relative pronouns.

Furthermore, there are speakers for whom (16) is acceptable, as pointed out by Richard Hudson on LinguistList September 11, 1991, and September 19, 1991 (citing van der Auwera and Jespersen). His examples even include one with a plural 'head' (cf. also Seppänen (1999) and Herrmann (2005, 54)):

- (19) I'm looking for some pencils that's leads aren't broken.

and one in which the containing DP is an object:

- (20) This is the pencil that's lead you broke.

Hudson takes these to clearly support a relative pronoun analysis of relative *that*. David Pesetsky (LinguistList September 13, 1991) pointed out that at most such examples might support that analysis for those who accept (16) (and (19) and (20)).³ Hudson replied in turn that his point is actually stronger, in that those who accept (16) and (19) and (20) still do not accept (14). Thus, if for the speakers in question one grants (on the basis of (16) and (19) and (20)) the relative pronoun status of *that* one is forced to admit that for those speakers (14) is unacceptable even though *that* is a relative pronoun, in which case there must be an independent reason for (14) that might actually hold for all speakers, in which case in turn (14) would no longer constitute support for the analysis of relative *that* as a complementizer.

Where does this leave us? We still have the question why (16) and (19) and (20) are unacceptable to many/most (including myself). The restriction seen in (18) may well be relevant, but there is an even closer one:

- (21) The importance of it is undeniable.
 (22) The importance of that is undeniable.
 (23) Its importance is undeniable.
 (24) *That's importance is undeniable.

Demonstratives accompanied by no overt NP cannot be possessors, as shown also by:⁴

- (25) *This's importance is undeniable.
 (26) *Those's importance is undeniable.
 (27) *These's importance is undeniable.

Therefore even if relative *that* is a demonstrative, as I will pursue below, the unacceptability of (16) and (19) and (20) promises to reduce to the unacceptability of (24)–(27) (and/or to that of (18)) in a way that is compatible with relative *that* being a demonstrative-type relative pronoun, rather than a complementizer.⁵

³ Cf. also Pesetsky (1998).

⁴ Note the contrast with:

- i) That one's importance is undeniable.

as well as the contrast:

- ii) ?The participants' identity are to remain a secret.
 iii) *Those's identity are to remain a secret.

On (ii) (which shows that this sort of non-standard plural agreement does not depend on contiguity with the plural antecedent), see den Dikken (2001) and Kayne (1998a, note 9).

⁵ Still left open is the acceptability, for some, of (16) and (19) and (20). If all such speakers also accept (24), then the problem is essentially solved. If they don't (I don't know the answer), then more needs to be said.

5. The preposition restriction

Returning to the preposition restriction exemplified by (14), the question is why it should hold if *that* is a relative pronoun. Those who have taken (14) to argue against a relative pronoun analysis of *that* have implicitly assumed that true relative pronouns would never show such a restriction. But that seems incorrect.

There is a restriction in Dutch concerning relative *d*-pronouns. Dutch relative *d*-pronouns are demonstrative-related relative pronouns, rather than complementizers, insofar as they show some number agreement (when the gender is neuter) with the head of the relative:⁶

- (28) het boek dat ik nu lees ('the book *dat* I now read')
 (29) de boeken die ik nu lees ('the books *die* I now lees')

They are nonetheless prohibited from being the object of a preposition, e.g.:

- (30) *de persoon aan die ik de brief heb gegeven ('the person to *die* I the letter have given')

as opposed to:⁷

- (31) de persoon aan wie ik de brief heb gegeven

Dutch contrasts here with German, whose (demonstrative-related) *d*-relative pronouns can readily be objects of a preposition, e.g.:

- (32) der Mann mit dem wir gesprochen haben ('the man with *dem*(dative) we spoken have')

Yet German still has a certain restriction that recalls the Dutch one. This restriction is found in German when an *r*-pronoun (akin to English *where*, *there*, *here*) is to be used as a relative pronoun with a preposition (adposition). In that case, the form of the *r*-type relative pronoun must be *wo(r)*- and cannot be *da(r)*-.

- (33) das, woran ich denke ('that whereof I think')
 (34) *das, daran ich denke ('that thereof I think')

The generalization that suggests itself on the basis of these facts is:

⁶ Examples from Donaldson (1997, sect. 8.5.2).

⁷ In the context of a preposition, the relative pronoun in Dutch must be of the *w*-type, akin to English *wh*-relative pronouns—for recent discussion, cf. Sportiche (2008).

- (35) In (at least) West Germanic, a demonstrative-related relative pronoun can be the object of an adposition only if that *d*-pronoun has morphological Case.

This is arguably so for relative *d*-pronouns (with the exception of *da(r)*) in German, which has widespread morphological Case (though never with *da(r)*), but not in Dutch, which apart from personal pronouns by and large lacks morphological Case. Since English *that* has no morphological Case, the preposition restriction illustrated in (14) falls under (35), in a way compatible with *that* being a relative pronoun.⁸

6. Sensitivity of *that* to +/-human

Another consideration that might at first glance appear to weigh against taking *that* to be a relative pronoun is its apparent indifference to the humanness of the 'head' of the relative.⁹ In this respect, *that* appears to differ from both *who* and *which*. *Who* is incompatible with an inanimate relative head:

- (36) the person/*house who he was looking at

and *which* is generally incompatible with a human relative head:¹⁰

- (37) the house/*person to which I was alluding

That, on the other hand, seems to accomodate all sorts of relative heads:

- (38) the person/insect/house that we were looking at

One might consider this a reason not to take *that* to be a relative pronoun.

For my English, though, (38), while accurate per se, is misleading, in that there exist other contexts in which *that* is not indifferent to the choice of 'head'. In particular, I agree here with the judgments of Kayne (1981a, sect. 3.3) concerning a certain kind of cleft sentence:

⁸ Why (35) should hold for relative *d*-pronouns but not for relative *w*-pronouns remains to be understood; the question is especially challenging if *w*-pronouns are accompanied by a silent D.

⁹ The term 'head of a relative' is convenient but confusing, since it doesn't match 'head' in the sense of X-bar theory, insofar as what is relativized can readily be phrasal, even in restrictives, e.g.:

- i) the ton of money that they've saved this year
- ii) the picture of you that's over there
- iii) the removal of the evidence that took place last week
- iv) the paper you just published that everybody should read
- v) this going to the movies all the time that you've gotten yourself into the habit of

¹⁰ Though I find somewhat acceptable:

- i) ?There were lots of linguists there, only some of which were known to us.

- (39) (Do you know Mary?) Yes, in fact it was Mary who/*?that got me interested in linguistics in the first place.
- (40) (Have you read this book?) Yes, in fact it was this book that got me interested in linguistics in the first place.

In such cases, *that* is not possible for me if the clefted (subject) constituent is human.

The deviance of (39) with *that* depends on the clefted constituent being the highest subject. A parallel sentence with a clefted object and *that* is appreciably better for me (though not quite perfect):¹¹

- (41) (Do you know Mary?) Yes, in fact it was Mary who/?that I learned linguistics from in the first place.

This subject/object difference also holds for me in simple relatives with an indefinite pronoun as 'head', especially in 'extraposition' contexts:

- (42) I met somebody last night who/*?that told me you were back in town.

Again, *that* is deviant if it is a (highest) subject that is relativized. The object counterpart is, as with (39) vs. (41), appreciably improved:

- (43) I met somebody last night that you've known for a long time.

as is the -human counterpart of (42):

- (44) I read something last night that would interest even you.

A third case in which *that* shows sensitivity to the humanness of the 'head' involves non-restrictives. It is often thought that *that* is excluded from non-restrictives, but for me, while *that* is not perfect (compared to *who* or *which*), it is clearly better than zero:

- (45) Your last paper, *(?that) I've been meaning to reread for a while now, is really good.

Yet I find the following, with a human 'head', clearly worse than (45) with *that*:

- (46) *Your oldest friend, that I've been meaning to talk to for a while now, is really smart.

¹¹ That *that* is, for at least some speakers, sensitive to the +/- human status of the head of the relative has also been pointed out by Huddleston et al. (2002, 1054), Quirk et al. (1972, 870), and Evans and Evans (1957, 505).

In conclusion, *that* is sometimes sensitive to the +/- human status of the head of the relative, even if less systematically than with *who* or *which*. The fact that *that* does not differ sharply from *who* and *which* in this respect increases the plausibility of the claim that *that* is always a relative pronoun.¹²

The fact that relative *that* is incompatible in a certain range of contexts with a human antecedent/head is not entirely surprising, if relative *that* is demonstrative *that* followed by a silent N/NP (silent by virtue of movement, if the raising/promotion approach to relatives is correct). This is so, since ordinary demonstrative *that*, while indifferent to the humanness of an overt associated N(P):

(47) that house/insect/person

is quite sensitive to humanness when that N(P) is silent, even in simple non-relative contexts:

(48) That's too expensive.

(49) *That thinks too much.¹³

The idea, then, is that the requirement that relative *that* in some contexts not have a human antecedent/head is related to the deviance of (49), and that this relation supports taking relative *that* to be a relative pronoun.

I note in passing that instances of relative *that* that are possible for me only with -human, i.e., those instances of relative *that* that are most clearly relative pronouns, as in (40), (44), and (45), still have no counterpart with *this*:¹⁴

(50) (Have you read this book?) Yes, in fact it was this book that/*this got me interested in linguistics in the first place.

(51) I read something last night that/*this would interest even you.

(52) Your last paper, ?that/*this I've been meaning to reread for a while now, is really good.

¹² It remains to be understood why (38) with *person* is acceptable to me. Of potential interest is the fact that all three contexts in which *that* requires for me a non-human 'head' are also contexts in which zero is excluded for me (independently of humanness). Thus alongside (45):

i) Have you read this book? Yes, in fact it was this book *(that) got me interested in linguistics in the first place.

and in the indefinite extraposition case:

ii) I read something last night *(that) would interest even you.

¹³ With stress on *that* and a pejorative interpretation, this example may be possible with reference to a human, probably with a silent THING associated with *that*.

¹⁴ With intonation held constant. Possible, but not as a relative clause structure, is:

i) I read something last night. This would interest even you.

Similarly, with stress on *this* and *and* added:

ii) ?Your last paper, and this I've been meaning to reread for a while now, is really good.

This *that*/**this* contrast that holds for relative pronouns resembles the *that*/**this* contrast that holds for what we think of as sentential complementizers. The relative pronoun contrast is more basic than and in fact underlies the other, if this chapter is on the right track.

7. The impossibility of agreement with English relative *that*

Those instances of relative *that* that are possible only with -human, i.e., those instances of relative *that* that are most clearly relative pronouns, as in (40), (44), and (45), still do not allow agreement with the head of the relative:

- (53) (Have you read these books?) Yes, in fact it was these books *that*/**those* got me interested in linguistics in the first place.
- (54) I read some things last night *that*/**those* would interest even you.¹⁵
- (55) Your last few papers, ?*that*/**those* I've been meaning to reread for a while now, are really good.

The question is why relative pronoun *that* would not have a plural counterpart, contrary to Dutch in (28)/(29) and to German, which also shows number agreement with the head of the relative:

- (56) das Buch, das ich gelesen habe ('the book that I read have')
- (57) die Bücher, die ich gelesen habe ('the books that(plural) I read have')

A possible but not entirely satisfactory answer might be that *that* in this respect is 'simply' like *who*, which shows no number (or gender) agreement. Nor does *which*, of course, though in the case of *which* there is no number agreement elsewhere (*which book?*, *which books?*), contrary to *that book* vs. *those books*. But since ordinary demonstrative *that* does agree in number in English, we are obliged to ask, if relative *that* is indeed a relative pronoun related to demonstratives, why exactly relative *that* does not agree, too?

Here it becomes important to say a bit more precisely what one means by 'relative pronoun'. As in Kayne (1994a) for the case of *which* (and *who*), I take 'relative

¹⁵ Again, with a different, non-relative clause, structure, the following is possible:

- i) I read some things last night. Those would interest even you.

and similarly for the next text example:

- ii) Your last few papers, and those I've been meaning to reread for a while now, are really good.

Also possible is, as a case of apposition, with a relative inside the apposition:

- iii) Your last few papers, those that I've been meaning to reread for a while now, are really good.

pronouns' to be determiners¹⁶ whose NP has raised to become the 'head' of the relative, in the general context of the raising approach to relatives first developed at length in Vergnaud (1974; 1985). Thus in:

- (58) the book to which I was alluding

which is immediately followed by a trace/copy of *book*. In French (or Italian) relatives close to (58), one does see agreement:

- (59) les livres avec lesquels... (Fr.: 'the books with the(pl.)which(pl.)...')

where, as with *which*, there is a trace/copy of *livres* following *quels*.

Taking *that* to be a relative pronoun, then, amounts to taking it to be a (demonstrative) determiner whose NP has raised past it, i.e., in:

- (60) the linguists that she talks to

that is followed by the trace/copy of *linguists* (the trace/copy following *to* is omitted):

- (61) the linguists_i that t_i she talks to

Yet *that* shows no number agreement.

The fact that relative pronoun *that* shows no number agreement with the head of the relative in English (as opposed to Dutch and German) is plausibly related to the fact that English differs from other Germanic languages in having no DP-internal number agreement apart from demonstratives:

- (62) the(*s) books

- (63) interesting(*s) books

The fact that demonstratives are anomalous within English in this respect, i.e., that they alone show DP-internal number agreement, recalls a parallel fact in Hungarian discussed by Szabolcsi (1994, 184–185). What Hungarian adds to the discussion rests on the fact that its agreeing demonstratives are visibly pre-D, i.e., they visibly precede the definite article (the plural morpheme here is *-(e)k*):¹⁷

- (64) ezeket a könyveket ('these(acc.) the books(acc.)')

Within a Hungarian DP, the definite article itself does not agree, nor does any element between the definite article and the noun.

¹⁶ Which may be phrasal—cf. Leu (2008b).

¹⁷ Example from É Kiss (2002, 164).

The fact that the single case of DP-internal number agreement in Hungarian is visibly pre-D suggests taking English agreeing demonstratives to be pre-D also, as in:

(65) those D books

with a silent D—cf. Leu (2007).¹⁸ This in turn leads to the following proposal:

(66) English plural *-s* (like Hungarian number morphology) can be prenominal only if it is also pre-D.

In consequence of (66),¹⁹ examples (62)–(63) are excluded because the first *-s* there is prenominal but not pre-D (assuming that adjectives in English can never be pre-D). The plural *-s* of *those* in (65) is allowed precisely because it is pre-D. (Why English plural *-s* and Hungarian number morphology (and Hungarian Case morphology) should have the property expressed in (66) remains to be elucidated.)

We are now in a position to propose an account for the absence of number agreement illustrated by:²⁰

(67) *the only books those you should read

Given (61), the question is why (67) couldn't arise from a structure containing (65), with a pre-D *those* (trace/copy in object position again omitted), as in:

(68) *the only books_i those D t_i you should read

A plausible answer is that the raising of the NP *books* shown in (68) must target Spec,D,²¹ that pre-D demonstratives themselves occupy Spec,D, and that in essence the presence of pre-D *those* in (68) interferes with the raising required to yield a relative clause structure, which therefore makes (68) impossible.²²

¹⁸ In Greek, too, one sees demonstratives followed by an overt D—for recent discussion, v. Grohmann and Panagiotidis (2004). (66) could be reformulated if *these/those* turned out to have a silent plural morpheme (i.e. if their *-s* is part of the plural stem—cf. Halle and Marantz (1993, 132) on *geese* and Leu (2008b)).

¹⁹ The converse of (66) would not hold, given:

- i) all/*alls the books
- ii) half/*halves the books

²⁰ I am assuming that the widespread presence in non-standard English of:

- i) them guys

instead of *those guys* is not paralleled by any instance of relative pronoun *them*:

- ii) *the only guys them she ever talks to

²¹ It may be that the raising of the 'head' of the relative has it passing through Spec,D on its way to some higher position—cf. Bianchi (1999).

²² This is most straightforward if there are no multiple specifiers, at least not with D. Another possibility is that pre-D *those* acts as an intervener.

The fact that counterparts of (67) are possible in German (and Dutch), as illustrated in German by (57), repeated here:

- (69) die Bücher, die ich gelesen habe ('the books that(plural) I read have')

in which the second *die* is an agreeing plural demonstrative relative pronoun, suggests that a plural demonstrative in German (and Dutch) need not be pre-D. Put another way, relative *die* in (69) is post-D:²³

- (70) die Bücher_i D die t_i...

in which case the NP *Bücher* can arguably move into/through Spec,D without hindrance.

The reason that German and Dutch allow a post-D plural demonstrative as in (70), while English does not (if English allowed (70), it would allow (67)), must in turn reflect the fact that (66) does not hold of German or Dutch, both of which visibly allow DP-internal number (plural) agreement with post-D adjectives, in a way that is impossible in English (and Hungarian), e.g., in German:

- (71) das andere Buch ('the other book')
 (72) die anderen Bücher ('the other(plural) books')

The fact that English does not allow a post-D plural demonstrative does not imply that English allows no post-D demonstrative. English might still allow a non-agreeing post-D demonstrative that would be the source of English relative (non-agreeing) *that*.

The contrast between (68) and:

- i) We prefer those.

implies, in a way relevant to chapter 4, that the silent NP associated with *those* in (i) does not need to raise to Spec,D. Probably important here is the availability in some English of:

- ii) We prefer those ones.

²³ In non-relative contexts (with NP-ellipsis) one finds a visible post-D agreeing demonstrative in the Dutch/Flemish dialect spoken by Jeroen van Craenenbroeck (p.c.):

- i) den daunen ('the that(masc.)')

In Greek, one can have:

- ii) ta nea afta fenomena ('the new these phenomena')

with the demonstrative visibly between adjective and noun—v. Grohmann and Panagiotidis (2004).

8. The impossibility of agreement with Romance relative *che/que*

Given the discussion of (67)–(70), the structure associated with the well-formed:

(73) the books that you should read

must not be:

(74) *the books_i that D t_i you should read

in which pre-D *that* would interfere with the raising of *books*,²⁴ but rather:

(75) the books_i D that t_i you should read

in which demonstrative *that* is post-D, parallel to (70).

The absence of number agreement between *books* and *that* in (73)/(75) can be taken to follow automatically from the general absence of post-D number agreement in English. An obvious question then arises from the impossibility of:

(76) *You should read that books.

(which is possible, though, in the dialect studied by Adger and Smith (2005)). I return to (76) below.

Romance relatives raise closely related questions, insofar as they are frequently introduced by a non-agreeing *che/que*, despite Romance languages having wide-spread prenominal post-D number agreement. This is particularly striking in a language like Italian, with rich number morphology and yet non-agreeing relative *che*:

(77) l'altro libro che Gianni ha letto ('the other book that G has read')

(78) gli altri libri che Gianni ha letto ('the(pl.) other(pl.) books that...')

In (78), both the definite article and the prenominal *altri* show plural morphology in agreement with plural *libri*, yet *che* does not. In this respect, relative *che* differs sharply from relative *il quale*:

(79) l'altro libro del quale Gianni ha parlato ('the other book of-the which G has spoken')

(80) gli altri libri dei quali Gianni ha parlato ('the(pl.) other(pl.) books of-the(pl.) which(pl.)...')

²⁴ *That* could be pre-D, parallel to (65), in contexts where raising to Spec,D is not at issue, e.g., in:

i) That book is interesting.

as well as from accusative pronominal object clitics:

- (81) Quel libro, lo leggo volentieri. ('that book, it I-read gladly')
 (82) Quei libri, li leggo volentieri. ('those books, them I-read gladly')

The distinction here between singular object clitic *lo* and plural object clitic *li* parallels that between singular *l'* and plural *gli* in (77) vs. (78), whereas relative *che* appears in the same form whether its antecedent is singular or plural.

As in Italian, French pronominal object clitics show a number distinction (and, in the singular accusative, a gender distinction). Again as in Italian, French relative *que* shows, in contrast, no distinction in number or gender.²⁵

Italian relative *che* (like French *que*) is not related to a demonstrative, but rather to the interrogative *wh*-word (*che* in Italian, *que* in French) corresponding to English *what*. In the spirit of the earlier discussion of English *that*, we would expect, despite this difference, that neither *che* nor *que* is a complementizer,²⁶ even though complementizer status (as opposed to relative pronoun/determiner status) might appear to provide an account of non-agreement.

The claim that complementizer status is not at the heart of *che* not agreeing is supported by:²⁷

- (83) Che libro/libri hai letto? ('what book/books have-you read')
 (84) Che bel libro/bei libri! ('what beautiful book/beautiful books')

In (83) *che* is an interrogative determiner that fails to agree (and cannot agree) with the following noun.

In (84) *che* is an exclamative determiner, again with no agreement. In the first case, there is, as in (78) vs. (80), a sharp contrast with (interrogative) *quale*, which necessarily shows agreement, contrary to *che*:

- (85) Quale libro/quali libri hai letto? ('which(sg.) book/which(pl.) books have-you read')

²⁵ In both French and Italian there is an overt dative-accusative Case distinction within the set of third person pronominal object clitics, but there is no comparable dative-accusative distinction for French relative *que*, nor for Italian *che*—unless Italian *cui* (or even French relative *qui*) is a dative/possessive/oblique form of *chelque*, as in (93)/(100) below.

²⁶ Contrary to Kayne (1976) for French *que* and to Cinque (1982) for *che*, but in partial agreement with Sportiche (2008), who takes French *que* to be a weak form of both *quoi* and *qui*. From the perspective of this chapter, the relation between French relative *que* and *quoi* or especially *qui* is necessarily more complex, given the discussion beginning at (88). For relevant work on French interrogative *que/quoi*, see Poletto and Pollock (2004a; b) and Munaro and Pollock (2005).

²⁷ French does not allow *que* (or *quoi*) either as an exclamative determiner or as an interrogative determiner with an overt following NP (setting aside cases with the preposition *de*), for reasons that need to be elucidated.

Relative to Italian determiners that can occur both with a singular count noun and a plural, *quale* is typical; such determiners typically agree, in Italian. *Che* as a determiner is atypical, perhaps unique. The question is why.

The answer, I think, is to be found in Leu's (2008a, note 15) suggestion, building on Heim (1987), that English interrogatives like:²⁸

(86) What books are you reading?

are to be analyzed as parallel to German interrogatives of the *was ...für* type:

(87) Was für Bücher liest du? ('what for books read you')

Leu's analysis of such German(ic) interrogatives rests in part on his postulating in (87) the presence of a silent counterpart (represented as SORT) of the noun *sort*. *Was* in (87) is a kind of (genitive) modifier of this SORT, rather than of the lexical noun *Bücher*. In this way, Leu accounts for why *was* does not agree in phi-features or in Case with *Bücher*. (A close relation between *was* and SORT is seen visibly in English *You bought books of what sort?*)

Let us now take Italian to be like German, so that the non-agreeing character of *che* in (83) (and, less directly, (84)) exactly matches the non-agreeing character of *was* in (87). In Italian, too, agreement fails to take place because *che* in (83) is not a modifier of *libri* (but rather of SORT).²⁹

Returning to relatives, the key proposal is to take Italian relative *che*, too, to be associated with a structure of the type found in (87), in which case a relative like:

(88) i libri che Gianni ha letto ('the books *che* G has read')

must be thought of (abstracting away from the question of *für*) as:

(89) i libri_i che SORT t_i G ha letto

or, more exactly:

(90) i libri_i [[che SORT] t_i]_j G ha letto t_j

in which *che* is a modifier of silent SORT and not a modifier of (the trace of) *libri*, with which it therefore is not expected to agree in number (or gender).

²⁸ On the interpretation of these, see Heim (1987) and Leu (2008a; 2008b).

²⁹ *Quali* in (85) is, then, not a modifier of SORT. It must also be the case that *che* cannot raise high and agree in the manner of *tropp-* in:

i) troppi pochi libri

For discussion, cf. Kayne (2002a, sect. 1.8) and Corver (2007).

The genitive relation that Leu (2008a) suggests between *was* and SORT may underlie the (probable) absence of agreement between *was* and SORT.

The agreeing interrogative *quale* ('which') of (85) has an agreeing counterpart in relatives, as we saw in (80). This relative *quale* contrasts sharply with another Italian relative element, *cui*. Although *cui* is like *quale* in being compatible with both human and non-human antecedents, it differs from it in that *cui* shows no number agreement:

- (91) il libro di cui Gianni ha parlato ('the book of *cui* G has spoken')
 (92) i libri di cui Gianni ha parlato ('the books of *cui*...')

This suggests taking *cui* to be closely related to *che*, which also shows no number agreement, as discussed earlier starting at (78). A way to express this relation would be to attribute to (92) an analysis modeled on (90), namely:

- (93) i libri_i di [[ch(e) SORT] t_i-ui] G ha parlato t

in which *-ui* is an oblique Case morpheme stranded by the raising of *libri*. (The *ch-* of *che* is the same consonant /k/ as the *c-* of *cui*.)

The lack of number agreement with *cui* is now seen to depend in part on *che* not being a direct modifier of *libri* and in part on the fact that the number morpheme *-i* associated with *libr-* must be raised along with *libr-*. Taking *-ui* to be oblique provides a way of accounting for the fact that *cui* is not possible if what is relativized is a subject or a direct object,³⁰ as opposed to a prepositional object or a prepositionless oblique. The latter is found in:

- (94) la persona cui Gianni ha dato un libro ('the person *cui* G has given a book')

The contrast with subject and direct object relativization is illustrated by:

- (95) *la persona cui G ha visto ('the person *cui* G has seen')
 (96) *la persona cui ha parlato di noi ('the person *cui* has spoken of us')

Although French lacks an exact counterpart of (94),³¹ it has a contrast between prepositional object relativization with *qui* (limited to human) and direct object relativization:

- (97) la personne avec qui Jean a parlé ('the person with *qui* J has spoken')
 (98) *la personne qui Jean a vue ('the person *qui* J has seen')

In addition, this *qui* shows no number agreement (contrasting with French relative *lequel* ('the which')):

³⁰ There is also a restriction with Italian relative *il quale* ('the which') that makes subject and direct object relativization deviant, but the restriction is in certain respects less systematic than with *cui*—v. Cinque (1982; 2006b). On the other hand, *il quale* is not possible in (94).

³¹ Perhaps related to the fact that French lacks a counterpart of the weak pronoun *loro* that is discussed by Cardinaletti (1991) and Cardinaletti and Starke (1999).

(99) les personnes avec qui Jean a parlé ('the persons with *qui*...')

suggesting, parallel to (93):

(100) les personnes_i avec [[qu(e) SORT] t_i -i] J a parlé t

in which the consonant /k/ of *que* (which like Italian *che* is a modifier of SORT and consequently does not agree in number with *personnes*) is followed by an oblique -i (thereby accounting for (98)).³²

9. More on non-agreement with *that*

Returning to English relative *that*, the question is now whether it is appropriate to take its non-agreeing character to have the same kind of source as non-agreement with German *was* and Italian *che*, i.e., whether or not take relative *that* to co-occur as a modifier of silent SORT in the manner of relative *che* in (90) and (by extension) interrogative *what* in (86), as in:

(101) what SORT ... books ...

Given certain differences between *what* and demonstratives in English (and German and Italian), I tentatively take the answer to be negative, i.e., neither simple demonstratives such as in *that book*, nor relative demonstrative pronouns as in (73), repeated here:

(102) the books that you should read

co-occur with SORT.

One relevant difference within German is that alongside the *was für* construction of (87), there is no exactly parallel demonstrative **das für*.³³

³² (100) leaves open, however, the status of French interrogative *qui*, which is not limited to obliques, and of French relative subject *qui*. For recent discussion, cf. Sportiche (2008) and Koopman and Sportiche (forthcoming).

Italian relative *cui* (like French relative *dont*) cannot be used in interrogatives (or free relatives). This seems to correlate with a pied-piping difference between *cui/dont* and *qui* (cf. Kayne (1976) and Cinque (1982; 2006b)), with *cui/dont* recalling Webelhuth (1992) on non-English Germanic:

- i) la fille avec la mère de qui Jean a parlé ('the girl with the mother of *qui*/whom J has spoken')
- ii) *la fille avec la mère dont Jean a parlé
- iii) *la ragazza con la madre di cui Gianni ha parlato (Ital.: same)

The exact reason for this correlation needs to be worked out.

³³ Thomas Leu (p.c.).

(103) *Ich lese das für ein Buch ('I read that for a book')

A second (cross-language) difference is that the sensitivity of *that* to +/- human discussed above starting at (39) is not found at all with Italian relative *che* (or with French relative *que*) as far as I know.³⁴ A third, within English, is seen in:

(104) Which (books) are still on the table?

(105) Those (books) are still on the table.

(106) What *(books) are still on the table?

where *which* is like *those*, both differing sharply from *what*. Conversely, we have:

(107) Which one is still on the table?

(108) That one is still on the table.

(109) ?What one is still on the table?

where *what* again differs from *that* (and from *which*). Finally, there is the basic fact that relative *that* has, in standard English, no counterpart with *what*.³⁵

(110) the book that/*what you should read

Thus it may well be that although SORT is licensed in the context of *che* and *what*, as in (90) and (101), it is not licensed by *that*.

If so, there must be at least one other factor that accounts for the ability of *that* to co-occur with a plural relative head. Recall that in the discussion around example (65), reproduced here:

(111) those D books

I took agreeing *those* to necessarily occupy Spec,D. This was partially inspired by the facts of Hungarian, in which agreeing demonstratives visibly precede the definite article. Relevant now is the fact mentioned earlier that in Hungarian those elements that occur between the definite article and the noun do not agree, which ties in with the proposal made earlier in (75), repeated here:

(112) the books_i D that t_i you should read

that relative *that* in English is post-D. In other words, the primary claim of this section is that relative *that*, despite being a demonstrative, fails to agree in number

³⁴ French relative *quoi* (like German relative *was*) is limited in the range of relative heads it is compatible with, but the restriction in question is much more severe than with English *that*.

³⁵ As opposed to certain English dialects (cf. Herrmann (2005)), for reasons that need to be elucidated, along with the fact that those dialects consistently lack a sentential complementizer use of *what*, according to Berizzi (2007).

with the relative head because relative *that* originates as a post-D, not as a pre-D, demonstrative.

As discussed earlier, the lack of post-D demonstrative agreement in English can be related to the absence in English of post-D adjective agreement (just as it is in Hungarian). A question arises of course as to the status of:

(113) *that books

in which non-agreement is impossible in standard English.³⁶ If the following:

(114) D that book(s)

is available as the source of relative *that*, in the way indicated in (112), why can it not also yield (113), i.e., why does:

(115) D that books

yield a well-formed output only when *books* is moved by relativization?

We can draw the correct distinction if the following holds:³⁷

(116) Silent definite D in English requires that some XP move to its Spec.

In (113), *books* has not moved into Spec,D, so there is a violation of (116). (In *that book*, *that* must occupy Spec,D, parallel to (111).) (112), though, does not violate (116), since in (112) Spec,D has been moved into by *books*.

10. Non-agreement with French demonstrative *ce*

The lack of number agreement that holds for demonstrative relative *that* in English has a counterpart in French in a particular case of demonstrative *ce* that does not involve relativization. French *ce* normally agrees in number:

(117) *ce* livre ('that/this book')

(118) *ces* livres ('those/these books')

However, when *ce* is followed by a pronoun rather than by a lexical noun, it does not agree. This happens in the closest French counterpart to English *the one(s)*..., which instead of *one(s)* uses a pronominal form (*lui/elle/eux/elles*) and instead of the definite article uses *ce* (with the two written as one word):³⁸

³⁶ The Buckie dialect studied by Adger and Smith (2005, 169) allows such non-agreement.

³⁷ Cf. Leu 2007; 2008b; also, more indirectly, chapter 1.

³⁸ In these forms, the *-e* of *ce* drops obligatorily if the pronoun begins with a vowel. On the fact that *celui*, etc. cannot stand alone, cf. ?*That's not the you/him* *(*that we remember*), with English *the* matching French *ce*.

- (119) celui que tu vois ('*ce* him that you see')
 (120) celle que tu vois ('*ce* her that you see')
 (121) ceux que tu vois ('*ce* them(masc.) that you see')
 (122) celles que tu vois ('*ce* them(fem.) that you see')

The decomposition of these into *ce*+pronoun goes back to Gross (1968, 51) and seems correct both on grounds of form and of interpretation.

It is striking that *ce* in (119)–(122) shows no agreement in number (or gender), despite French having appreciably more DP-internal agreement than English. If *ce* were to agree in (120)–(122), we would have the impossible:

- (123) *cetteelle..., *ceseux..., *ceselles...

where *cette* is the normal feminine singular and *ces*, as in (118) the normal plural form of *ce*. The following show that in the presence of a lexical noun *ce* must agree:

- (124) *cette*/**ce* femme ('*ce* woman')
 (125) *ces*/**ce* livres ('*ce* books')

The fact that *ce* fails to agree in (120)–(122), by providing an example of a non-agreeing demonstrative in a language in which demonstratives otherwise agree, indirectly supports taking English relative *that* to be a non-agreeing demonstrative, as in (112).

It may be that a still tighter link can be drawn, if we ask why *ce* fails to agree precisely in those cases in which it is followed by a pronominal, as in (120)–(122). The answer requires us to (briefly) look in more detail at the feminine singular form *cette* of (124), the *-t-* of which has a counterpart in the masculine singular when the following word begins with a vowel:³⁹

- (126) *cet* ami ('*ce* friend')

Against the background of French morphophonology, it is plausible that this *-t-* is present with all the forms of *ce*, i.e., that (117) and (118) are really:⁴⁰

³⁹ The double *-tt-* of *cette* is just orthographic.

⁴⁰ In (127), the non-pronunciation of *t*/*T* is induced by the following consonant—cf. Schane (1968), Tranel (1981).

In (128), the non-pronunciation of *t*/*T* recalls possessive *mes*, *tes*, *ses*, which lack (overtly) the *-on/-ien* that is pronounced in the masculine singular and (in the presence of a following vowel) in the feminine singular—for discussion, see Kayne (2008c).

The (initial) *-e-* of *cet/cette* is phonologically distinct from that of *ce*, in a way that may be phonologically predictable.

The *-e* of *ce* is pronounced in:

i) *ce* à quoi elle pense ('that to what she thinks')

perhaps due to the presence of a silent noun following it.

- (127) *ce* T livre
 (128) *ce* T es livres

where T represents a silent *-t-* (and where the *-e* of *ce* is unpronounced if followed by a pronounced vowel, as in (128)).

Consider the possibility that this *t/T* is a D, in which case *ce* in (124)–(128) is plausibly in Spec,*t/T*. Since there is no *t* in any of (120)–(122),⁴¹ and therefore arguably no T in (119), *ce* in (119)–(122) need not be in Spec,D. Assume it is not, and more specifically, that it is below D. Then the *ce* of (119)–(122) strongly matches the *that* of (112)—both are instances of non-agreeing post-D demonstratives.

That *ce* in (119)–(122) is post-D is supported by the non-standard French that allows the following (cf. Bauche (1928, 101) and Grevisse (1993, §672)):⁴²

- (129) les ceux que ...
 (130) la celle que ...

In conclusion to this section, then, French *ce* provides indirect support for the idea that English relative *that* is a non-agreeing (post-D) demonstrative.

11. The absence of relative *this*

This and *that* appear to have parallel status in cases like:

- (131) This book is better than that book.

Yet *that* can be ‘neutral’ in a way that *this* cannot be.⁴³

- (132) He’s not all that/*this smart.
 (133) ?Only those/*these people who have any money can see the film.
 (134) those/*these of us who are linguists
 (135) the destruction of the bridge and that/*this of the car

which leads to the following proposal:⁴⁴

⁴¹ It may be that *-t-/T* is incompatible with the pronominal status of *lui/elle/eux/elles*, though more needs to be said here.

⁴² If *t/T* is a D, the expectation is that no variety of French will allow:

- i) *la cette femme
 ii) *les ces femmes

As far as I know, this is correct.

The co-occurrence of the definite article (*les*, *la*) in these popular French forms with the pronominals *eux* and *elle* indicates recursion of a kind that bears on (i)/(ii) and on Postal (1966).

⁴³ Cf. expletive *there* vs. the absence of expletive *here*—Kayne (2004a) and chapter 6.

⁴⁴ Cf. Ferrari (2005) on feminine vs. masculine gender. A proposal of the text sort (as in Rooryck (2003)) might be extendable to the *come/go* asymmetries discussed in Nakatani (2008).

- (136) Demonstrative *this* is necessarily accompanied by a first person element akin to *I/me*; in contrast, demonstrative *that* is not necessarily accompanied by such an element.

The idea is then that this person element is incompatible (for reasons to be worked out) with (132)–(135).

With this as background, consider the question of the absence of relative *this/these*. By previous reasoning, plural *these* must be pre-D, in which case relative *these*, as in:

- (137) *the books these we were reading

is straightforwardly excluded parallel to (67), by virtue of pre-D *these* in Spec,D interfering with the raising of *books*.

What, though, of:

- (138) *the book(s) this we were reading

If *this* is pre-D, then the problem is immediately solved, as with (137). But what if *this* were post-D, parallel to (112)/(115)? The proposal that comes to mind is:

- (139) The person element accompanying *this* (or *these*) must occupy (or be contained in) Spec,D.

This means that even if *this* itself is below D, there will still necessarily be a person element in Spec,D that will block the raising of *book(s)* in (138), thereby preventing *this* from being a relative pronoun.

The contrast with relative *that* follows now from the fact that demonstrative *that* does not necessarily occur with a person element, as was stated in (136). In fact, such a person element must not be present with relative *that*, which we now see to pattern in this respect with the (non-relative) instances of demonstrative *that* given in (132)–(135).

12. *The fact that/*this...*

We normally think that only one of the following contains a relative clause:

- (140) the fact that you mentioned
(141) the fact that you're here

Yet neither allows *this*:

- (142) *the fact this you mentioned
(143) *the fact this you're here

(142) fits directly into the preceding discussion, whereby *this* is prevented from being a relative pronoun as a function of its obligatorily cooccurring with a person element in Spec,D.

If (141) contains a relative clause, too, rather than a sentential complement,⁴⁵ then (143) will fit directly into the preceding discussion. *This* will be excluded in (143) by virtue of being excluded as a relative pronoun.

An apparent problem with taking (141) to contain a relative clause lies in the contrast:

- (144) the fact which I mentioned
- (145) *the fact which you're here

But the unacceptability of (145) is surprising, on a relative clause analysis, only if clear cases of relative clauses (with inanimate heads) always allow *which*. That is not the case, however, as shown by relatives with *way* as the head:

- (146) the way in which they solved it
- (147) the way that they solved it

The first of these corresponds straightforwardly to sentences like *They solved it in a certain way*, etc. The second does, too, with the twist that the preposition *in* is not visible.

This lack of visible preposition is not specific to relatives:

- (148) They solved it this way.

What is notable is that in relatives containing both *way* and *which*, *in* cannot be omitted (cf. Larson (1987), as well as Cinque (1988a, 464) on Italian; also Herrmann (2005, 88ff.) on the different case of English non-restrictives):

- (149) *the way which they solved it

The same holds with other prepositions, in certain cases:⁴⁶

⁴⁵ For related discussion, see chapter 9. Partially similar proposals can be found in Aboh (2005) and Arsenijević (2007).

⁴⁶ Interrogative *which* allows omission of the preposition:

- (i) Which way did they solve it this time?
- (ii) (?)Which day did he leave for Paris?

(though not with *reason*).

Interrogative and relative *which* act alike insofar as:

- (iii) *Which (one) did they solve it this time?
- (iv) *Which (one) did he leave for Paris?

are displaying the same restriction as (149) and (152). That the absent preposition is important is shown by the increased acceptability of:

- (150) the day on which they saw him for the first time
 (151) the day that they saw him for the first time
 (152) *the day which they saw him for the first time

Returning to *fact*, the claim is that (141) involves a silent P and therefore that (145) is excluded for the same reason as (149) and (152). Since these two are part of a clear relative clause paradigm, (145) can be excluded even if (141) is a relative clause structure.

The silent P of (141) has a visible counterpart *in* in:

- (153) You're here in fact/You're in fact here/In fact you're here

In other words, *the fact that you're here* is a relativization based on an embedded sentence like (153).⁴⁷

The absence (vs. (146), (150)) of:

- (154) *the fact in which you're here

is probably related to the extra restrictions on determiners that hold with *in fact*:

- (155) In what/which way did you solve it this time?
 (156) *In what/which fact are you here this time?

Also:⁴⁸

- (157) In (*the, *a) fact, you're right.

One might think that a relative clause analysis of (141) would have difficulty with the contrast between (141) and (140) concerning the replacement of *fact* by *one*:

-
- (v) ??In which did they solve it this time?
 (vi) ??On which did he leave for Paris?

In (146), *way* has raised into Spec,*in*. Similarly, silent *WAY* may be raising to Spec,*in* in (v) (cf. chapter 4). It may be that it is this raising of *way/WAY* to Spec,P (stranding *which*) that is incompatible with the licensing of a silent P (perhaps because a silent P requires its Spec to be filled by its entire argument). (The difference between *which* and *that* here may be related to preposition-stranding.)

⁴⁷ This has the advantage of allowing a link between:

- i) *the facts that you're here and that he's not
 ii) *In facts, you're here.

though Italian *infatti*, which seems to contain a plural *fatti*, will need to be integrated.

⁴⁸ In the presence of *that*, *fact* must raise, given:

- i) *In that fact, John is here.
 ii) the fact that John is here

- (158) the one that you mentioned
 (159) *the one that you're here

But the same holds for the clear relative clause cases (also with a silent P and with *that*) of (147) (with *way*) and (151) (with *day*):

- (160) We admire the way/*one that they solved it
 (161) We weren't there the day/*one that they solved it

This common restriction on (159)–(161), which is arguably inherited, within the raising perspective on relatives, from a restriction found in non-relative instances of a silent P, e.g.:

- (162) They solved it that day and we would have solved it that day/*one, too.

seems compatible with a relative clause status for (141).

Luigi Rizzi (p.c.) has called my attention to an apparent problem (in Italian, here transposed to French) having to do with the possible appearance of subjunctive in:

- (163) Le fait que Jean soit là nous inquiète. ('the fact that J is(subjunc.) there us bothers')

as opposed to the ordinary relative:

- (164) *Le livre que Jean ait acheté lui a coûté cher. ('the book that J has(subjunc.) bought to-him has cost dear')

A solution that comes to mind is to take the subjunctive in (163) to be akin to that found with ordinary relatives preceded by *seul* ('sole/only'), as in:⁴⁹

- (165) Le seul livre que Jean ait acheté hier se trouve sur la table. ('the sole book that J has(subjunc.) bought...')

by attributing to (163) a structure like:

- (166) le SEUL fait que...

with a silent SEUL that would license the embedded subjunctive.⁵⁰

⁴⁹ Another possible solution is suggested in chapter 9.

⁵⁰ Relevant here may be:

- i) *the other fact that John is here
 ii) the other fact that John mentioned

13. Factives

An idea that goes back to Kiparsky and Kiparsky (1970) is that factive sentences like:

(167) We're sorry that you're here.

have a deleted or silent FACT. If so, and if the preceding section is on the right track, then factives, too, must involve relative clause structures (based on 'IN FACT'). This provides an immediate account of:

(168) *We're sorry this you're here.

in terms of the inability of *this* to serve as a relative pronoun, for the reasons discussed earlier around (136).

That factives are relative clause structures is supported by the observation in Roberts and Roussou (2003, 120) to the effect that in Modern Greek the relative clause marker *pou* is also used with factives.

14. Non-factives

The Kiparsky and Kiparsky proposal is similar to Rosenbaum's (1967) earlier one that sentential complements and sentential subjects are in general accompanied by *it*,⁵¹ which sometimes appears overtly and is sometimes deleted.⁵² This similarity to Kiparsky and Kiparsky is especially clear if *it* is a noun. It will also hold if *it* is a determiner (as in Postal (1966)) accompanied by a silent noun.

Assume, then, that sentential complements and sentential subjects are always accompanied by a 'head' noun, even if they are not factive. Then a natural extension of the previous discussion is that even these non-factive embedded sentences are relative clause structures (and the *that* that introduces them is a relative pronoun). Either *it* will be raised from within the relative in a way largely parallel to what happens with overt *fact* (and *way*, *day*), or a silent noun will be so raised.⁵³

A relative clause analysis of all embedded finite sentences accounts directly for:

⁵¹ In which case, sentential 'extraposition' becomes a subcase of relative clause extraposition.

⁵² Case-wise, (i), with silent IT, is akin to (ii):

- i) I'm sure that things will work out.
- ii) That I'm sure.

as opposed to:

- iii) *I'm sure that.

⁵³ Parallel to (166), there will be a silent SEUL associated with (at least some) preverbal subjunctive clauses.

(169) We insist that/*this you be back by noon.

as a subcase of the fact that *this* cannot be a relative pronoun:

(170) the book that/*this you're reading

for which I proposed an account in section 11.⁵⁴ Without such an account, the impossibility of *this* in (169) would be difficult to understand. (Recall in particular that the Davidson/Kiparsky/Roberts and Roussou view of the origin of complementizer *that* mentioned in section 2 cannot account for the contrast in (169).⁵⁵)

The claim that English sentential *that* is a relative pronoun must be taken to extend to (non-prepositional) finite complementizers in other languages (for example, to Italian *che*, to French *que*, to German *dass*, to Russian *shto*, etc.) There is relevance to questions of Case. Complementizers normally do not show Case, e.g., in German or Russian, where they might have been expected to. From the current perspective, this reduces to the fact that relative pronouns normally do not show Case determined in the matrix.⁵⁶

As is well known, finite complementizers cannot be stranded by (topicalization-like) IP-movement:⁵⁷

(171) He's sure that he's right.

(172) *He's right he's sure that.

If *that* is properly understood to be a relative pronoun, this reduces to the fact that relative pronouns cannot be stranded by IP-movement.⁵⁸

⁵⁴ The sensitivity of Greek *pou* to factivity remains to be elucidated.

⁵⁵ From the present perspective, *that* is not a Force⁰ in Rizzi's (1997) sense, nor the head of a CP phase in Chomsky's (2001) sense. The bearing that a Rosenbaum-type/relative clause analysis of sentential complementation might have on Chomsky's choice of CP as a phase needs to be looked into.

⁵⁶ The question of Case attraction and its interaction with complementizers needs to be looked into further (as does complementizer agreement of the Germanic sort).

If sentential complements are relative clauses, extraction phenomena (island effects) must be sensitive to some combination of (at least):

- a) 'extraposition'—cf. Taraldsen (1981), who shows that relative clauses are not systematically islands (cf. also Chung and McCloskey (1983))
- b) what type of phrase was wh-moved (argument or adjunct) and what exact type of argument or adjunct
- c) whether the 'head' of the relative is overt
- d) what determiner precedes the 'head'

⁵⁷ This contrasts with:

- i) They predicted that John would have to resign, and resign he'll have to.

For discussion, see Kayne (2003b, sect. 4.5).

⁵⁸ Cf.:

- i) We know the reason why you left.
- ii) *You left we know the reason why.

- (173) We like the people who you invited.
 (174) *You invited we like the people who.

Nor can relative pronouns be stranded under sluicing:

- (175) *We like the students who you invited, but we don't like the professors who.
 (176) *We liked the first way in which you presented your results but not the second way in which.
 (177) *The stated reason for which they quit is not the same as the real reason for which.⁵⁹

The relative pronoun status of sentential *that* allows relating to the preceding the fact that *that* cannot be stranded under sluicing, either.⁶⁰

which seems clearly impossible as topicalization of IP. (ii) is to be distinguished from:

- iii) You left and we know the reason why.

or:

- iv) You left. We know the reason why.

with two sentences.

Since IP-movement cannot strand an interrogative *wh*-word, either:

- v) *They invited we're trying to find out who.

the sluicing facts are more important here.

⁵⁹ The contrast with:

- i) ... the real reason why.

may be attributable to (i) containing a silent FOR:

- ii) ... the real reason FOR why.

with the *why*-clause being interrogative.

⁶⁰ Nor can *if* be:

- (i) *We suspect they're here but we don't really know if.

This may indicate that this *if* involves a relative clause structure, too (just as conditional *if* recalls correlatives of the Hindi type and, more specifically, the phrase *in what case*).

Why *whether* cannot be stranded under sluicing is not clear to me. The contrast between it and *if* with respect to control:

- ii) We're trying to figure out whether/*if to leave.

might suggest that *whether* does not involve a relative clause structure, at least not in the same way. If *if* is not a complementizer, various aspects of Kayne (1991) will need to be rethought. Similarly for the question of the degree of parallelism between DP and CP, if there are no (overt) finite complementizers.

(178) *We suspect that you're right, but we're not sure that.

The relative pronoun status of sentential *that* has the further advantage of allowing one to bring together two generalizations discussed by (Downing and) Keenan.⁶¹

- (179) a. prenominal relatives lack (overt) relative pronouns
 b. prenominal relatives never display a complementizer that is identical to the normal complementizer of sentential complementation.

(179b) now reduces (on the assumption that English *that* is typical of what we have called complementizers) to (179a).

15. Relatives with resumptive pronouns

In the face of colloquial English relatives like the one in:

(180) There's the guy that we still don't know if he's gonna show up or not.

one might be tempted to say that *that* here could not be a relative pronoun because there's already a resumptive pronoun *he* present. However (my) colloquial English also allows:

(181) There's the guy who we still don't know if he's gonna show up or not.

with *he* co-occurring with relative pronoun *who*, so there is no bar to taking *that* to be a relative pronoun in (180).

For me, the example with *that* is slightly less natural than the one with *who*, recalling the earlier discussion (starting at (39)) of cases in which relative pronoun *that* favored non-human relative 'heads'.⁶² As expected then, the following, with a non-human head, is more fully natural than (180):

(182) There's the book that we still don't know if it's gonna be on the reading list or not.

Since relative *which* is in general not very natural (for me) in colloquial English, it is not surprising that it is less good than *that*:

⁶¹ On the lack of relative pronouns in prenominal relatives, cf. Downing (1978, 392–394) and Keenan (1985, 149). On the lack of relative and sentential complementizer identity in prenominal relatives, cf. Keenan (1985, 160).

For a proposal on why (179) should hold, see Kayne (1994a, chapter 9).

Morphemes that separate prenominal relatives from the following 'head' in languages like Chinese and Korean must not be relative pronouns.

⁶² Related to that discussion, I find the 'zero' counterpart of resumptive pronoun relatives appreciably less good:

i) *?There's the guy we still don't know if he's gonna show up or not

- (183) ?There's the book which we still don't know if it's gonna be on the reading list or not.

16. *Which* vs. *that*

In simple cases with non-human (especially inanimate) heads, both *which* and *that* are possible (with *which* for me being less colloquial):

- (184) the book that/which I was reading

With superlatives, however, *which* is degraded:

- (185) the longest book that/??which I've ever read

though I find the prepositional counterpart better:

- (186) ?the softest chair in which I've ever sat

Sharper than (185) is the following, in which there is no overt head noun:

- (187) the fastest that/*which he's ever run

From the present perspective, which takes both relative *that* and relative *which* to be relative pronouns, i.e. determiners, it may be that (187) is traceable back to:

- (188) He's never run that fast/at that fast a speed.

vs.:

- (189) *Which fast (a speed) is he running (at) now?

Similarly, perhaps, for the amount relative contrast:⁶³

- (190) You won't believe the amount of sugar that/??which he puts in his coffee.

the restriction on which might have to do with:

- (191) What/??which amount of sugar do you usually put in your coffee?

In other words, these differences between relative *that* and relative *which* may be due to the fact that although both are relative pronouns/determiners, they are not the same type of determiner.

⁶³ Cf. Prinzhorn and Schmitt (2005, note 2) on German.

17. Determiners that cannot serve as relative pronouns

Wiltschko (1998) proposes that *the* cannot be a relative pronoun because it cannot license a silent NP:⁶⁴

(192) We need that/*the.

with the contrast in (192) underlying:

(193) the book that/*the we're reading

This seems plausible for English, and also provides a promising way of interpreting this French contrast:

(194) la chaise sur la*(quelle) tu étais assis ('the chair on the which you were seated')

French allows *laquelle* ('the which') as a (complex) relative pronoun/determiner, but not *la* by itself. This correlates with *laquelle* being able to appear without an overt noun in interrogatives:

(195) Sur laquelle étais-tu assis? ('on the which were you seated')

whereas *la* cannot appear by itself in argument position:

(196) *Tu étais assis sur la.

As a direct object, *la* can appear in clitic position:

(197) Tu la vois. ('you her/it see')

⁶⁴ If personal pronouns are determiners, as in Postal (1966) (though (23) vs. (24) needs to be addressed), then questions need to be asked about their absence as relative pronouns—cf. Wiltschko (1998).

Given that demonstratives can occur as relative pronouns, another question that arises is whether any language could have (the equivalent of):

i) *the book that there we like

alongside:

ii) We like that there book.

and if not, why not. (It might be that *there* would block the raising of *book*, as in the text account of the absence of relative *this*.)

yet still not as a relative pronoun:

- (198) *la fille la tu vois ('the girl the you see')

indicating that (Romance) relative pronouns cannot be clitics in the way that Romance personal pronouns can be.

A somewhat different kind of question arises from the fact that no Romance language, as far as I know, has demonstrative-related relative pronouns of the sort found in German, Dutch and (if I'm right about *that*) English. Note that from the perspective of this chapter, this generalization incorporates the fact that sentential complementizers related to demonstratives are found widely in Germanic but never, it seems, in Romance. (Why Germanic and Romance differ in this way remains to be figured out.⁶⁵)

There may (or may not) be a link here to a question that arises for French (and Italian). In (194) there is a complex relative pronoun of the form 'definite article + a close French counterpart of *which*'. The definite article cannot be replaced by a demonstrative:⁶⁶

- (199) *la chaise sur cette quelle tu étais assis ('the chair on that which you were seated')

Other (open) questions of this general type can be asked. Standard English has both interrogative *which* and interrogative *what* as determiners:

- (200) Which books/what books are still on the table?

yet only *which* as a relative pronoun:

- (201) the books which/*what are still on the table

In the spirit of Wiltschko's (1998) proposal concerning the absence of relative *the*, there might be a link between (201) and:⁶⁷

⁶⁵ As does why Romanian does not have a relative pronoun of the *che/que* ('what') type. Similarly, we need to ask why colloquial Norwegian has no relative *w*-type pronouns and why no Norwegian (apparently) has any agreeing *d*-type relative pronouns—cf. Taraldsen (1978, 629 ff.).

⁶⁶ Nor by an indefinite article:

- i) *la chaise sur une quelle tu étais assis ('the chair on a which you were seated')

or by any French counterpart of *some* or *any*. Cf. English:

- ii) the only place where/*somewhere they like to spend the summer

Cf. Kuroda (1968).

⁶⁷ What exactly distinguishes standard English here from the dialectal English that allows relative *what* will need to be determined.

(202) Which/*what are still on the table?

Some dialectal English allows relatives with *as* (in a way that recalls Scandinavian *som/sem/sum*).⁶⁸

(203) the things as I was saying

An extension of the proposals in this chapter would take this *as* to originate within a phrase containing the (moved) head of the relative:

(204) ...I was saying things as THAT

where *as* has something in common with *like* and THAT is silent, and similarly for Scandinavian.⁶⁹

18. Doubly-filled comps

Non-standard French allows relatives like:

(205) la fille à qui que tu as parlé ('the girl to who what you have spoken')

that contain two wh-words. Since from the perspective of this chapter, there are no finite complementizers distinct from relative pronouns, relatives as in (205) must contain two relative pronouns.

⁶⁸ Cf. Herrmann (2005).

⁶⁹ Icelandic sometimes has ...*sem að*... in relatives—cf. Thráinsson et al. (2004, 304).

To some extent, my English allows relative *as* with *such*, in particular in sentences like (cf. Evans and Evans (1957, 388)):

- i) He's a man such as/*that we've never seen the likes of.

Patricia Irwin (p.c.) points out:

- ii) I don't know as I'd say that.

with a possible link to Legate (2002).

(204) recalls chapter 5, note 9, on:

- iii) I was like, I'm outta here.

as:

- iv) I was GOING SOMETHING like....

arguably with a silent nominal following *like*.

Relevant here is also:

- v) Mary ended up winning the contest, as you won't be surprised to learn.

with a negation that contrasts with Rizzi (1990, 15).

Relatives with two relative pronouns are not unknown:⁷⁰

- (206) John Smith, whose children's love for whom is obvious to everybody, is a famous chemist.

but this kind of relative does not seem to match (205) very well.

More promising, I suspect, is a link between (205) and relativized clefts of a sort found (a bit marginally) in English:

- (207) ?the person to whom it was that we were alluding

Whom in this example seems like an ordinary relative pronoun. A corresponding non-relativized example would be:

- (208) It was to him that we were alluding.

The *that* of (207) is clearly to be identified with the *that* of (208). By extension, the *que* of (205) is to be identified with the *que* of:

- (209) C'est à elle que tu as parlé. ('it is to here what you have spoken')

if we grant that (205) is an instance of a reduced cleft, in which the *c'* ('it') and the *est* ('is') of (209) are unpronounced.⁷¹

If so, then the question of (205) essentially reduces to the question of the status of the *que* or of the *that* of clefts. The claim that such *que* or *that* are instances of relative pronouns is enhanced by the appearance of *who* in certain English clefts:

- (210) It was Mary who gave us the idea.

and by the appearance of (oblique) relative *qui* in certain French clefts:⁷²

- (211) C'est elle à qui tu as parlé. ('it is her to whom you have spoken')

Given (210) and the entire preceding discussion, there is immediate plausibility to taking the *that* of:

- (212) It was her paper that gave us the idea.

⁷⁰ Cf. Kayne (1983b, sect. 2.3 ff.) for more details.

⁷¹ Taking (205) to be a reduced cleft accounts for the relative order of the two *wh*-phrases:

- i) *la fille que à qui tu as parlé ('the girl what to who you have spoken')

The order in (i) is available in some languages (v. Szabolcsi (1994, 217)) in (embedded) interrogatives; such cases must not involve a reduced cleft analysis.

⁷² Cf. Grevisse (1993, sect. 447, 3°).

to be a relative pronoun, especially since here *that* is for me sensitive to +/-human (as in (39)):

- (213) *?It was Mary that gave us the idea.

The greatest challenge appears to come from cases in which *that* is possible, but not *who*:

- (214) It was to her that/*who we were alluding.

and similarly for *that* vs. *which* in:

- (215) It was to her paper that/*which we were alluding.

These might seem to support the idea that at least these clefts do not involve relative clause structures at all, in which case the presence of *that* might be thought surprising. Other examples of this sort are:

- (216) It was on that very day that/*which we met you for the first time.
 (217) It was in that very way that/*which we were able to solve the problem.

The force of this challenge is reduced, I think, by the observation that parallel contrasts exist in clear relative clause contexts, as seen earlier starting at (149), e.g.:

- (218) It rained the very day that/*which we were supposed to go to the movies.
 (219) The precise way that/*which they solved the problem is hard for us to understand.

In these two examples, the relative is (overtly) missing a preposition whose reinstatement makes *which* possible:

- (220) It rained the very day on which we were supposed to go to the movies.
 (221) The precise way in which they solved the problem is hard for us to understand.

If I am right to think that the facts of (214)–(217) represent the same phenomenon as those of (218)/(219), then, since (218)/(219) clearly contain relative clauses, it is straightforward to claim that the clefts of (214)–(217) contain relative clauses, too, in which case the relative pronoun status of *that* in (214)–(217) is enhanced.

More specifically, since (218)/(219) involve a silent preposition, it is natural to think that (214)–(217) do, too, which amounts to saying that (214) contains two instance of *to* (one of which is silent), and similarly for the other examples. The conclusion that a kind of preposition doubling is at issue in such examples is supported by the existence in some English of:⁷³

⁷³ Obviously more needs to be said about derivations involving preposition-doubling, and the arguably related multiple spelling out of Case in languages like Russian.

(222) It was to her that we were alluding to.

Similarly, some French allows (with pied-piping rather than stranding) sentences like:⁷⁴

(223) C'est à elle à qui nous faisons allusion. ('it is to her to whom we were-making allusion')

with the same preposition appearing twice.

I conclude that the *that* and *que* of clefts are relative pronouns and hence that the 'extra' *que* of the 'doubly-filled Comp' example (205) is also a relative pronoun.⁷⁵

In addition to relatives, interrogatives can also show 'doubly-filled Comps', as again in non-standard French:

(224) A qui que tu as parlé? ('to whom what you have spoken')

I take the preceding discussion to carry over directly, and conclude that the *que* of such interrogatives is a relative pronoun associated with a reduced cleft structure. Baltin (2006) discusses the fact that sluicing can never strand the complementizer in a doubly-filled Comp structure. This now becomes the fact that sluicing can never strand a relative pronoun, as seen in (175)–(177).

19. Conclusion

One answer to the title question was given in section 11. *This* is not a complementizer in part because, unlike *that*, it is necessarily associated with a person element. The rest of the chapter develops a second, more general answer. *This* is not a complementizer and *that* isn't, either. The *that* that introduces sentential complements is really a relative pronoun, and sentential complements are really relative clauses,⁷⁶ in

⁷⁴ Cf. Grevisse (1993, sect. 447, 3°).

⁷⁵ Similarly for the *wo* ('where') of Southern German relatives like (from Bayer (1983, 213)):

i) der Hund der wo gestern d'Katz bissn hod ('the dog that where yesterday the-cat bit has')

as well as for cases (Bayer 1983, 215) in which *wo* appears alone. A plausible conjecture is:

ii) A general use of *wo/where* in relatives is found only in those Germanic languages that have a productive use of *wovon, whereof*, etc.

This relative *wo*, which may be accompanied by a silent P (in which case the expectation arises, thinking of (34), that there will be no parallel relative *da* ('there'),) should be integrated with chapters 5 and 6.

Complementizer doubling of the sort discussed recently by Mascarenhas (2007) must now be interpreted as relative pronoun doubling, linking to the interrogative *wh*-phrase doubling found in some Germanic.

⁷⁶ Cf. Collins (2006) and chapter 9 for the claim that derived nominals are relative clauses, too.

a way that partially recalls Rosenbaum (1967). The *that* of classic relative clauses is a relative pronoun, too, as are comparable elements in other languages. By extension, no determiner-like element that introduces a clause is ever a complementizer in the standard sense of the term.⁷⁷ If sentential complements are relatives, Wh-movement is even more pervasive in syntax than Chomsky (1977) thought.

On the misleading appearance of what look like sentential complements, see also Polinsky (2008).

On the absence of complements to nouns in Malayalam, see Jayaseelan (1988).

⁷⁷ This is in turn probably to be related to determiners' being nominal and to chapter 9's proposal that nouns can never have complements (cf. Hale and Keyser (2002, 250)).

Manzini (forthcoming) also takes such elements not to be complementizers in the classic sense of the term, but in quite a different way from the text proposal.

Toward an Analysis of French Hyper-Complex Inversion (with Jean-Yves Pollock)

1. HCl

Standard French has a root interrogative construction that involves what looks a bit like English subject-aux inversion:¹

- (1) Is he there?
- (2) Est-il là? ('is he there')

In a way related to Pollock's (1989) discussion, the fronted verb in French, as opposed to English, need not be an auxiliary:

- (3) Voit-elle quelqu'un? ('sees she someone')

A second difference between the two languages is that in French yes-no questions the postverbal subject must be a pronominal clitic, as it is in (2) and (3); it cannot be a lexical DP:²

To Memo, whose work and friendship have been of great importance to both of us.

¹ Colloquial French has lost the inversions discussed in this chapter. In what follows, we abbreviate 'standard French' to 'French'.

² French has another, distinct inversion construction informally called 'stylistic inversion' that sometimes (but not in yes-no questions) overlaps with subject clitic inversion—see Kayne and Pollock (2001) and references cited there.

- (4) *Est Jean là? ('is J there')
 (5) *Voit Marie quelqu'un? ('sees M someone')

A third difference is that French allows what Kayne (1972) called 'complex inversion' (henceforth CI), in which a non-dislocated preverbal subject can co-occur with the postverbal pronominal subject:

- (6) Cela est-il vrai? ('that is it true')

In the appropriate register, CI is highly productive. Relevant to this chapter is the fact that CI is compatible with an object clitic (henceforth OCL):

- (7) Cela la gêne-t-il? ('that her bothers it' = 'does that bother her?')

Central to this chapter is an important observation due to Morin (1985), namely that alongside (7) a large number of speakers also accept, with the same interpretation:

- (8) Cela la gêne-t-elle? ('that her bothers she' = 'does that bother her?')

in which the postverbal (nominative) subject clitic (here *elle*) agrees in gender and number with the preverbal (accusative) OCL (here *la*). This contrasts with ordinary CI, as in (7) in which the postverbal subject clitic *il* agrees with the preverbal subject *cela*. We shall use for (8) the term hyper-complex inversion (henceforth HCI), and in this chapter shall provide a first attempt at a theoretically grounded analysis of some of HCI's properties.

2. HCI as clitic doubling

In many ways HCI and CI are very similar,³ so that one can think of HCI as a subcase of CI characterized by the agreement, in HCI, between subject clitic (henceforth SCL) and OCL (and by the non-agreement, in HCI, between SCL and preverbal subject). There are sentences that appear ambiguous between HCI and CI, such as:

- (9) Cela le gêne-t-il?

in which masculine *il* might be agreeing (in gender and number) either with the lexical subject *cela* or with the masculine OCL *le*. To bring out the specific properties of HCI, then, one needs to study sentences in which, as in (8), the lexical subject and the OCL do not match in phi-features.

³ For example, both are restricted to root contexts lacking any complementizer, both are limited to interrogatives and some affective contexts, both have the property that the postverbal pronoun must be a clitic. For additional details on CI, see Kayne (1972) and Pollock (2006).

It should be noted that although the postverbal SCL in HCI/CI can agree with either the OCL (HCI) or with the preverbal subject (CI), it does not have the option of not agreeing at all:⁴

- (10) **Cette table la gêne-t-il?* ('that table her bothers it/him')

Here, both *cette table* and *la* are feminine, while *il* is masculine. In this respect, HCI/CI differs sharply from the closest French counterpart of English *There has arrived a letter*.

- (11) *Il est arrivé une lettre.* ('it is arrived a letter')

In (11) there is an expletive-like SCL *il* that is masculine in gender, despite the fact that *une lettre* is feminine. Agreement between the SCL and its 'associate' (i.e., having feminine *elle* in place of masculine *il*) is impossible:⁵

- (12) **Elle est arrivée une lettre.*

Thinking of Chomsky (1995, 288), we can attribute this lack of agreement to the fact that the expletive-like *il* of (11) has intrinsic masculine gender. In which case we conclude that the postverbal SCL of CI/HCI seen in (7)/(8) is not expletive-like. The alternative that we will adopt is to see CI/HCI as an instance of clitic doubling, i.e., to relate it to the well-known dative clitic doubling found in languages like Spanish. A key difference is that CI/HCI centrally involves not dative clitics but rather nominative ones.

We will adopt the 'complex constituent' approach to clitic doubling proposed in Kayne (1972, sect. 3) for CI and in Uriagereka (1995, 81) for the Spanish type.⁶ This amounts to saying that in a CI example like (7) *cela* and *il* start out within a phrase (a complex DP) that excludes the verb (and the object):

- (13) ...[*cela il*] *gêne la*

In HCI examples like (8), the SCL starts out paired with the OCL, rather than with the lexical subject:

- (14) ...*cela gêne* [*la elle*]

The agreement effect seen in CI/HCI is in this way reduced to agreement (in gender and number) within the complex DP. (In both (7) and (8) the complex DP is split apart in the course of the derivation.)

⁴ As opposed to the non-standard *-ti* mentioned by Morin (1985, 794) and Pollock (2006, section 7.3).

⁵ As opposed to right-dislocation:

i) *Elle est arrivée hier, cette lettre.* ('she/it is arrived yesterday, this letter')

⁶ Cf. also Bianchini, Borgato, and Galassi (1982), Belletti (1999), and, for extensions to wh-doubling, Poletto and Pollock (2004b).

The impossibility of (10), in which the postverbal SCL agrees with nothing, is now excluded as follows. If that SCL is merged within a complex DP containing either *cette table* or *la*, there is a violation of the obligatoriness of DP-internal gender/number agreement. But if that SCL is not thus merged, it has no viable source at all (on the reasonable assumption that it cannot be an expletive of the sort licensed in (11)).

Of interest now is that fact that simple SCL inversion (henceforth SCLI) of the sort seen earlier in (2) and (3) has no HCI-like counterpart. SCLI is compatible with an OCL:

- (15) La gêne-t-il? ('her bothers it/he' = 'does he/it bother her?')

Here *la* and *il* correspond to distinct arguments. If there existed an HCI-like counterpart of (15), then agreement between SCL and OCL would be possible in (15), while keeping the interpretation constant. Such agreement is not, however, possible in sentences like (15). Although the following is well formed, it does not have the interpretation of (15):

- (16) La gêne-t-elle? ('her bothers she/it' = 'does she/it bother her?')

(The (postverbal) subject argument in (15) must be masculine (whether animate or not), while the corresponding argument in (16) must be feminine.)

The reason that (16) cannot be related to (15) in the way that (8) is related to (7) is the following. In (8), *elle* can be taken to be a double of *la* (both then being part of the object argument), since there is still *cela* to fill the role of subject argument, whereas in (16), if we were to take *elle* to be a double of *la*, there would be nothing left to fill the role of subject argument.⁷

The impossibility of (16) in the relevant reading is brought out by a contrast between HCI and right dislocation:

- (17) Ce scandale la gênera-t-elle? ('this scandal her will-bother she' = 'will this scandal bother her?')
 (18) *La gênera-t-elle, ce scandale?⁸

(17) is an example of HCI parallel to (8). (18) is an ill-formed instance of right dislocation corresponding to the well-formed right dislocation in:

⁷ Since French is not a null subject language of the Italian sort. French may allow (cf. Kayne (1972) and Kayne and Pollock (2001)):

i) pro il/elle

but such a pro would have to be linked to the SCL and therefore could not correspond to a separate argument, as would be needed in (16).

The text proposal is in the spirit of Morin (1985, 796).

⁸ Counterparts of both this example and (16) appear to be possible in the North Italian dialect (close to Paduan) discussed by Penello (2007, (11b)). The contrast with French may be related to that dialect's being a partial pro-drop language. See also Roberts (1993) and Pollock (2006) on Valdôtain dialects, and Poletto (2000) on multiple SCLs.

- (19) La gênera-t-il, ce scandale? ('her will-bother it, this scandal' = 'will it bother her, this scandal?')

in which the SCL *il* is paired with the dislocated *ce scandale*. (18) is ill-formed for essentially the same reason as (the relevant interpretation of) (16)—having *elle* instead of *il* amounts to having *elle* merged in the same complex DP as object argument *la*. That causes no problem in (17), where non-dislocated *ce scandale* is available as subject argument, but in (18) there is no available subject argument once *elle* is paired with *la*. The reason is that a right-dislocated constituent cannot directly correspond to any argument and there is no available pronoun in (18) that can (help it to) fill that role, either (just as there wasn't in (16)).

3. Person and -/-

In taking the relation between OCL *la* and SCL *elle* in the HCI example (17) to be one of clitic doubling, we are taking it not to be exactly the same kind of agreement relation as that found between OCLs and past participles in French or Italian, as illustrated in:

- (20) Jean l'a repeinte. (French: 'J it(fem.) has repainted(fem.)')
 (21) Gianni li avrà visti. (Italian: 'G them will-have seen(pl.)')

A clear difference between HCI and past participle agreement involves person. In French and in some Italian a past participle can agree in gender (and number⁹) with a first-or second-person pronoun accusative OCL.¹⁰

- (22) Jean t'a prise par le bras. (French: 'J you(fem.) has taken(fem.) by the arm')
 (23) Gianni mi ha vista ieri. (Italian: 'G me(fem.) has seen(fem.) yesterday')

In contrast, while CI in French can readily have such an OCL:

- (24) Cela te/me gêne-t-il? ('that you/me bothers it' = 'does that bother you/me?')

HCI cannot.¹¹ Even if the OCL in (24) is understood to be feminine, the SCL must remain *il* (pairing with *cela*); this *il* cannot be replaced by feminine *elle* (pairing with *te* or *me*):

- (25) *Cela te/me gêne-t-elle?

⁹ In ordinary French the plural -s on agreeing past participles is only orthographic; in Italian plural agreement is readily audible.

¹⁰ The fact that for some Italian speakers (23) is impossible may be due to their obligatorily taking first and second-person OCLs to be dative, with this in turn related to their Italian having a stronger presence of Spanish-like accusative *a* than the Italian of those who accept (23).

¹¹ As noted by Morin (1985, 795).

This property of HCI is not surprising, insofar as other instances of clitic doubling also strictly prohibit a person clash:

- (26) Je te vois toi/*elle. (French: 'I you see you/her')
 (27) Yo te veo a ti/*ella.¹² (Spanish: 'I you saw to you/her')

This contrast between clitic doubling and past participle agreement can be understood more specifically as follows. In all of (25)–(27) there is a clash between *te/me* and *elle/ella*. This clash is due to the morpheme *-l-* present as part of *elle/ella*. A doubling relation cannot hold of two elements one of which is (non-first/non-second person) *-l-* and the other of which is first or second person. On the other hand, the past participle agreement morphemes *-e/-a* in (22)–(23) contain no *-l-*; consequently there is no person clash.¹³

4. *Voilà*

Our account of the impossibility of HCI in (18) rested, in essence, on the idea that (18) lacked an appropriate non-dislocated subject argument. At first glance this might seem to be in conflict with a point made by Morin (1985, 795) concerning French *voilà*,¹⁴ which occurs in sentences like:

- (28) Voilà Jean. ('see there J' = 'there's J')

and which is similar to (the less usual) *voici*:

- (29) Voici Jean. ('see here J' = 'here's J')

Morin notes that *voilà* (but not *voici*) is compatible with HCI. One of his examples is:

- (30) Ne les voilà-t-elles pas qui courent maintenant? ('neg. them(fem.) *voilà t*
 they(fem.) who run now' = 'isn't that them (who are) running now')

In (30), OCL *les* and SCL *elles* are merged in a complex DP (and are separated in the course of the derivation). Taken together as one argument, they correspond to *Jean*

¹² On Spanish *Nos vió a los lingüistas* ('us (s)he-saw to the linguists' = '(s)he saw us linguists'), with a silent first plural (non-clitic) pronoun, see Torrego (1996) and Ordóñez and Treviño (1999); also chapter 7.

¹³ We leave aside for reasons of space the general question of finite verb agreement, which differs from both past participle agreement and clitic doubling in various ways, while sharing with the former the absence of *-l-*; for some discussion, see Kayne (2003a).

We also note in passing that, if the presence vs. absence of *-l-* is at the heart of (22)–(23) vs. (25)–(27), the possibility arises that past participle agreement should receive a complex DP analysis of the sort proposed for clitic doubling, i.e., that (22)–(23), for example, should be taken to contain the complex DPs [te -e] and [mi -a], respectively (cf. Kayne (1994b)).

¹⁴ Cf. also Kayne (1983a).

in (28). The reason that (30) is well formed and (18) is not is that the verb *gêner* in (18) is a two-argument verb (so a problem arises, as discussed), whereas *voilà* in (30) requires only one true argument (so that problem does not arise for (30)).¹⁵

5. An SCL restriction

In lacking an ordinary subject argument, *voilà* has something in common with a verb like *falloir* ('to be-necessary'):

- (31) Il nous faut une nouvelle voiture. ('it us is-necessary a new car' = 'we need a new car')

They differ in that *falloir* takes an expletive-like preverbal subject clitic *il*,¹⁶ as seen in (31), while *voilà* does not. The compatibility of *voilà* with HCI seen in (30) has no parallel with *falloir*, despite their partial similarity. SCLI is possible in:

- (32) Nous la faut-il? ('us it is-necessary it' = 'do we need it?')

where *la* is an OCL counterpart of *une nouvelle voiture*, as in the simple declarative:

- (33) Il nous la faut.

Yet (33) cannot give rise to HCI:

¹⁵ Morin (1985) argues that *voilà* and *voici* are truly subjectless. Alternatively, (29) has a subject *-ci* ('here') past which verbal *voi-* has moved, and similarly for a subject *là* ('there') in (28). However, the fact that *voici* and *voilà* contrast with respect to HCI might indicate that the subject in at least (30) (and perhaps (28), too) is just *l-*, with *-à* (despite the spelling) being a form of the verb 'have' (in which case we could take the presence of the postverbal SCL with *voilà*, which never allows a preverbal SCL, to be indirectly licensed by verbal *à*). That *voilà* can contain 'have' (cf. Morin's (1985, 810ff.) dialect observations) might then be related to French existentials containing 'have'.

Morin (1985, 797) notes that almost all speakers reject HCI with *falloir* in:

- i) *La (lui) faut-elle absolument? ('it/her to-him/her is-necessary it/she really' = 'does he/she really need it/her?')

This recalls (18), as he in effect notes, and suggests that the impersonal subject of *falloir* might be a quasi-argument rather than an expletive—cf. chapter 6. Alternatively, or in addition, see section 5 just ahead.

Possible to some extent is:

- ii) (?)? La surprendrait-elle que tout soit en ordre? ('her would-surprise she that all is in order' = 'would it surprise her that...?')

in which *que tout soit en ordre* must be counting as subject argument.

¹⁶ This *il* can sometimes fail to appear with *falloir* (cf. Morin (1985, 807)), but probably only in varieties/registers of French that exclude HCI.

- (34) *Il nous la faut-elle?

nor can it to CI:

- (35) *Il nous la faut-il?

As it happens, this is not specific to *falloir*, or even to impersonal verbs more generally, but is rather a property of all preverbal SCLs, which are never compatible with CI/HCI¹⁷. Thus alongside:

- (36) Ils la voient. ('they her see')

with SCL *ils*, French allows SCLI:

- (37) La voient-ils?

but neither CI:

- (38) *Ils la voient-ils?

nor HCI:

- (39) *Ils la voient-elle?

6. The -t- morpheme

Informally speaking, the sharp deviance of (38) and (39) can be thought of as reflecting the fact that French cannot license two SCLs in one simple sentence, as opposed to French being able, in CI/HCI, to license one (postverbal) SCL and one (preverbal)

¹⁷ In contrast, the distinct popular French *-ti* mentioned by Morin (1985, 794) and Pollock (2006, section 7.3) is compatible with preverbal subject clitics.

There is also a contrast here between French and the dialect studied by Penello (2007)—cf. note 8. Demonstrative *ça* is not a SCL insofar as it is compatible with HCI and CI:

- i) Ça la gêne-t-elle? ('that her bothers she' = 'does that bother her?')
- ii) Ça la gêne-t-il?

Ça (as opposed to demonstrative *ce*) also differs from SCLs in never undergoing simple SCL-inversion of the (37)/(2)/(3)-type:

- iii) Est-ce vrai? ('is that true?')
- iv) *Est-ça vrai?

and in sometimes being able to be the subject of a gerund:

- v) (?)Ça étant dit, je pense que... ('that being said, I think that...')
- vi) *Il étant heureux,... ('he being happy...')

lexical subject DP at the same time. If we set aside left- and right-dislocation, however, we can see that such doubling licensing is possible only if the SCL is postverbal. This is shown using CI in:

(40) Cela est-il vrai? ('that is it true')

(41) *Cela il est vrai.

and with HCI in:

(42) Cela la gêne-t-elle? ('that her bothers *t* she' = 'does that bother her?')

(43) *Cela elle la gêne.

We can take (41) and (43) to be excluded by virtue of the fact that preverbal SCLs and preverbal lexical subject DPs are, in French,¹⁸ Case-licensed in the same way by a functional head that can license only one of them in a given simple sentence.

If so, then postverbal SCLs must have access to an extra licenser, one that is not available to preverbal subjects of any type. In the spirit (though not the letter) of Pollock (2006), we shall claim that it is the *-t-* morpheme of CI and HCI (seen clearly in (42)) that plays a key role in licensing the postverbal subject clitic in those constructions.

This 'extra' *-t-* is not clearly represented in the orthography in cases like (40) that contain a verb whose third-person form otherwise ends in *-t*. But it is in (42) and in cases such as:

(44) Marie a-t-elle une voiture? ('M has *t* she a car')

as compared with the corresponding non-inversion examples:

(45) Marie a (*-t) une voiture.

(46) Elle a (*-t) une voiture.

In (44) (and (42) and (40)), the *t* must be pronounced; in (45)/(46) there cannot be a pronounced *t*.

When the verb has an orthographic *-t* as does *est* in (40), then that *-t* can (sometimes) be pronounced if followed by a word beginning with a vowel. Thus the following, in which the verb-final *-t* can be pronounced, contrast minimally with (45)/(46):

(47) Ceci est une voiture. ('this is a car')

(48) Elle parlait à sa soeur. ('she spoke to her sister')

Morin (1985, note 26) takes *ça* to be a clitic; it may instead be that *ça* (or at least some instances of it) is something like a weak pronoun in the sense of (a more refined version of) Cardinaletti and Starke's (1999) proposal.

¹⁸ As opposed to various dialects in northern France and in northern Italy; on the latter, see Poletto (2000).

- (49) Elles entendent une symphonie. ('they hear a symphony')

French is thus 'irregular' in the following way. Some finite verb forms, such as those in (47)–(49), end in a third-person agreement *-t* morpheme.¹⁹ Others, as in (45)/(46), normally do not, but are nonetheless followed by that *-t-* morpheme in root interrogative contexts in which the finite verb is itself followed by a SCL, as in (44).²⁰

The absence of any *-t* in (45)/(46) means that ordinary subject Case-licensing, whether of a preverbal lexical DP, as in (45), or of a preverbal SCL, as in (46), cannot in general depend on the presence of (overt) *-t-*. On the other hand, there is invariably a pronounced *-t-* immediately preceding a postverbal third-person SCL, as in (44). As stated above, this makes it plausible to take the licensing of a third-person postverbal SCL to depend crucially on the presence of this *-t-*.²¹

7. Remnant movement and *-t-*

Thinking of the limitation of this *-t-* to root contexts, of a partial similarity to Germanic complementizer agreement,²² and of Shlonsky (1994), we take *-t-* to be a morpheme located above IP, somewhere in the Comp area, in Rizzi's (1997) sense. It may be an independent Agr head in the spirit of Pollock (1989), in which case it must require the nearby presence of a root interrogative head, or it may reflect the spelling out of

¹⁹ In at least one dialect in France, this third-person *-t* has been generalized—see Morin (1985, note 30).

²⁰ The limitation to root contexts is sharp, but (to an extent as in English) there are some non-interrogative root contexts that allow *-t-* + SCL, e.g., with CI and HCI:

- i) Peut-être cela la gêne-t-il. ('maybe that her bothers it')
- ii) Peut-être cela la gêne-t-elle.

The fact that the *-t-* in question cannot precede a lexical DP:

- iii) Où va-t-il? ('where goes *t* he')
- iv) Où va (*-t-) Anne?

(with (iv) an instance of stylistic inversion—see note 2) can be thought of in terms of a requirement that *-t-* have something to license the nominative Case of; alternatively (or in addition), there might be a link to languages like Irish, in which agreement with a postverbal lexical subject is excluded.

The fact that (v) contrasts with (iv) in allowing *-t* to be pronounced:

- v) Que fait Anne? ('what does A')

reinforces the idea that there are two related but non-identical third-person *t*-morphemes.

²¹ A more syntax-friendly French orthography would arguably write (40) as:

- (i) Cela est-t-il vrai?

(in which only one *t* would be pronounced, in a way consistent with general properties of French phonology). In other words, we take this 'extra' *-t-* to be present in CI/HCI whether the verb has a *-t* of its own or not.

²² For recent discussion, see Gruber (2008). Why Germanic 'complementizer agreement' is (apparently) limited to the 'OV' Germanic languages needs to be accounted for.

(phi-features on) a root interrogative head.²³ Of importance to the present chapter are two properties of *-t-*. The first, already discussed to some extent, is that it participates in the Case-licensing of a (third-person) SCL found in the projection just below it. In the CI example (44) *-t-* participates in the Case-licensing of *elle*, and similarly in the HCI example (42).

The second important property of this interrogative *-t-* is that it attracts to its Spec a phrase containing the lexical subject plus the finite verb (along with any intervening OCLs). In (42), for example, *-t-* attracts the phrase '[*cela la gêne*]', as indicated in the following sketchy derivation (traces/copies not included):²⁴

- (50) *cela gêne* [*la elle*] → OCL movement
cela *la_i gêne* [*t_i elle*] → raising of remnant containing SCL
 [*t_i elle*]_j *cela la gêne t_j* → merger of *-t-*
t [*t_i elle*]_j *cela la gêne t_j* → remnant IP movement
 [*cela la gêne t_j*]_k *t* [*t_i elle*]_j *t_k*

with the last step involving remnant IP movement, essentially as in Pollock (2006). (In (42)/(50), *-t-* licenses the morphologically nominative *elle* while the finite tense Case-marks *cela* (but without being able to license a morphologically nominative subject)—see section 10 below.)

8. Missing persons

Of interest is a restriction on HCI not yet mentioned, namely that HCI is limited to third-person SCLs. Alongside the well-formed (42)/(50), repeated here:

- (51) *Cela la gêne-t-elle?* ('that her bothers *t* she' = 'does that bother her?')

there is no second person:

- (52) **Cela te gêne-(t)-tu?* ('that you bothers *t* you')

Similarly, alongside the well-formed HCI example:

- (53) *Cela l'aurait-elle gênée?* ('that her would-have she bothered' = 'would that have bothered her?')

there is no:²⁵

²³ For discussion, see Pollock (2006).

²⁴ Well-formed sentences with *-t-* have no counterpart with zero in place of *-t-*:

- (i) *Cela a*(-t)-il été important?* ('that has *t* it been important' = 'has that been important?')

²⁵ We have switched to a conditional tense because of restrictions on postverbal *je* discussed by Pollock (2006, note 43).

- (54) *Cela m'aurait-je gêné? ('that me would-have I bothered')

A further question is whether CI is possible when both the SCL and the preverbal subject are first or second person. At first glance, there do seem to be well-formed CI sentences that fit this description, e.g.:

- (55) Jean et moi avons-nous vu ce film? ('J and me have we seen that film')

On the other hand, Morin (1979) noted the contrast:

- (56) Pourquoi lui seul a-t-il été prévenu? ('why him alone has *t* he been told')
 (57) *Pourquoi toi seul as-tu été prévenu? ('why you alone have *t* you been told')

and Pollock (2006):

- (58) Quel livre lui a-t-il apporté? ('which book him has *t* he brought' = 'which book did HE bring?')
 (59) *Quel livre moi ai-je apporté? ('which book me have *t* I brought')

We tentatively interpret this to mean that both CI (as in (57) and (59)) and HCI (as in (52) and (54)) are impossible with a first-or second-person SCL.²⁶

If CI and HCI are truly not possible in the first or second person, they contrast with first-and second-person examples of SCLI (in which the SCL is not doubling anything overt) as in:

- (60) Aurais-je été prévenu? ('would-have I been told')
 (61) As-tu été prévenu? ('have you been told')
 (62) Avons-nous été prévenus? ('have we...')
 (63) Avez-vous été prévenu(s)? ('have you...')

In the first and second plural, the facts are the same:

- i) *Cela nous gêne-nous?
 ii) *Cela vous gêne-vous?

These HCI examples must be distinguished from right-dislocation (with its distinctive intonation):

- iii) Cela nous gêne, nous?
 iv) Cela vous gêne, vous?

With a (silent) third-person *-t-*, (52) and (54) might be excluded via a person clash, with third-person *-t-* clashing in person features with the SCLs *tu* and *je*. On the other hand, with a first- or second-person (silent) counterpart of *-t-*, (52) and (54) would involve no clash with the SCL.

²⁶ In which case (55) must be an instance of (a certain form of) left dislocation, as in:

- i) Je me demande ce que Marie et toi vous lui avez dit pour qu'il se fache à ce point-là.
 ('I me ask that which M and you you him have told for...' = 'I wonder what M and you told him for...')

This suggests that CI and HCI are excluded in the first and second person precisely because the type of overt doubling that plays a central role in CI/HCI is incompatible with first and second person. The reason for that may lie in the complex DP analysis that we have taken to underlie such doubling, insofar as third-person SCLs resemble definite articles (they share the *-l-* morpheme), while first- and second-person SCLs do not. If, more specifically, first- and second-person SCLs (as opposed to third-person SCLs) are not Ds,²⁷ then they arguably may not appear at all in the complex DP structure that underlies CI/HCI doubling.²⁸

French has a subject clitic *on* that takes third-person singular verb agreement and that has a range of interpretations that in English would (approximately) match *one*, impersonal *they* and *we*. In the *we* interpretation, *on* can co-occur with *nous* (cf. chapter 7):

- (64) Nous, on va à Paris. ('us *on* go to P' = 'we're going to P')
 (65) On va à Paris, nous.

Yet alongside the CI example:

- (66) Cela nous gêne-t-il? ('that us bothers it' = 'does that bother us?')

there is no HCI-like:

- (67) *Cela nous gêne-t-on?

despite the fact that *on* is compatible with SCLI:

- (68) A-t-on tous fait la même erreur? ('has *on* all made the same mistake' = 'have we all ...?')

²⁷ Cf. Jones (1993, sects. 2.2.6, 5.1) and Bartos (2001).

²⁸ First- and second-person object clitic doubling, as in:

- i) Jean m'a vu moi. (French: 'J me has seen me')
 ii) Juan me vió a mí. (Spanish: 'J me saw to me')

must then have a different origin, perhaps a bisentential one:

- iii) J m'a vu [AND] A VU moi.

thinking in part of:

- iv) He's real smart, John is.

on which, cf. Kayne (1994a, 78), and similarly for the kind of doubling (cf. Ronat (1979)) found in:

- v) Je le ferai moi. ('I it will-do me')

The exclusion of first- and second-person doubling as in the text must not extend to the wh-doubling studied by Poletto and Pollock (2004b).

A plausible hypothesis is that (67) is excluded for the same reason as (52) and (54), i.e., that *on* is not a D. Put another way, *on* is more closely related to the first- and second-person SCLs than to the third-person SCLs (despite sharing verb agreement with the latter). More precisely, *on* is the nominative counterpart of object clitic *se* (cf. Togeby (1982, 428)), as suggested also by the parallelism between the range of interpretations of *on* and those of the Italian *si* discussed by Cinque (1988b), as well as by the strong similarity internal to French between the following ‘middle’ example:

(69) Cela se lit facilement. (‘this book *se* reads easily’)

and:

(70) On lit cela facilement.

Of note is the fact that middles are compatible with CI:

(71) Cela se lit-il facilement?

but not with HCI:

(72) *Cela se lit-on facilement?

i.e., doubling of *se* by *on* is prohibited, despite *on* being the nominative counterpart of *se*. The reason is, as with (52), (54), and (67), that HCI is possible only with D-type SCLs and that class excludes first-person *je*, second-person *tu*, and what we might call zero person *on*.²⁹

9. The demonstrative SCL *ce*

The notion of D-type SCL here covers those SCLs (*il*, *elle*, *ils*, *elles*) that in French share the morpheme *-l-* with definite articles. In all likelihood, the SCL *ce* seen in SCLI in:

(73) Est-ce vrai? (‘is that true’)

does not belong to the D-type class, to judge by its incompatibility, for most speakers, with CI:³⁰

(74) Depuis quand cela est-il/*ce connu? (‘since when that is it/that known’ = ‘since when has that been known?’)

²⁹ Cf. Kayne (2003a). The fact that *on* requires the same agreement on verbs as ordinary third-person singular subjects needs to be elucidated.

³⁰ Those who accept this example may be doing so as an instance of dislocation.

and by its sharp exclusion from HCI, as we can illustrate starting with:

- (75) Cet article est court. ('this article is short')

for which French has a VP-deletion-like use of object clitic *le*:³¹

- (76) Cet article l'est.

that has something in common with (dialectal) English:

- (77) This article is that.

where *that* is close to French *le*. Now (76) has a CI counterpart:

- (78) Cet article l'est-il?

but no HCI counterpart (in which SCL *ce*, which is often a good translation of *that*) would double *le*:

- (79) *Cet article l'est-ce?

That *ce* is not a D-type SCL is in all likelihood due to its not being a definite article, but rather a demonstrative, combined with Giusti's (1997) and Leu's (2007; 2008b) proposals that demonstratives are phrasal (as opposed to definite articles, which are not).

10. A link to gerunds and to 'stylistic inversion'

Returning to the question of (38) and (39), i.e., to the question why neither CI nor HCI allows the preverbal subject to be a SCL, we see two possibilities. The first is to say that the merger of *-t-* in (50) is not external merge, but internal merge, i.e., to say that *-t-* reaches its above-IP position via movement from the usual Agr-S position within IP. If so, then it might be that *-t-* is limited to Case-licensing just one element. If it licenses the postverbal SCL, then it cannot license a preverbal one, so (38) and (39) are not possible. This approach would require saying that lexical DP subjects, as in (44), have another licensing option that is not open to SCLs, and would lead to a link with gerunds:

- (80) Jean ayant téléphoné, ... ('J having telephoned, ...')

- (81) *Il ayant téléphoné, ... ('he ...')

³¹ Cf. Sportiche (1995a).

which disallow SCLs as subjects, arguably because SCLs invariably require agreement, which is lacking in gerunds. We could then say that the preverbal lexical subject in CI/HCI is licensed in the same way (via Tense, as in Pollock (2006)) as the preverbal lexical subject in gerunds.

A second way of thinking about the incompatibility of preverbal SCLs with CI and HCI would be to establish a link to the following stylistic inversion contrast discussed by Kayne and Pollock (2001):

(82) un livre que lit Jean ('a book that reads J' = 'a book that J is reading')

(83) *un livre que lit-il ('...he')

in terms of the idea that the lexical subject that ends up postverbal in such cases must have been topicalized at an intermediate stage of the derivation.³² with topicalization not being available to SCLs. From that perspective, one could say that in both CI and HCI (and perhaps in French gerunds, too) topicalization of the preverbal subject must likewise take place (within the remnant-moved constituent in (50)),³³ in which case the non-topicalizable SCLs would be unable to appear preverbally either in CI or in HCI (or in gerunds).

11. Conclusion

French hyper-complex inversion (HCI), like its better-known counterpart complex inversion (CI), is an instance of clitic doubling that lends itself to a complex DP analysis. Such an analysis, combined with an analysis of French interrogative *-t-*, yields an account of a number of salient properties of both HCI and CI.³⁴ Whether an equally satisfactory account of HCI/CI could be achieved via Chomsky's (2001) Agree needs to be looked into, as does the converse question whether a complex DP analysis of 'ordinary' verbal agreement could replace one based on Agree.

³² The topicalization in question must be compatible with:

- i) un enfant à qui a dû faire peur quelque chose ('a child to whom has must make fear some thing' = 'a child that something must have frightened')

despite the counter-indefiniteness effect examples discussed by Kayne and Pollock (2001). Cf. also Pollock (2006, note 26) on sentences with parentheticals following indefinite subjects.

³³ Possibly there is a link here to the fact that North Italian dialects (apart from the Val d'Aosta ones discussed in Roberts (1993) and Pollock (2006)) generally lack CI and HCI with a lexical subject (and may lack 'stylistic inversion').

On the fact that HCI allows:

- i) Quelque chose la gêne-t-elle? ('some thing her bothers *t* she')

with a subject that is otherwise not readily topicalizable, see the previous note; in both HCI/CI and stylistic inversion, the heart of the matter is not the term 'topicalization', but the idea that SCLs cannot move as high as lexical DPs.

³⁴ Additional salient properties, set aside here for reasons of space, will be addressed in a future paper on HCI/CI that we hope to complete soon.

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INDEX

Note: The spelling of ordinary words with capitals indicates non-pronunciation

Language abbreviations:

Bel	Bellinzonese
Cat	Catalan
Du	Dutch
Eng	English
Fr	French
It	Italian
Ger	German
Pad	Paduan
Ro	Romanian
Sard	Sardinian
Sp	Spanish
Swiss Ger	Swiss German

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