

# COMPLEMENTATION IN ITALIAN: PHONETICALLY NULL VS. TOTALLY ABSENT COMPLEMENTS

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Italian sentences which appear to lack propositional arguments of verbs are shown to be base-generated without these verb complements. This analysis accounts for a wide range of syntactic and semantic data, including the fact that movement rules never appear to have operated out of missing complements. The possibility for a given lexical item to lack such a complement is arbitrary (i.e., it is a subcategorization fact); the so-called missing complement need not be associated with a specific interpretation. The polarity, tense, and person of a verb affect the possibility of its allowing a missing complement.\*

## INTRODUCTION

1. Italian has both finite and non-finite propositional arguments of verbs. In 1a-d, I give some examples of finite complements; in 2a-d, of non-finite ones:

- (1) a. *Daria pensa che non venga nessuno.*  
'Daria thinks that no one is coming.'
- b. *Sembra che Emilia venga.*  
'It seems that Emilia is coming.'
- c. *Silvia ha detto che verrà di sicuro.*  
'Silvia said that she will come for sure.'
- d. *È chiaro che verrà di sicuro.*  
'It's clear that she'll come for sure.'
- (2) a. *Le ragazze vogliono invitare Gennaro.*  
'The girls want to invite Gennaro.'
- b. *Ilario persuade Gennaro a venire.*  
'Ilario persuaded Gennaro to come.'
- c. *Stefania non sembra capire.*  
'Stefania doesn't seem to understand.'
- d. *Carlo è facile da capire.*  
'Carlo is easy to understand.'

Ex. 1a has a matrix two-place verb with a subjunctive complement; 1b, a matrix one-place verb with a subjunctive complement; 1c, a matrix two-place verb with an indicative complement; and 1d, a matrix one-place verb with an in-

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dicative complement. In 2a, we find an 'Equi' verb with subject control; in 2b, an 'Equi' verb with object control; in 2c, a 'Raising' verb; and in 2d, a 'Tough Movement' verb.

The first six types of propositional arguments seen in 1-2 may be omitted:<sup>1</sup>

- (3) a. *Credi che Enzo l'abbia trovato? Sì, credo —.*  
'Do you believe that Enzo has found it? Yes, I believe (so).'  
b. *Verrà Alfredo? No, non mi pare —.*  
'Will Alfredo come? No, it doesn't seem (so) to me.'  
c. *Ha promesso Silvia che il suo fratellino verrebbe? Sì, ha promesso —.*  
'Did Silvia promise that her little brother would come? Yes, she promised.'  
d. *È chiaro che verranno? Sì, sì, è chiaro —.*  
'Is it clear that they'll come? Yes, yes, it's clear.'
- (4) a. *Marina non vuole invitare Gennaro, ma io voglio —.*  
'Marina doesn't want to invite Gennaro, but I want (to).'  
b. *Non ho ancora persuaso Gennaro a venire, ma ti assicuro, lo persuaderò —.*  
'I haven't yet persuaded Gennaro to come, but I assure you, I'll persuade him.'

The types of propositional arguments exemplified in 2c-d cannot be omitted. Furthermore, the omission of complements of the first six types is not free.

We should mention at least two analyses of such sentences which would treat them as elliptical. One analysis would account for the omissions in 3-4 by a deletion rule. Thus the response in 3a would be derived from 5:<sup>2</sup>

- (5) *Sì, credo che Enzo l'abbia trovato.*

This analysis is assumed for Italian in Burzio 1981 and discussed for English in Morgan 1973.

A second analysis would derive 3-4 from a source with a deep empty node (i.e. present in the deep structure after lexical insertion); this functions as complement, and is interpreted appropriately. With this analysis, the deep and surface structure of 3a would be as in 6, where e represents the lexically empty

<sup>1</sup> In 3-4, the point of interest is that the responses are acceptable and appropriate. I am not claiming that it is necessary for the relevant verbs to be understood in precisely the same way in the question as in the answer. Pertinent remarks on interpretation are found in §2 below.

<sup>2</sup> Alternatively, one might derive 3a by way of deletion from (a), below, with a pro-form complement instead of a full complement:

(a) *Sì, credo di sì.*

But not all instances of missing complements have corresponding pro-form complements:

(b) *\*Voglio di sì.* (cf. 4a)

Thus, to require the deletion rule to operate only on a pro-form source is immediately problematic. Furthermore, the analysis which derives 3a from (a) is open both to some of the criticisms which can be leveled against the deletion analysis presented in the text, and to some of the criticisms which can be leveled against the interpretive analysis there. For these reasons I will not discuss such an analysis, but will leave its destruction to the reader.

node:

(6) *Si, credo* [e].

Such an analysis is presented for English by Hankamer & Sag 1976, who call the phenomenon Null Complement Anaphora (NCA). Relevant discussion is also found in Freidin 1970.

I argue here for a third analysis: exx. 3–4 are base-generated, with no complements of the matrix verb, null or otherwise, at any level in the derivation. These give simple intransitive sentences. This analysis is identical to that for English given by Grimshaw 1979 (§3) with regard to the syntax. However, it differs from hers with regard to semantics. The base analysis here was also suggested for English, without supporting arguments, by Williams 1977 (fn. 6), and was argued for English by Napoli 1983a. Some of the arguments for English against non-base analyses of this phenomenon are shown here to hold for Italian as well. Where arguments for English do not hold for Italian, the reason is a lack of relevant data, rather than the presence of problematic data.<sup>3</sup> Several additional arguments based solely on Italian data are also offered here.

In the arguments below I will make the reasonable assumption that the null anaphor complements of deep structures and surface structures like 6 are to be interpreted in the same way as other complements. (In fact, we'd expect them to be interpreted like other anaphoric complements, at least in some

<sup>3</sup> The phenomena which are used to argue for base generation in English, but are not relevant in Italian, include the following:

(a) Parenthetical tags, as in *He's coming, I think*. In Italian, these tags need not match the polarity of the S's to which they serve as tags in the negative:

*Non viene, (non) credo* 'He's not coming, I (don't) think.'

(b) The Backwards Anaphora Constraint. Italian pro-sentences do not appear to obey the BAC—although, since the pro-sentence in the example below commands, but does not c-command, the co-indexed R expression, we do not have a violation of Part C of Binding Theory:

*La Mamma non lo sa, ma sono io che ho rubato i biscotti.*

'Mamma doesn't know it, but it's me who stole the cookies.'

(In fact, the BAC is also violated in English in this example, calling into question the argument based on the BAC for English.)

This is not an isolated instance. The BAC is not observed by even such classic rules as Gapping, for at least some speakers (including Giulio Lepschy and most of my consultants):

Q. *Chi ha comprato la frutta?* 'Who bought the fruit?'

A. *Giorgio le mele, e Carlina ha comprato l'uva.*

'George the apples, and Carlina bought the grapes.'

Sentences with missing complements also violate the BAC:

*Gianni ha promesso, anche se ancora io mi preoccupo se viene o no.*

'Gianni promised, even if I still worry whether he's coming or not.'

However, since the violation of the BAC is general for pro-sentences and pro-predicates, no argument can be based on this fact.

(c) Any words. Italian does not have a fully productive distinction parallel to Eng. *some/any* (although it does have a limited parallel, as in *qualcuno/alcuno*); thus no argument can be made.

(d) Concealed questions. I have found no Italian verb that can take an embedded question, but not a simple NP object (i.e., there seems to be no verb that patterns like Eng. *inquire*). Thus no argument can be made based on concealed questions (as in Grimshaw, §5).

theories of anaphora.) Any alternative to this assumption is unreasonable. That is, if we claim that the null anaphor has some unique interpretation which makes it contrast (in whatever ways arise) with all other complements, an already abstract syntactic entity is given an equally abstract semantic entity; thus we protect this analysis from any possible objections based on interpretation. But an analysis that is protected from any such objection is untestable from a semantic point of view; and an analysis which is untestable is a non-analysis.

Our three possible analyses can be called DEL (for Deletion), NCA, and BASE (for Base Generated Analysis). The phenomenon to be analysed will be termed 'missing complement sentences'. The arguments below assume a theoretical framework which allows deletion rules, as well as lexically empty nodes in the base which are later semantically interpreted, as in (R)EST and GB. With this approach, the pre-eminence of BASE is not predetermined by the choice of theoretical frameworks; rather, it is called for by the nature of the linguistic phenomenon being studied.

The arguments below further assume a theoretical framework in which semantic interpretation operates relative to a structure before any deletion rules have applied—again, as in (R)EST and GB. This means that any semantic rules will see the structure proposed by DEL as distinct from that proposed by BASE. Also, syntactic rules which apply before deletion rules (i.e. the transformations of core grammar) will see these two structures as distinct. Rules which apply after deletion rules will see these two structures as distinct only if the output of deletion is an empty node which remains in the tree as a syntactic entity (and which may or may not be co-indexed with the trigger of the deletion, if such a trigger exists). Note that assuming this framework forces us to see DEL and BASE as distinct analyses. If, instead, we chose a framework in which deletion rules could precede both semantic interpretation rules and at least some of the transformational rules, then we could simply allow DEL to apply before whatever semantic or syntactic rule we were looking at, and thus obliterate any difference (predictive or explanatory) between DEL and BASE. Thus the framework assumed here is the only interesting one with regard to discussing DEL, NCA, and BASE.

In §2, below, I discuss the explanatory value of BASE in comparison with DEL and NCA. In §3, I conclude with a brief discussion of the theoretical implications of this study.

#### EXPLANATORY VALUE OF BASE

**2.1. LEXICAL VARIATION.** This argument is found both in Grimshaw and in Napoli 1983a; the latter paper attributes it to Edwin Williams (p.c., 1979), who credits it to Ken Wexler (p.c.). Some verbs allow their complements to be missing; but others, which otherwise occur in the same syntactic structures, do not:

- (7) *Voglio vederla, sì, sì, voglio \_\_\_\_.* (cf. *Voglio vederla.*)

'I want to see her, oh, yes, I want (to).'

*Voglio vederla, sì, sì, non vedo l'ora \_\_\_\_.* (cf. *Non vedo l'ora di vederla.*)

'I want to see her, oh, yes, I can't wait (to).'

(8) \**Voglio vederla, sì, sì, bramo* \_\_\_\_\_. (cf. *Bramo vederla*.)

'I want to see her, oh yes, I'm burning (to).'

\**Voglio vederla, sì, sì, desidero* \_\_\_\_\_. (cf. *Desidero vederla*.)

'I want to see her, oh, yes, I desire (to).'

With BASE, this variation can be attributed to differences in strict subcategorization. DEL, by contrast, would call for lexical governance—a mechanism which, some have argued, should not be available to syntactic and deletion rules (cf. Bresnan 1972, Napoli 1981, and Herschensohn 1982). NCA is even more problematic: it would call for a base in which predicates like those of 7 allow a null or full complement, but those of 8 allow only full complements. Since null and full complements are to be interpreted in the same way (cf. §1, above), no explanation based on semantics is possible. This difference in types of complements is lexically idiosyncratic, yet no independently needed mechanism exists in the base to handle it. BASE is the only analysis, then, which is capable of accounting for the data with an independently needed mechanism (i.e. strict subcategorization).

2.2. MOVEMENT RULES never appear to operate out of missing complements. This fact is predicted by BASE, but it presents various problems for DEL. It does not present problems for the version of NCA outlined in §1, although it would be problematical for an NCA analysis which had an analysable null complement (along the lines of Wasow's 1972 expansion hypothesis). Let me discuss three of these putative movement rules.<sup>4</sup>

<sup>4</sup> One might at first assume, on the basis of data like (a) below, that so-called Clitic Climbing sentences offer a fourth example for this section:

(a) Q. *{Devil/Puoi} farmi arrabbiare?* 'Must/Can you make me get angry?'

A. *No, non ti {devo/posso} far arrabbiare* (or: *No, non {devo/posso} farti arrabbiare*.)

'No, I {don't have to / can't} make you get angry.'

\**No, non ti {devo/posso}*.

*No, non {devo/posso}*.

'No, I {don't have to / can't}.'

Clearly the facts above are predicted by BASE (outlined below), since the second answer could never be generated. However, DEL (also outlined below) is not necessarily at a disadvantage here. We can just say that DEL's structural description is not met after Restructuring (the rule responsible for the effect known as Clitic Climbing, according to Rizzi 1976). Indeed, we must say this, for reasons external to the problems of clitic placement, since Restructuring in general disallows missing complements:

(b) Q. *Hai dovuto studiare?* 'Did you have to study?'

A. *Sì, ho dovuto* 'Yes, I had to.'

(c) Q. *Sei dovuto venire alla spiaggia?* 'Did you have to come to the beach?'

A. \**Sì, sono dovuto*.

(Cf. *Sì, sono dovuto venirci* 'Yes, I had to come here.')

In (b), we do not find Restructuring, and a missing complement is accepted. In (c), we find Restructuring (witness the auxiliary *essere*), and a missing complement is unacceptable. Thus Clitic Climbing does not, after all, add any evidence for BASE over DEL.

Likewise, one might assume, on the basis of data like the following, that causatives offer a fifth example for this section:

(d) *L'hai fatta andare?* 'Did you make her go?'

\**Sì, l'ho fatta* 'Yes, I made her.'

\**No, non l'ho fatta* 'No, I didn't make her.' (Continue overleaf.)

2.2.1. RAISING INTO SUBJECT POSITION. Sentences which have undergone Raising into Subject Position (an instance of 'Move  $\alpha$ ') never have corresponding sentences which differ from them only by a missing complement. Thus 10a-b are impossible:

- (9) *Sembrano capire questi ragazzi?*  
 'Do these boys seem to understand?'  
 a. *Sì, sembrano capire* 'Yes, they seem to understand.'  
 b. *No, non sembrano capire* 'No, they don't seem to understand.'
- (10) *Sembrano capire questi ragazzi?*  
 a. \**Sì, sembrano.*  
 b. \**No, non sembrano.*

BASE gives a satisfying explanation. Since no underlying complement appears in 10a-b (null or otherwise), it is impossible to raise out of this non-existent complement. Thus 10a-b will never be generated.<sup>5</sup>

The problems for DEL, however, are significant. With DEL we must block the application of deletion from 10a-b, but in such a way as not to block its application in 3-4. The only structural difference which sets 10 aside is that the subject of the infinitival here is TRACE rather than PRO. Why DEL should require PRO and disallow TRACE in its structural description is unclear. Surely DEL operates on a propositional complement in its entirety, and thus the internal structure of that complement should not be expected to affect the application of the rule.

2.2.2. TOUGH MOVEMENT. Sentences which involve 'Tough Movement' never have corresponding sentences which differ from them only by a missing complement. Thus 12a-b do not have a meaning similar to 11a-b:

- (11) *Puoi seguire quei ladri?*  
 'Can you follow those thieves?'  
 a. *Sì, sì, sono facili da seguire* 'Yes, yes, they are easy to follow.'  
 b. *No, non sono facili da seguire* 'No, no, they aren't easy to follow.'
- (12) *Puoi seguire quei ladri?*  
 a. \**Sì, sì, sono facili* 'Yes, yes, they are easy.'  
 b. \**No, non sono facili* 'No, they aren't easy.'

BASE could explain the impossibility of the clitic (the *l'*) with a missing complement in the answers, since there is no complement for that clitic to have moved out of. But as with the Clitic Climbing sentences above, one could merely claim that DEL's structural description is not met after *Fare Attraction*—the Italian counterpart to Kayne's (1975) *Faire Attraction*—since causatives in general disallow missing complements:

- (e) *Hai fatto andare Carlina?* 'Did you make Carlina go?'  
 \**Sì, ho fatto* 'Yes, I made.'  
 \**No, non ho fatto* 'No, I didn't make.'

Thus causatives do not, after all, offer crucial evidence for determining the proper analysis of missing complement S's.

Note that, with BASE, the data here on both Clitic Climbing sentences and causatives are perfectly consistent and expected.

<sup>5</sup> An analogous argument could be made for English, although I have found none in the literature.

Exx. 12a-b are grammatical for many speakers in this context, but not with the intended meaning. Instead, they mean that the robbers are easily contented (or not), or of an easy-going personality (or not). That is, *facile* in 12a-b has a meaning similar to *easy* in *John's an easy guy*.

The problems here for DEL are, *mutatis mutandis*, the same as in §2.2.1. The solution with BASE is also similar, if we assume that 11a-b involve movement from object position of the lower clause to subject position of the higher clause. That is, since there is no lower clause for an object to move out of in 12a-b, these sentences will never be generated. If, instead, we assume that 11a-b involve deletion of an object in the lower clause under identity with a subject in the higher clause (as in Fiengo & Lasnik 1974), then there is no lower clause whose object can be deleted in 12a-b, so they are not interpretable as 'Tough Movement' structures.

2.2.3. RELATIVE CLAUSES. Relatives in which the 'gap' in the relative clause corresponds to a direct object or a subject of that clause can be introduced by *che* 'that' or by a form of the relative pronoun *il quale* 'who'. Only the *che* relative can exhibit missing complement (see Figure 1, overleaf):<sup>6</sup>

(13) a. *Mariella ha sposato l'uomo {che / il quale} credevi che sposasse.*  
'Mariella married the man {that/who} you believed she would marry.'

b. *L'uomo {che / il quale} credevi che vincesse ha vinto.*  
'The man {that/who} you believed would win has won.'

(14) a. *Mariella ha sposato l'uomo {che / \*il quale} credevi.*  
'Mariella married the man {that/\*who} you believed.'

<sup>6</sup> Many speakers of Italian reject *il quale* when it corresponds to a direct object; for them, (13-14)a are unacceptable with *il quale*. But other speakers accept *il quale* when it corresponds to a direct object:

(a) *Mariella ha sposato l'uomo il quale conoscevo.*  
'Mariella married the man whom I knew.'

I do not know whether this difference is regional. Among my consultants who accept (a) are people from Venezia, Verona, Genova, Milano, Treviso, and Roma. Rita Manzini rejects (a), and reports that it is rejected by 'all the speakers of Italian I know to hold opinions on the subject'. Clearly, for speakers who reject (a), the discussion of exx. 13-14 is not relevant to choosing the proper analysis of missing complement S's in their speech. The relevant point for this argument, however, is that no speakers accept 14a; but if they accept (a) above, then they accept 13a.

Some speakers find the contrast between the *il quale* sentences of 13-14 to be a 'strong preference' rather than a difference of acceptability vs. total unacceptability. These same speakers, however, find the contrast much stronger—to the point of an acceptability difference—between these same sentences if, for *credere* 'believe', we substitute *pensare* 'think' or *dire* 'say':

- (b) *Mariella ha sposato l'uomo {che / il quale} pensavi che sposasse.*  
*Mariella ha sposato l'uomo {che / il quale} hai detto che sposerebbe.*
- (c) *Mariella ha sposato l'uomo {che / \*il quale} pensavi.*  
*Mariella ha sposato l'uomo {che / \*il quale} hai detto.*
- (d) *L'uomo {che / il quale} pensavi che vincesse ha vinto.*  
*L'uomo {che / il quale} hai detto che vincerebbe ha vinto.*
- (e) *L'uomo {che / \*il quale} pensavi ha vinto.*  
*L'uomo {che / \*il quale} hai detto ha vinto.*

I have no explanation for why the contrast between 13 and 14 should be less distinctive with *credere*.

- b. *Ha vinto l'uomo {che / \*il quale} credevi.*  
 'The man {that/\*who} you believed won.'

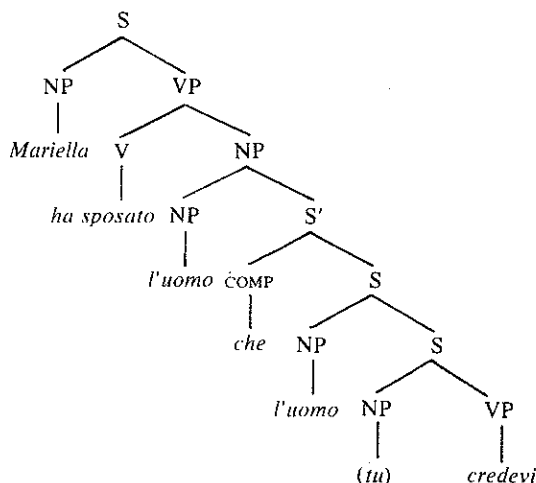


FIGURE 1. *Mariella ha sposato l'uomo che credevi.*

If we assume the existence of a rule of WH-movement operative in *il quale* relative clauses, in order to block the bad sentences of 14 with DEL, we must extrinsically order DEL before WH-movement—an impossible ordering, given the theoretical framework outlined in §1. With NCA or BASE, however, we predict that the *il quale* relatives in 14 will be unacceptable, since *il quale* can not be moved out of *e* (as with NCA) or out of a non-existent complement (as with BASE).<sup>7</sup>

**2.3. STRUCTURAL IDENTITY.** Hankamer & Sag (413) offer an argument against DEL based on the claim that syntactic deletion requires 'that the syntactic antecedent (when there is one) be structurally identical to the form that the anaphorized complement would have taken were it present'.<sup>8</sup> But missing com-

<sup>7</sup> For further comments on the above argument, see Appendices A and B.

<sup>8</sup> Two other arguments are offered by H&S against DEL, but they both fail. The first argument (412) is based on the 'missing antecedent phenomenon', discussed in Grinder & Postal 1971. But from Williams (1977:693-4) we can see that this test is not a reliable diagnostic for syntactic deletion—since elements like *that* and *those*, which even H&S would have to call 'deep anaphors', can be understood to contain missing antecedents. For this reason I will not discuss that argument here.

The other argument (419) is based on the claim that a sentence like (a), below, is ambiguous between a 'stupid' and a 'sensible' reading, whereas (b) is unambiguous (with only the 'stupid' reading):

(a) *I claimed that she was older than she was.*

(b) *I claimed that Sue was older than she was, and Lennie agreed.* (H&S's ex. 99)

But no one I have asked finds (b) limited to the 'stupid' reading. Instead, they see only the 'sensible' reading (and judge the sentence good with that reading)—until I specifically point out the possible 'stupid' reading, at which time they all accept that reading also. For this reason I will not attempt further discussion of H&S's arguments.

Sag & Hankamer 1980 present no new arguments against either DEL or BASE.



plements do not observe this requirement:<sup>9</sup>

(15) *Nessuno ha portato l'orzo in cantina. Anche Memo ha dimenticato.*  
'No one carried the oats to the cellar. Even Memo forgot.'

(16) *L'orzo doveva essere portato in cantina, ma Memo ha dimenticato.*  
'The oats had to be taken to the cellar, but Memo forgot.'

If H&S's requirement is correct, DEL cannot be responsible for 16. Note that both NCA and BASE are compatible with the data here (although H&S argue for NCA).

**2.4. SMALL CLAUSES.** This argument is similar to one in Napoli 1983a, built on Kuno 1981. Missing complement S's cannot occur in constructions which take so-called small clauses, whether or not the 'subject' of the small clause occurs in the surface:

(17) *La consideri bella?* 'Do you consider her pretty?'

a. *\*Sì, la considero* 'Yes, I consider her.'

b. *\*No, non la considero* 'No, I don't consider her.'

c. *\*Sì, considero* 'Yes, I consider.'

d. *\*No, non considero* 'No, I don't consider.'

(Exx. 17a–b are grammatical, but they mean only that I {am/am not} considering or thinking about her, not that I am considering a proposition.)

Consider first 17a–b. If *la* were to be interpreted as the subject of a small clause, we would have an instance of movement out of a missing complement. For these sentences, then, the problems for DEL are, *mutatis mutandis*, the same as those outlined in §2.2. Both NCA and BASE predict the unacceptability of 17a–b.

Turning to 17c–d, we find no explanation for their failure with either NCA or DEL. We must simply resort to claiming, with NCA, that *considerare* requires an audible complement—and, with DEL, that *considerare* does not lexically govern deletion. BASE, however, uses the same explanation discussed in §2.1: *considerare* is subcategorized to take an obligatory complement, and thus cannot occur with a missing complement.

**2.5. AN ANTECEDENT PROBLEM.** Jeitty Morgan (p.c., 1980) has pointed out to me a problem for the analysis of Eng. VP Deletion structures that involve phrases like *one of them*. In this subsection, I give the analogous problem for the analysis of missing complements in Italian (this argument is found for English in Napoli 1983a). Consider sentences like these:

(18) *Gigina doveva comprare le candeline e Susanna doveva  
darle il denaro, ma una di loro* { a. *ha dimenticato.*  
b. *ha rifiutato.* }

'Gigina was supposed to buy the candles and Susanna was supposed to give her the money, but one of them {forgot/refused}.'

The problems for DEL and NCA are similar: What is the antecedent of the putative gap which either triggers the deletion (as in DEL) or accounts for the

<sup>9</sup> Napoli 1983a (fn. 4) shows that H&S's requirement is not a sufficient test for syntactic deletion, and leaves open the question of whether it is a necessary one.

interpretation (as in NCA)? Either analysis would lead us to the claim that the sentences in 18 are ambiguous; thus one reading of 18a has Gigina forgetting to buy the candles, while another reading has Susanna forgetting to give Gigina the money. But this is not the way people understand these sentences. They do not have two distinct meanings: instead, they mean precisely what they say—that either Gigina or Susanna forgot. Which one forgot and what she forgot is not part of the meaning of the sentence. That information is not given us. In fact, understanding that that information is not given us is crucial in understanding the sentence.

BASE, by contrast, encounters no problem with 18. There is no complement of *dimenticare* 'forget' or *rifiutare* 'refuse' at any level of the derivation, so questions of antecedents and corresponding interpretations do not arise. Here conversational principles are again at work. To tag on 'but one of them {forgot/refused}' is to invite the listener to conclude that if the one was Gigina, what she {forgot/refused} to do was buy the candles; but if the one was Susanna, what she {forgot/refused} to do was give Gigina the money. This is true even if the speaker doesn't know who {forgot/refused}:

- (19) A. *Dove sono le candeline?*  
 B. *Gigina doveva comprarle e Susanna doveva darle il denaro, ma una di loro ha {dimenticato/rifiutato}.*  
 A. *Chi?*  
 B. *Non lo so di preciso. Nessuno me l'ha detto.*  
     'Where are the candles?'  
     'Gigina was supposed to buy them and Susanna was supposed to give her the money, but one of them {forgot/refused}.'  
     'Who?'  
     'I don't know exactly. No one told me.'

As expected, this implicature can also be canceled:

- (20) A. *Gigina doveva comprare le candeline e Susanna doveva darle il denaro, ma una di loro ha dimenticato.*  
 B. *Ah, sì? Cos' è successo?*  
 A. *Per dire la verità, Susanna è andata al mare—non si è ricordata neanche che oggi fosse il compleanno di Carlo.*  
     'Gigina was supposed to buy the candles and Susanna was supposed to give her the money, but one of them forgot.'  
     'Oh, yes? What happened?'  
     'To tell the truth, Susanna went to the seaside—she didn't even remember that today was Carlo's birthday.'

BASE predicts all the above data.

2.6. ADVERBIALS. Some adverbial clauses accept either a full complement or a missing complement:

- (21) *Gianni è uscito*  $\left\{ \begin{array}{l} \text{dopo che Maria credeva} \\ \text{quando Maria credeva} \\ \text{prima che Maria credesse} \end{array} \right\}$  *(che sarebbe uscito).*

'Gianni left {after/when/before} Maria believed (that he would have left).'

The problem for DEL is that it cannot be stated with the string formalism, given the standard notion of analysability—because the complement clause to be deleted under identity with another clause is actually contained in that other clause. BASE and NCA are unaffected by these data.

Furthermore, pro-forms which are to be understood as having an antecedent in the same over-all sentence are, interestingly, excluded from adverbial clauses:

- (22) \**Gianni è uscito*  $\left\{ \begin{array}{l} \text{dopo che Maria lo credeva.} \\ \text{quando Maria lo credeva.} \\ \text{prima che Maria lo credesse.} \end{array} \right\}$

'Gianni left {after/when/before} Maria believed it.'

(The sentences in 22 are grammatical, but only with *lo* having as antecedent some controller—linguistic or pragmatic—outside the over-all sentence.)

- (23) \**Gianni è uscito*  $\left\{ \begin{array}{l} \text{dopo che} \\ \text{quando} \\ \text{prima che} \end{array} \right\}$  *Maria credeva di sì.*

With NCA, null items are to be interpreted in the same way that other pro-forms are. With NCA, then, I see no explanation why 22–23, fail, but 21 succeeds. That is, the putative null item in 21 has a different distribution from the pro-forms *lo* and *sì*, but no ready explanation is available with NCA.

Let us turn now to BASE. Ex. 21 involves no violation of constraints on rule formulation, since there is no syntactic rule involved in forming the missing complement S's. Exx. 22–23 are still a puzzle with BASE, but a solution might be found. That is, missing complement S's involve no null anaphor; thus the fact that they have a different distribution from sentences with phonetically full anaphors is not inherently problematic. I do not, however, see an immediate semantic or pragmatic explanation for the failure of 22–23. The point remains that such an explanation is conceivable with BASE, but apparently not with NCA.

## 2.7. COMPARATIVES can contain missing complement S's:<sup>10</sup>

- (24) *Enrico urla più forte di quanto tu non abbia pensato.*  
'Enrico shouts louder than you think.'

<sup>10</sup> Note that Comparative Ellipsis (if it exists; see Napoli 1983b for arguments against it in English) cannot have applied in 24, since it obeys subadjacency:

- (a) *Enrico urla più forte di*  $\left\{ \begin{array}{l} \text{quanto non urli Memo.} \\ \text{Memo.} \end{array} \right\}$

'Enrico shouts louder than Memo (shouts).'

- (b) *Enrico urla più forte di quanto tu non abbia pensato*  
 $\left\{ \begin{array}{l} \text{che Memo urlasse.} \\ \text{*cheldi Memo.} \end{array} \right\}$

'Enrico shouts louder than you thought Memo (shouts).'

Since CE cannot operate in (b), it also cannot operate in 24, which is thus an example of a missing complement S (see also Kuno 1981).

Now the argument against DEL in §2.6 holds here, *mutatis mutandis*. Furthermore, the pro-forms disallowed in adverbial clauses in §2.6 are also disallowed in comparative clauses:

- (25) \**Enrico urla più forte di quanto tu non*  
           { *l'abbia pensato.*  
           *abbia pensato di sì / di no.* }

'Enrico shouts louder than you thought {it/so/not}.'

Thus we find another argument against NCA. BASE once more encounters no difficulty with 24, and at least leaves open the possibility for an explanation of 25.

Relative clauses offer a third argument against DEL which is entirely parallel to the argument here and in §2.6. For relevant data, see §2.2.3.

**2.8. INTRANSITIVE VERBS.** This argument is also found for English in Napoli 1983a. A (trivial) argument for BASE can be deduced from the fact that all verbs which allow missing object complements also have what Hankamer & Sag (412, fn. 12) call intransitive uses. If DEL or NCA exist, it is accidental that they can apply only to verbs which are also subcategorized to take optional object complements in the base. But if BASE is correct, this fact is as expected, because missing complement S's are, precisely, intransitive uses of the verbs in question.

**2.9. INTRANSITIVE MEANING.** This argument is also found in Napoli 1983a for English. There are sentences in which the same verbs which can occur in missing complement S's must be analysed as being intransitive; e.g.,

- (26) *Penso, dunque sono* 'I think, therefore I am.'

- (27) *È stato operato al cervello. Ora non pensa più.*

'His brain was operated on. Now he doesn't think anymore.'

Hankamer & Sag (412) give, as an argument against BASE, the claim that verbs with missing complements are understood differently from intransitive uses of those same verbs. Thus they claim that ex. 28 'means specifically that my wife doesn't approve of my playing cards and shooting dice, not that she just doesn't approve of anything in general':

- (28) *I play cards and shoot dice, and my wife doesn't approve.*

Grimshaw agrees with H&S as to the meaning of missing complement S's. Thus these writers make different claims than mine about the meaning of these sentences. They claim missing complement S's have a specific meaning assigned to the missing complement. I claim, however, that no meaning per se is assigned to the missing complement because no complement exists there at any point in the derivation; but the sentence as a whole is interpreted as having a given (limited) meaning enriched by certain inferences—invited, as expected, by Grice's (1975) conversational principles.

There are at least two obvious ways to test which claim about the meaning of these sentences is correct, and these involve the predictions made with regard to synonymy and contradiction. That is, the claim that missing complements have a specific interpretation leads us to expect instances in which both the intransitive verb and the missing complement are used non-redun-

dantly, since the two are not synonymous. But BASE, which claims that missing complements have no meaning per se, predicts that such instances will never arise. Thus the first approach predicts that 29A will have a non-redundant reading (as well as, perhaps, a redundant one), whereas BASE predicts only redundancy:<sup>11</sup>

(29) Q. *Perchè cerca così forte di riuscire suo fratello?*

A. *Cerca perchè cerca.*

'Why does her brother try so hard to succeed?'

'He tries because he tries.'

No one whom I asked found 29A ambiguous when first presented with it; everyone found it redundant. Certainly, with the addition of adverbs which can distinguish simple present vs. generic interpretation of the verb tense in 29A, the answer becomes non-redundant:

(30) *Cerca ora perchè cerca sempre.*

'He's trying now because he always tries.'

Again, the claim that missing complements have a specific interpretation predicts that 31A, in which an intransitive use of a verb and the missing-complement use of a verb appear with opposite polarity, will have a non-contradictory reading (as well as, perhaps, a contradictory one), whereas BASE predicts only contradiction:

(31) Q. *Perchè non cerca di riuscire suo fratello?*

A. *Non cerca ma cerca.*

'Why doesn't her brother try to succeed?'

'He doesn't try but he tries.'

Everyone I asked found 31A contradictory when first presented with it. But the addition or change of elements, to allow for contrasting tense interpretations, can rescue 31A:

(32) *Non cerca ora, ma di solito cerca.*

'He's not trying now, but usually he tries.'

Note that the generic use of the present tense does not force an interpretation of 'always', but only of 'typically'.<sup>12</sup> Thus 32 is not contradictory. We might expect that speakers who were presented with 32 would return to 31A, and allow a non-contradictory reading (involving simple present in one clause and generic in the other); but for some reason, no one I asked found 31A anything but contradictory.

Clearly the above facts are consistent only with BASE and not with DEL (where interpretation would operate off a structure before deletion rules had applied to it) or with NCA (where the null complement would receive a specific interpretation). There is no non-redundant reading of 29A or non-contradictory

<sup>11</sup> I am predicting that 29A will be similar, in its feeling of repetitiveness, to sentences like *War is war*. Something other than redundancy is at issue here, as Frank Humphrey (p.c., 1977) has pointed out to me; but for this paper it is not necessary to clarify what, so long as we make a clear distinction between the first claim's predictions and mine.

<sup>12</sup> Actually, the interpretation of generic tense need not require even a sense of 'typically'. See Dahl 1975, among others, for relevant discussion.

reading of 31A which depends strictly upon a distinction between an intransitive use of a verb and a missing-complement use of a verb. Rather, the only non-redundant reading of 29A depends upon a distinction between the tense interpretations of the two verbs; and there is NO non-contradictory reading of 31A. DEL and NCA fail to explain these facts. BASE predicts the proper interpretations of 29A, and fails only insofar as, with ANY analysis of missing complement S's, I see no explanation for the failure of a non-contradictory reading (based on different tense interpretations) in 31A.

**2.10. POLARITY.** Some verbs allow missing complements in the affirmative but not in the negative, and vice versa:<sup>13</sup>

(33) *Verrà Alfredo?* 'Will Alfredo come?'

a. (Si,) *penso*; cf. (Si,) *credo* 'Yes, I think so.'

b. #(*No*,) *non penso*; cf. (*No*), *non credo* 'No, I don't think so.'

(34) *Verrà Alfredo?* 'Will Alfredo come?'

a. #*So, ma non te lo dico* 'I know, but I'm not telling you' (cf. *Credo, ma non lo so di sicuro* 'I believe (so), but I don't know for sure.')

b. *Non so* 'I don't know.'

<sup>13</sup> Giulio Lepschy (p.c.) has pointed out to me that 33b 'may be becoming acceptable as an anglicism'; and, in fact, Rita Manzini finds it 'perfectly well-formed'. None of my consultants accept it, however. My study is based on the speech of a large population of native speakers of Italian, the vast majority of whom know little or no English. They are people who summer at Framura, and most come from towns and cities in the geographical area bounded roughly by the triangle formed by La Spezia, Torino, and Bologna. After receiving Manzini's comments, I re-confirmed my data with another dozen people from as far south as Cosenza and as far north as Verona. Perhaps there is some regional variation here which my data sampling does not reflect; but in the absence of such knowledge, I must rely on my (quite substantial) data base, and simply note that Manzini's speech does not have the problems for NCA and DEL that I discuss in this section.

Manzini has also suggested that 34a is unacceptable because *sapere* in the affirmative cannot take a *se* ('if' or 'whether') complement, although it can in the negative. This is not, in fact, accurate. Affirmative *sapere* can occur with a *se* complement:

(a) *So se Carlo l'ha fatto o no, ma non te lo dico.*

'I know whether Carlo has done it or not, but I'm not telling you.'

Furthermore, *sapere* can take many other types of complements in both the affirmative and the negative. Yet even in these instances, a missing complement S in the affirmative is rejected:

(b) *Chi sa quando l'Italia è stata unita?* 'Who knows when Italy was united?'

\*(*Io*) *so*; cf. (*Io*) *so quando l'Italia è stata unita.*

'I know; I know when Italy was united.'

*Io lo so* 'I know it.'

(c) *Sai che Carlo ha avuto un incidente?*

'Did you know that Carlo had an accident?'

\*(*Si*), *so*; cf. (*Si*), *so che Carlo ha avuto un incidente.*

'(Yes,) I know'; '(Yes), I know that Carlo had an accident.'

(*Si*), *lo so* '(Yes,) I know it.'

Ex. (c) was offered to me by Rita Manzini—who, in fact, accepts the first reply. I therefore rechecked with all my presently available consultants (over a dozen), and all rejected the first reply—just as my original data sampling rejected similar S's. Again, it is a real possibility that some regional variation exists which my data sampling does not reflect.

(The # here means unacceptable in this context; relevant discussion of appropriate contexts follows. The response in 34b is a bit abrupt for some speakers, but no one I have questioned rejects it.)

Before turning to what BASE would have to say about 33–34, let us first examine DEL and NCA. Recall that semantic interpretation is assigned to a structure prior to the application of DEL. Thus the application of DEL should not affect the appropriateness of an utterance in a given context. If DEL were operative in these sentences, it would have to be sensitive to the polarity of some lexical items (like *pensare* 'think' and *sapere* 'know') but not of others (*credere* 'believe', *promettere* 'promise'). Furthermore, DEL would be blocked for some lexical items when the polarity of their clause was affirmative, but for others when it was negative. I know of no independent evidence for claiming that syntactic rules should be allowed to be sensitive to polarity in this way. Rules exist which operate in the environment of negative items (e.g. Subject–Auxiliary Inversion with a fronted negative—as well as with other items), and rules have been proposed which operate on negative items (e.g. Negative Transportation); but I know of none which depend on the polarity of a clause relative to the particular lexical items in that clause. Clearly, one would hope to exclude such factors from our set of possible conditions on syntactic rules.

If NCA is the proper analysis, we are facing an apparently inexplicable set of data in 33–34. Since there is no semantic difference between null complements and full ones, we cannot appeal to differences in interpretation to account for differences in the appropriateness of an S with a full complement and one with a missing complement. No syntactic explanation is forthcoming, either.

With BASE, the problem becomes one of how these sentences with missing complements are to be interpreted. Let me repeat that, with BASE, we have no propositional argument of the verb at any point in its syntactic or semantic derivation. If this is true, the semantics of these sentences is, indeed, less than skeletal: it is partial, and out of context it is deficient. In context, however, such sentences have communicative value which goes significantly beyond their semantic value alone. To account for this fact, one might adopt a situational semantics—perhaps like that of Barwise & Perry 1983, which recognizes the 'efficiency' of language: 'expressions, whether simple or complex, can be recycled, can be used over and over again in different ways, places and times and by different people, TO SAY DIFFERENT THINGS' (p. 41).<sup>14</sup> Alternatively (and not necessarily inconsistently), one might appeal to conversational principles of the type offered by Grice. With such conversational principles in mind, we can return to 33–34, and attempt an explanation.

*Penso* in 33a means 'I think'. When we think, we must be thinking of something (i.e., thinking of nothing would be non-thinking, unless by 'nothing' we mean the name of that vacuum); thus, in order for the response 33a to be relevant to the question, listeners must think that I intend them to infer that I

<sup>14</sup> It is unclear to me whether Barwise & Perry would have to posit a semantic complement for the matrix verbs in missing complement S's. If they would, some of the evidence in §2 of this paper would be problematic for them.



am thinking about whether or not Alfredo is coming. Since my answer is affirmative, listeners can further infer that I think Alfredo is indeed coming. The above reasoning process could be called a generalized conversational implicature.

In 33b, the answer *Non penso* is a non sequitur, and rejected on that ground. But in other contexts it is acceptable; it means 'I do not think' or 'I am not thinking'. When I am not thinking, there need be no specific object to which I would readily point as the object not thought about. Instead, not thinking implies a lack of anything thought about. Therefore, if I respond to a question with a statement to the effect that I have no thoughts whatever, I am responding non-coöperatively. Put in an appropriate context, this response is acceptable:

(35) Q. *Ti piace Alfredo?* 'Do you like Alfredo?'

A. *Zitta tu! Non penso ora. Dormo. Lasciami stare!*

'Hush up! I'm not thinking now. I'm sleeping. Leave me be!'

The speaker of English who accepts the English counterpart to 33b (some do and some do not) might be disturbed at this account. Why should It. *pensare* have a different range of appropriate contexts for its use from Eng. *think*? Perhaps the answer is that the two verbs are not exact synonyms. *Pensare* can be paraphrased as 'hold an opinion' when it has a tensed complement or an infinitival complement introduced by *di*, like Eng. *think* with a tensed complement. But *pensare* without a complement seems to have the reading of 'cogitate' or 'contemplate': the interest is in the mental activity, rather than on the semantic object of that activity (and, as we have noted, no semantic object need be implied in the negative). By comparison, Eng. *think* may, for some speakers, allow a reading of 'hold an opinion', even when no object is expressed (and of course it also has the 'cogitate' reading).

Note that the behavior of *pensare* contrasts with that of *credere* in 33; this contrast supports the above pragmatic explanation for 33. *Credo* means 'I believe', and implies that something is in fact believed. In a context like 33a, a listener assuming the Gricean Maxim of Relation could infer that what I believe is that Alfredo is coming. Thus *credo* and *penso* in 33a are open to the same conversational implicature. But *non credo* means 'I do not believe', and it calls for an object of this lack of belief just as strongly as an affirmation of belief calls for an object. In the absence of a context which invokes the Maxim of Relation, *non credo* is taken to mean 'I don't believe in God':

(36) Q. *Ma cos' hai? Perchè piangi?* 'What's wrong? Why are you crying?'

A. *Ahi, sono molto infelice. Non credo.*

'Alas, I'm very unhappy. I don't have faith.'

Significantly, *non credo* never means 'I don't believe in anything.' This is a crucial contrast with *non penso*, which does mean 'I don't think about anything.' Thus the conversational implicature outlined for 33a, above, holds for 33b with *credere*, but not with *pensare*.

The example in 34, however, is much less obviously amenable to a pragmatic explanation; and I include it for precisely that reason. In 34b, BASE claims that *non so* means 'I don't know' or 'I lack knowledge'. An object in the world



need not be specified; but surely if I lack knowledge in general, there are specific things about which I lack knowledge. In fact, in the right context, *non so* can be interpreted as 'I don't know anything':

(37) *Non ho cervello. Non penso. Non so.*

'I don't have a brain. I don't think. I lack knowledge.'

Looking at 34b, we can see that if I lack knowledge in general, then I surely don't know whether Alfredo will come.

In the affirmative, *so* has the expected meaning corresponding to *non so*, i.e. 'I know' or 'I have knowledge in general'. It is difficult to find a context in which speakers accept *so* without a complement, but a possible one is:

(38) *Pregami! Sono Dio. So!*

'Pray to me! I am God. {I know / I am knowledge}.'

That is, *so* without a complement is taken to mean 'I know everything'. The question now is why a response of omniscience is not an appropriate one in 34. It is possible that we must state this as an arbitrary fact of Italian. But let me try to push a pragmatic analysis as far as it can go. I suggest that 34a is bad because it is simply too rude, or too full of hubris. That is, to respond that one is the source of all knowledge is almost blasphemy, and such bad behavior is not good Italian. Pinpointing omniscience, by contrast, is fine: *So tutto* 'I know everything' would be an acceptable response to 34. However, to respond that one has no knowledge (as in 34b) is by itself unassuming; therefore one need not pinpoint the object of ignorance with some definite anaphor. Thus, at best, BASE can cope with 34 in a reasonable fashion. At worst, BASE must state the restriction of *sapere* as idiosyncratic.

**2.11. TENSE AND PERSON.** In some contexts, missing complement S's are preferred over their counterparts with explicitly expressed complements—with some tenses, but not all. Thus, in 34b, responses in the present tense, with or without complements, are equally acceptable. But in the conditional, the response with a complement is rejected:

(39) *Verrà Alfredo?* 'Will Alfredo come?'

- a. *Non so* 'I don't know.'
- b. *Non lo so* 'I don't know it.'
- c. *Non saprei* 'I wouldn't know.'
- d. *?\*Non lo saprei* 'I wouldn't know it.'

Interestingly, the pattern of preference changes if the subject of the sentence is not first person:

(40) *Sa tua sorella se Alfredo verrà?*

'Does your sister know if Alfredo is coming?'

- a. *?Non sa* 'She doesn't know.'
- b. *Non lo sa* 'She doesn't know it.'
- c. *Non saprebbe* (—*non lo vede in questi giorni*).  
'She wouldn't know (—she doesn't see him these days).'
- d. *Non lo saprebbe* (—*non lo vede in questi giorni*).  
'She wouldn't know it (—she doesn't see him these days).'

With DEL and NCA, we cannot appeal to any semantic difference between the a-b and c-d pairs to account for the preferences in 39-40.

With BASE, however, these pairs are not semantically equivalent; and we find that the semantic difference between the pairs will allow us to cast the problem as a pragmatic one of conversational principles. The use of the conditional in 39c-d is somewhat deferential (as contrasted with the simple present of 39a-b). To pair the deferential inflection on the verb with a definite object (as in 39d) is to limit one's deference to a particular case; i.e., speakers are deferential about their lack of one specific piece of knowledge—not about their general knowledge. The deference, matched with definiteness in the situation of expressing one's own knowledge, is perceived as a clash in the personal style of the speaker. As my consultants put it, if people are aggressive enough to put definite limits on their lack of knowledge, they will not simultaneously act deferential about it. Hence 39d is rejected.

Let us now consider 40. To speak of another's lack of knowledge in the present tense is to suggest precise information about that lack of knowledge. Accordingly, a definite complement is expected. But the use of the conditional with the suggestion of deference noted above is appropriate either with or without a complement, since there is no inherent clash in being deferential about another person's lack of specific knowledge.

Clearly, the explanations which I offer here are to be taken only as suggestive. The more important point, however, is that the data in 39-40 are not open to any pragmatic explanation involving person or tense with either DEL or NCA, because of my working assumption (defended in §1) that the meaning of S's with missing complements is the same as that of the corresponding S's with full or pro-complements. Surely the pragmatics of person and tense will be the same with regard to two S's whose semantic interpretations are identical. Only BASE recognizes semantic differences between these sentence pairs. Accordingly, only BASE permits a pragmatic explanation for these data.

#### IMPLICATIONS

3. Many arguments have been presented above to show that the phenomenon which I have labeled 'missing complements' in Italian is really a case of intransitive verb usage.<sup>15</sup> This result is interesting in a number of ways. First, it

<sup>15</sup> As noted at the outset of this paper, Burzio assumes that DEL is the proper analysis of missing complement S's. He uses DEL plus the distance principle of Williams 1975 to explain a range of data involving missing complement S's. However, my consultants do not make the grammaticality judgments which require the assumption of DEL for Burzio. For example, in (a), Burzio finds every instance of a missing complement unacceptable, but my speakers accept them all:

(a) *Giovanni non ha accompagnato Maria a casa, ma adesso va Piero (ad accompagnarla).*

'Giovanni didn't accompany Maria home, but now Piero is going (to accompany her).'

*Mario non ha pensato di comprare il giornale, ma adesso va Piero (a comprarlo).*

'Mario didn't think to buy a newspaper, but now Piero is going (to buy it).'

*Mario non la ha {fatta/voluta} riparare, ma adesso viene Piero (a ripararla).*

'Mario didn't {have it repaired / want to repair it}, but now Piero is coming (to repair it).'

is one more of a growing number of examples of syntactic phenomena which are best handled with a phrase structure analysis rather than any more abstract analysis. Second, it is another example of how conversational principles can help us avoid the mistake of asking our grammar to do more than its job. Third, it removes one of the few crucial bases for the theory of anaphora of Hankamer & Sag 1976, Sag & Hankamer 1980—thus threatening that theory further. Fourth, it offers one more example of bogus deletion rules, suggesting that perhaps deletion is a strictly phonological mechanism which plays no real part in syntax. Fifth, given that missing complements of both English (as in Napoli 1983a) and Italian are best handled by phrase structure analyses, one might want to take the tests and insights offered here and examine the phenomenon in other languages. The arguments here, while using Italian data alone, have broader relevance.

## APPENDIX A

A major weakness of the above argument is that it relies on one rather unusual assumption. In order to see this, consider the derivation of the *che* relatives consistent with BASE. No movement or deletion rules will have applied in these relatives. But analyses of *che* (or 'that') relative clauses which do not involve movement typically involve deletion instead (as in Bresnan 1976). And a common claim about relative clauses is that they contain a node identical to (i.e. coreferential with) the head of the relative clause (cf. Akmajian & Kitagawa 1976, Chomsky 1977:81, 92, and Kayne 1981:203). In ex. 14, Relative Deletion could not apply because there would be no node identical to the head to undergo deletion, given the BASE analysis for missing complement S's. If this analysis of 14 is correct, we would expect that Italian might allow other *che* relatives which contain no node identical to the head, but which also do not involve the topic of interest in this paper (i.e. missing complements). This expectation is minimally fulfilled in the very informal speech of some speakers:

(41) *La ragazza che dicevo ieri è Carla.*

'The girl I was talking about yesterday is Carla.'

Since *dire* in the sense used here cannot take a direct object, but only a prepositional one (with *di*), 41 is a problem for a deletion analysis of *che* relative clauses. (For discussion of such relatives, see Napoli 1977.) Given the strong arguments that English missing complement S's are also base-generated (see Napoli 1983a), it is supportive to note some evidence in English that *that* relatives need not contain a node coreferential with the head. This evidence comes from so-called VP Deletion sentences (which Napoli 1983c argues are base-generated) and from English relatives

Likewise, Burzio finds (b) good, but not (c). My consultants accept both:

*Mario non è andato a prendere il giornale, ma adesso*  $\left\{ \begin{array}{l} \text{b. } \textit{va Piero.} \\ \text{c. } \textit{Piero va.} \end{array} \right.$

'Mario didn't go buy the newspaper, but now Piero's going.'

I have no explanation for the difference in acceptability judgments reported here; but given that they exist, I see no basis for an argument for DEL in Burzio's work.

Let me note that my consultants' judgments differ from Burzio's on a variety of examples involving missing complements, not just ones crucial for his selection of DEL. Thus Burzio says (62) that missing complements generally fail with control verbs; but my speakers accept a wide range of missing complements with control verbs. Thus Burzio rejects (d), but my consultants fully accept it:

(d) *Maria ha sognato a lungo di andare in vacanza, e adesso spera Piero.*

'Maria dreamed for a long time of going on vacation, and now Piero hopes (to).'

See also other examples in this paper, including 4a-b.

similar to 41, above:

- (42) *Mary likes the guy (that) you thought she would.* (VPD)  
*That's the book that the ending drives me crazy.*

(The second sentence was attested in the speech of a native Ann Arborite, and I also accept it.)

Given this evidence, we might replace the coreference requirement of relatives with one that every relative clause can be construed as modifying the head—a functional rather than syntactic requirement. This is what Chomsky (1982:13) calls an 'aboutness' relation; and, as he notes, it is possible 'to devise a system of logic in which vacuous quantifiers are permitted in well-formed expressions, but simply ignored in interpretation'. Thus there is no a-priori argument against the existence of relatives which bear only an 'aboutness' relation to their head and do not contain an NP coreferential with the head. Note that Chomsky does not argue for a functional requirement on relatives: he merely discusses the issue, and makes a brief suggestion as to why English does not have relatives without NP's coreferential to the head. But, to the contrary, it appears that they do—at least in missing complement S's, VPD sentences, and informal speech relatives.

An alternative approach which deals with examples like 41–42 in their Japanese counterparts is given by Kuno, who (1973:256) notes examples like this:

- (43) *California-syuu ga Nihon yori ooki Amerika wa hontooni ooki kuni desu.* (Kuno's 35b)  
 'America, as for which the state of California is larger than Japan, is really a big country.'

Kuno maintains the coreference restriction on relative clauses only by analysing examples like 43 as coming from a relative clause which underlyingly has an S that branches to an NP and a following S. The NP is in 'theme' position, and this NP is coreferential with the head of the relative clause. Applying Kuno's analysis to Italian, one could analyse the *che* relative of 14a as coming from Figure 1.

In this way we could maintain the coreference requirement on relative clauses. What we lose, however, is an explanation for why relatives like 43 are 'typical' in Japanese, whereas 41–42 are 'unusual' in Italian and English.

Clearly the determination of the proper analysis of relative clauses is beyond the scope of this paper. What I hope to have demonstrated is simply that alternative analyses for sentences like 14 are consistent with BASE. I do not, therefore, consider the derivation of such examples to be a serious drawback to BASE.

Let me point out that NCA runs into precisely the same issues that BASE faces regarding the analysis of relative clauses.

#### APPENDIX B

The facts of §2.2, given a movement rule in *il quale* relatives, provide a strong argument against DEL in the speech of most of my consultants. However, the argument is threatened by further facts in the speech of my one speaker from Verona, and a handful from Venezia. For the Verona speaker, both *che* and *il quale* relatives can occur with missing complements if the relative pronoun is in a prepositional phrase:

- (44) *Mariella abita nella casa {che / nella quale} credevi (che abitasse).*  
 'Mariella lives in the house {that / in which} you believed (that she lived).'

This speaker does not accept all such relatives, however:

- (45) *\*Mariella ha parlato all'uomo al quale hai detto.*  
 'Mariella spoke to the man to whom you said.'

Furthermore, when we consider the relative pronoun *cui*, which must be either genitive or the object of a preposition, we find it accepted in 46a by my consultants from Venezia and Verona, but rejected in 47a (and also in 45 and 46b by those from Venezia):

- (46) a. *Mariella abita nella casa in cui hai detto.*  
       b. *(\*)Mariella abita nella casa nella quale hai detto.*  
           'Mariella lives in the house in which you said.'  
 (47) a. *\*Mariella abita nella casa in cui credevi.*  
       b. *(\*)Mariella abita nella casa nella quale credevi.*  
           'Mariella lives in the house in which you believed.'

(The \* in parentheses indicates that the speakers from Venezia reject these S's; but the one from Verona—who is the only one to accept 44—approves them.) Speakers can find a good reading for 47a, but only one in which you believe in the house, just as you might believe in yourself or in God. Ex. 47a has no reading similar to 48a; yet 47b does have a reading similar to 48b for my one Verona speaker:

- (48) a. *Mariella abita nella casa in cui credevi che abitasse.*  
 b. *Mariella abita nella casa nella quale credevi che abitasse.*

It seems that, for my Verona consultant, relative pronouns can introduce missing complement S's only when the relative pronouns are in PP's (and, perhaps, only when the PP does not satisfy the subcategorization frame of the verb of the clause that follows it). I have no explanation for this fact. However, there are languages other than Italian in which a relative pronoun is 'attracted' into the case of the head of the relative clause, e.g. Latin and Ancient Greek (cf. Ehrenkranz & Hirschland 1972) and Aziri (Azerbaijani; Rod Johnson, p.c.). Note that, in all the acceptable examples with *il quale* or *cui* in 44–48, the head of the relative clause is also in a PP. For my Verona and Venezia speakers, I have found no acceptable examples of missing complement S's introduced by a relative pronoun whose head is not the object of a P. Thus it is possible that some sort of 'case attraction' (in a loose sense of the term) is going on in their speech. Furthermore, the data in 44–48 are problematic for all three analyses of missing complement S's under discussion; thus these data cannot be taken as evidence against BASE. Rather, they demand a more thorough investigation of relative clauses in the speech of these consultants, and a search for other speakers with similar judgments. Since I do not have current access to other speakers with the relevant judgments, and since an in-depth analysis of relative clauses in the speech of the few pertinent consultants available would take us far from the main goal of this paper, I leave these fascinating data for future research.

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