

# SEMANTIC INTERPRETATION VS. LEXICAL GOVERNANCE: CLITIC CLIMBING IN ITALIAN

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The syntactic rule of Restructuring explains the syntactic properties of so-called 'Clitic Climbing' sentences in Italian. However, Restructuring alone fails to account for the semantic properties of such sentences. This paper argues that lexical governance of Restructuring is inadequate. Instead, a syntactic rule operating freely whenever its structural description is met, and followed by semantic interpretation rules, not only adequately but insightfully handles the data. A crucial claim is that the derived structure of the verbal complex in a restructured sentence is identical to that of a complex of auxiliary + past participle, so that the same semantic interpretation rules apply to both.\*

INTRODUCTION. In Italian, clitic (or 'weak') pronouns are sometimes attached to the verb of which they are a complement in underlying structure (as in 1, below), and at other times to the verb of a higher clause (as in 2). For special attention, the clitic is printed in capital letters in the examples in this paper, and the verb whose complement it is in underlying structure is in small capitals:

- (1) *Voleva VEDERMI.* } 'She wanted to see me.'  
(2) *MI voleva VEDERE.* }

This variation in position is not free, however:

- (3) *Sono sempre l'ultimo a CAPIRLO.* } 'I'm always the last one to  
(4) *\*LO sono sempre l'ultimo a CAPIRE.* } understand him.'

The phenomenon illustrated above is usually called Clitic Climbing (CC); it has been studied in a number of Romance languages, including Italian, Spanish, Portuguese, and Old French. (See the references in fnn. 3 and 24, as well as many others appearing in the text below.) This paper concentrates on the phenomenon in Italian.

The question addressed here is: Why are some CC sentences good, but not others? I argue that the syntactic rule responsible for CC is lexically ungoverned, but that many sentences which meet the structural description of the rule yield semantically deviant sentences if the rule applies.

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## SYNTAX

1.1. RESTRUCTURING. Rizzi 1976, 1978 has argued convincingly for a transformation called Restructuring, which applies in 5b but not in 5a.<sup>1</sup>

(5) a. *Maria deve DARLO a Francesco.*

Structure: *Maria deve* <sub>S</sub>[*DARLO a Francesco.*]

b. *Maria LO deve DARE a Francesco.*

Structure: *Maria* <sub>v</sub>[*LO deve DARE*] *a Francesco.*

'Maria must give it to Francesco.'

Here 5a is a complex sentence,<sup>2</sup> in which the clitic is attached by the rule of Clitic Placement to the leftmost lexical verb of its own clause (as argued in Radford 1977a:50–56; but see also Rizzi 1978, fn. 26). But 5b is a simplex sentence, since the embedded S node has been destroyed by Restructuring.<sup>3</sup> The clitic in 5b is positioned by Clitic Placement, just as in 5a; but here the leftmost lexical verb of the clitic's clause, which is the only clause, is *deve*. Rizzi's analysis, then, involves no CC rule per se; i.e., the clitic does not move from one verb to a higher verb. Instead, there is an optional rule of Restructuring and an obligatory rule of Clitic Placement. If Restructuring does not

<sup>1</sup> Restructuring re-analyses a terminal substring. It is not a permutation rule, but rather one which alters branching relationships; thus it is, like Raising into Object Position, one of the kinds of rules which Chomsky 1973 would like to exclude from a possible grammar—but see Rizzi (1978, fn. 35), for discussion of just this point.

In §1.1, I will only sketch the very intricate arguments and evidence that Rizzi has put forth for Restructuring. In §1.2, I exemplify many of these arguments. It would be impossible to do more than this without reproducing Rizzi's whole work. Since the arguments are so intricate, however, the interested reader is strongly advised to consult Rizzi's work directly.

<sup>2</sup> Raising into Subject Position (Subject Raising) has applied in both 5a and 5b. That modal verbs have underlying sentential subjects in Italian, for both root and epistemic readings, has been argued in Napoli 1974a and Radford 1977a. Those publications give the classical arguments based upon synonymy of active/passive pairs and upon idiom chunks, as well as a variety of other arguments. That Restructuring has applied in 5b, then, is evidence that Restructuring is not limited to Equi verbs (contrary to claims found frequently in the literature on CC, including Quicoli 1976). See also Radford 1977b and Luján 1977 for further arguments that CC can apply to subject raisers.

In the *dovere* 'must' example of 72c below, CC occurs with the epistemic reading of the modal. Thus even if it could be argued (contrary to both Napoli and Radford) that root and epistemic modals take different underlying structures, the epistemic reading is surely a subject raiser; so Restructuring can apply to subject raisers.

<sup>3</sup> Several rules which turn complex structures into simplex ones have been proposed in the literature. Reis 1973 argues for a rule which prunes an embedded S node, rather than a rule of Raising into Object Position, for German. Evers 1975 argues that both Dutch and German have a V-raising rule which operates on complex structures and yields simplex ones. Specifically with regard to Romance CC, many have argued (in a variety of theoretical frameworks) for just such a rule, including Rivas 1974, van Tiel-Di Maio 1975, Aissen & Perlmutter 1976, Radford 1977a, Schroten 1980, and Bok-Bennema & Crougns-Hageman 1980, in addition to Rizzi 1978. I have chosen to outline only Rizzi's proposal since I find it the most comprehensive of those mentioned here. Alternative analyses also abound, as in Bordelais 1974, 1980, Radford 1975, Luján 1978, and Morin & St.-Amour 1977.

apply, Clitic Placement does apply, and 5a results. If Restructuring applies, Clitic Placement does also, and 5b results.<sup>4</sup>

Restructuring was proposed in order to account for three different phenomena: (a) so-called CC; (b) object-fronting with indefinite *si* sentences; and (c) verbs which can take *avere* or *essere*, alternatively, as auxiliary. The CC phenomenon has already been exemplified in 5. Examples of the other two phenomena are:

Object fronting (from Rizzi 1978:113):

- (6) a. *Finalmente si comincerà a costruire le nuove case popolari.*  
       b. *Finalmente le nuove case popolari si cominceranno a costruire.*  
           'Finally PRO will begin to build the new council houses.'
- (7) a. *Finalmente si otterrà di costruire le nuove case popolari.*  
       b. *\*Finalment~~e~~ le nuove case popolari si otterranno di costruire.*  
           'Finally PRO will get permission to build the new council houses.'

Auxiliary choice (from Rizzi 1978:113-14):

- (8) a. *Mario ha voluto tornare a casa.*  
       b. *Mario è voluto tornare a casa.*  
           'Mario wanted to come back home.'
- (9) a. *Mario ha promesso di tornare a casa.*  
       b. *\*Mario è promesso di tornare a casa.*  
           'Mario has promised to come back home.'

Just as with CC, Object fronting with indefinite *si* (translated here as PRO) and Auxiliary choice are not free; witness 6b vs. 7b and 8b vs. 9b. Rizzi argues that Restructuring has applied in 6b and 8b, as well as in 5b.

The arguments for Restructuring are of three types. Rizzi applies appropriate constituency tests, assuming that only constituents can move, to argue that sentences with Restructuring (as evidenced by CC, object-fronting with indefinite *si*, or the auxiliary *essere* with a verb which can also take *avere*) have a different structure from sentences which have not undergone Restructuring. His evidence involves WH-movement, Cleft Sentence Formation, Right Node Raising, and Complex NP Shift. The second kind of argument assumes the validity of Chomsky's 1976 conditions on rules of grammar. Rizzi argues that sentences which have undergone Restructuring do not violate Chomsky's conditions if rules such as *Loro* Placement, *Tough* Movement, and Clitic Placement apply; sentences which have not undergone Restructuring demonstrate vio-

<sup>4</sup> There is no need to order Raising extrinsically into Subject Position and Restructuring, since the first feeds the second. Likewise, there is no need to order Raising into Subject Position and Clitic Placement, so long as the first involves no pruning of the embedded S node. However, it is important that Restructuring be allowed to occur before Clitic Placement in order to generate sentences like 5b. This means that obligatory rules (like Clitic Placement) do not necessarily precede optional ones (like Restructuring). Also, if Clitic Placement were allowed to precede Restructuring, the structural description of Restructuring would have to be sensitive to the absence or presence of attached clitics on verbs, so as not to apply to an-S where a clitic has been attached to the embedded verb—incorrectly generating structures like *v[deve DARLO]* in 5a.

lations of the appropriate conditions. His evidence involves the Specified Subject Condition, the Tensed-S Condition, and the Subjacency Condition. Rizzi's third kind of argument involves the interaction of the three phenomena in 5-9. For example, he shows that if Object Fronting occurs, then CC must also (if there are any clitics present to climb). The first two types of arguments are exemplified and further discussed in §1.2, below.

Rizzi's work leaves little doubt that Restructuring exists. In this paper, then, I take the position that ALL CC SENTENCES HAVE A COMPLEX UNDERLYING STRUCTURE AND A SIMPLEX SURFACE STRUCTURE, AND HAVE BEEN GENERATED BY RESTRUCTURING. Although, as I have noted, there is no CC transformation *per se* in Rizzi's analysis, I will continue to talk about CC in this paper, rather than Restructuring, since I have examined the semantics only of sentences involving CC. The semantic analysis presented here may well extend to sentences with Object Fronting and indefinite *si*, and to sentences where *essere* is used with a verb which could also have taken *avere* as auxiliary. If so, the semantic analysis here would offer further evidence in support of a unified account of all three phenomena, and thus of Restructuring.

Rizzi 1978 says that the rule of Restructuring is lexically governed by modals, aspectuals, and motion verbs (with the variations mentioned in his fn. 6, pp. 117-18). An appeal to lexical governance, however, is an unsatisfactory approach to CC. In particular, it fails to give insight as to why these three classes of verbs (modals, aspectuals, and motion verbs) are chosen rather than any other three classes; and it offers no insight as to the reasons for the variations which Rizzi mentions. Many linguists, including Rizzi 1976, have noted that there is a generalization to be captured about the semantics of the verbs which actually occur with Restructuring. I argue in §2 below that the proper way to capture this generalization is through a rule of semantic interpretation. In my proposal, Restructuring is not lexically governed; rather, it applies freely whenever its structural description is met. Then a rule of semantic interpretation applies. If the rule of semantic interpretation is blocked for some reason, the sentence fails to receive an interpretation, and is judged deviant by native speakers.

**1.2. AUXILIARY STRUCTURE.** I propose that the derived structure of the verbal complex in a CC sentence is the same as that of verbal complexes which include auxiliaries. This is precisely the proposal defended by Radford (1977a:105-17).<sup>5</sup>

The argument for this proposal proceeds as follows. Two syntactic structures should be assumed to be identical in the absence of syntactic evidence to the

<sup>5</sup> Radford argues at length that sentences with auxiliaries are underlyingly complex and superficially simplex, undergoing the same rule which applies in CC sentences. (The rule for which he argues is Predicate Raising, rather than Restructuring; and he argues for a relational account of this rule.) For my purposes, however, all that matters is the superficial structure of sentences with auxiliaries. I make no claims or assumptions as to the underlying structure or the syntactic derivation of sentences with auxiliaries. In particular, I am not supporting the proposal that the auxiliaries *essere* and *avere* are main verbs in underlying structure (see also the discussion following 63 in the text below).

contrary. This is a reasonable principle to follow for two reasons. First, unmotivated proliferation of hypothesized syntactic structures is to be avoided if we wish to arrive at the most elegant description of the grammar. Second, and more important by far, it is possible to show that two syntactic structures are different, but it is impossible to prove that they are identical. That is, it may well be that a syntactic difference exists between two structures, but that no rule is available in the grammar whose structural description is met by one but not by the other. With regard to the grammar of that language, then, the two structures are 'identical'.<sup>6</sup>

Many tests have been suggested to show that CC sentences have a different structure from the corresponding sentences without CC. In all such cases, verbal complexes with auxiliaries pattern like CC verbal complexes, and contrast with verbal complexes that do not include auxiliaries.

The following four tests (stated as rules) are offered by Rizzi 1978 to argue that an infinitive and following material do not form a constituent in a CC sentence. They can also be used to argue that a past participle and following material do not form a constituent. Rizzi concludes that this is because the infinitive in a CC sentence forms a constituent with the preceding verb (which has the clitic attached to it). Similarly, we can conclude that a past participle forms a constituent with the preceding auxiliary. The arguments are presented only sketchily here; I refer the reader to Rizzi 1978 for a thorough discussion of the CC data with regard to these tests.

- (10) RULE A. Pied-piping can move an infinitive with following material, but not in a CC sentence. Likewise, it cannot move a past participle with following material.

For example (Rizzi 1978:120):

- (11) a. *Questi argomenti, a PARLARTI dei quali verrò al più presto, mi sembrano molto interessanti.*  
 b. \**Questi argomenti, a PARLARE dei quali TI verrò al più ...*  
 'Those topics, to talk to you about which I will come as soon as possible, seem very interesting to me.'
- (12) a. \**Questi argomenti, discusso dei quali col papà avrò entro la settimana, mi sembrano molto interessanti.*  
 b. *Questi argomenti, dei quali avrò discusso col papà entro la settimana ...*  
 'These topics, which I will have discussed with the father within the week, seem very interesting to me.'

- (13) RULE B. Clefting can apply to an infinitive with following material, but not in a CC sentence. Likewise, it cannot move a past participle with following material.

<sup>6</sup> This is parallel to the well-known argument in historical linguistics that it is possible to show that languages are genetically related, but impossible to prove that they are not. For any two languages, no evidence may be available to prove genetic relationship; but the crucial evidence may have been lost to us. In these cases, it is common practice to say (without proof) that the two languages are not genetically related. Analogously, in syntax it is common practice to take structures as identical when no difference between them can be found.

For example (Rizzi 1978:123):<sup>7</sup>

- (14) a. *È proprio a RIPORTARGLI i soldi che sto andando, stai tranquillo!*  
 b. *\*È proprio a RIPORTARE i soldi che GLI sto andando ...*  
 'It is just to bring him back his money that I'm going, don't worry!'
- (15) *\*È mangiato la crostata che ho.*  
 'It's eaten the pie that I have.'
- (16) RULE C. Right Node Raising can apply to an infinitive with following material, but not in a CC sentence. Likewise, it cannot move a past participle with following material.

For example (Rizzi 1978:125):

- (17) a. *Mario sinceramente vorrebbe—ma a mio parere non potrà mai—PAGARGLI interamente il suo debito.*  
 b. *\*Mario sinceramente GLI vorrebbe—ma a mio parere non GLI potrà mai—PAGARE interamente il suo debito.*  
 'Mario sincerely would like—but in my opinion will never be able—to pay him his debt.'
- (18) *Mario ha—ma dirà { ?\*che non ha } —capito la lezione.*  
*\*di non avere }*  
 'Mario has—but he'll say that he hasn't—understood the lesson.'
- (19) RULE D. Complex NP Shift can postpone an infinitive with following material, but not in a CC sentence. Likewise, it cannot postpone a past participle with following material.

For example (Rizzi 1978:126):

- (20) a. *Fra qualche giorno verrò a Firenze ad ESPORTI la mia idea.*  
 b. *\*Fra qualche giorno TI verrò a Firenze ad ESPORRE la mia idea.*  
 'In a few days, I will come to Florence to explain my idea to you.'
- (21) a. *\*Ho al presidente dato una descrizione completa del disastro.*  
 b. *Ho dato al presidente una descrizione completa del disastro;*  
*Ho dato una descrizione completa del disastro al presidente.*

<sup>7</sup> Radford 1977a also uses the clefting test. Examples such as the following are not counter-examples to this test:

- (a) *'È MANGIARE che TI voglio,' disse la nonna.*  
 'It's eat that I want you,' said the grandmother.'
- (b) A. *Ho visto che hai già mangiato. Allora possiamo partire.*  
 'I see that you've already eaten. OK, then, we can leave.'
- B. *Ma, no, è solo cucinato che ho.*  
 'But no, it's only cooked that I have.'

Ex. (a) was offered to me by M. Stiller with a Little Red Riding Hood context; (b) was offered by M. Nespor. In both of these, the moved element—an infinitive in (a) and a past participle in (b)—is a single word and a single constituent. Thus Clefting is applying here to a single constituent. In contrast, *riportare i soldi* and *mangiato la crostata* in 14–15 are multiple-word strings; and the fact that Clefting and the other rules studied here cannot move such strings is evidence that these strings do not form constituents.

'I've given a complete description of the disaster to the president.'

To these four tests for constituency, Radford 1977a adds two more: one based on preposing and a second based on (so-called) elliptical responses to questions. The first test, however, is of questionable relevance to syntactic structure (as Radford himself carefully notes on p. 116). The second test depends on the assumption that deletion has occurred in an example such as the answer below:

(22) Q: *Pensi di poter scrivere in tempo questa recensione?*

'Do you think you can write this review in time?'

A: *No, non posso.*

'No, I can't!' (Radford 1977a:112-13)

But there is evidence that an answer such as A is base-generated—and in fact does not even involve a null anaphor.<sup>8</sup> If so, this test is vitiated. Thus I will not repeat either argument here. However, none of Radford's data are inconsistent with my proposal in this section.

From the above data, I conclude that the constituency relationship in a verbal complex with CC is the same as that in a verbal complex which includes an auxiliary.

Further arguments that the derived structures of verbal complexes with CC are identical to that of verbal complexes with auxiliaries can be made if we assume that some rules are sensitive to a clause-mate constraint—or, alternatively, to Chomsky's 1976 conditions on rules of grammar. Such rules can be used to show that sentences with CC act as single clauses (or do not violate Chomsky's conditions), while their non-CC counterparts act as complex (or do violate Chomsky's conditions). Both Radford 1977a (speaking of a clause-mate condition) and Rizzi 1978 (using Chomsky's conditions) offer such tests, and I will now discuss six of them (again, stated as rules). For each test it can likewise be argued that no clause boundary, or potential for violation of Chomsky's conditions, exists between an auxiliary and its past participle. Radford has made this extension with several of the rules discussed here, as pointed out below.

(23) RULE E. Object Fronting in indefinite *si* sentences is clause-bound (or sensitive to the Specified Subject Condition).

This is shown in 24 below (where a clause boundary precedes *a pagare* ...— or, alternatively, a specified subject appears with the infinitive in this Equi sentence). However, it is possible to apply Object Fronting to a verbal complex where CC has taken place.<sup>9</sup> Rizzi's 1978 explanation is that Restructuring has applied in these cases, removing the offending specified subject of the Equi

<sup>8</sup> See Schachter 1978, whose arguments are framed in Daughter Dependency Grammar, but could just as easily have been framed in the EST.

<sup>9</sup> Actually, Rizzi argues that Object Fronting can apply whenever Restructuring applies, regardless of the presence of clitics. But, of course, if a clitic is present in a sentence with Restructuring, it will appear in climbed position. In 24, however, Restructuring is not possible: if a clitic were present, it could not appear in climbed position.

(24) a. *Si propende sempre a pagare le tasse il più tardi possibile.*  
 b. *\*Le tasse si propendono sempre a pagare il più tardi possibile.*  
 'One is always inclined to pay taxes as late as possible.' (Rizzi 1978:130)

(25) a. *GLI si vuole VENDERE queste case a caro prezzo.*  
 b. *Queste case GLI si vogliono VENDERE a caro prezzo.*  
 'One wants to sell him these houses at a high price.' (Rizzi 1978:132)

(26) a. *Si sono costruite queste case a caro prezzo.*  
 b. *Queste case si sono costruite a caro prezzo.*  
 'One built these houses at a high price.'

(27) \**Queste case si vogliono VENDERGLI a caro prezzo.*

Radford (1977a:106) points out that, for a subset of Italian speakers, a verb in a transitive indefinite *si* sentence can be singular only if the direct object is also singular (unless that object is a clitic), as shown in 29. This restriction applies only within the clause, however, as shown in 30. But, as expected, it applies in CC sentences, offering evidence that a CC sentence contains only one clause. Radford also points out that the constraint applies to auxiliaries, arguing that there is no clause boundary between an auxiliary and a past participle:

- (29) a. \**Si costruisce troppe case in questa città.*  
          ‘One builds too many houses in this city.’  
      b.     *Si costruisce una nuova chiesa in questa città*  
          ‘One is building a new church in this city.’  
(30)       *Ci si propone di costruire più case qui.*  
          ‘It is being proposed to build more houses here.’  
(31) a. ?\**GLI si stava per VENDERE queste case.*  
      b.     ?*Si stava per VENDERGLI queste case.*  
          ‘They were about to sell him these houses.’  
(32) a. \**Si è costruito / costruite troppe case qui.*  
                unmarked fem.pl.                      fem.pl.  
      b.     *Si sono costruite troppe case qui.*  
          ‘They’ve built too many houses here.’

(33) RULE G. Gapping obligatorily applies to all (identical) clause-mates of a gapped verb, but only optionally to non-clause-mates, according to Ross 1975.



Radford 1977a. using Ross' claim, points out that, in a sentence with CC, the (identical) infinitive must be gapped; but in a sentence without CC, gapping of the infinitive is optional. This contrast is shown in 34a vs. 34b. These facts follow if there is no clause boundary in a CC sentence, in contrast to its non-CC counterpart. Likewise, if an auxiliary is gapped, its past participle must also be gapped, as in 35:

(34) a. *Paolo GLI potrebbe REGALARE una penna, e Giorgio (\*REGALARE) una cravatta.*

b. *Paolo potrebbe REGALARGLI una penna, e Giorgio (REGALARGLI) una cravatta.*

'Paolo would be able to give him a pen, and Giorgio (\*to give) a tie.'

(35) *Paolo è andato a Londra e Gino (\*andato) a Parigi.*

'Paolo has gone to London and Gino (\*gone) to Paris.'

Exx. 34a-b are from Radford (1977a:107); 35 is from Radford (1977a:114). Though my consultants were not uniformly happy with 34b, all found it better than 34a.

(36) RULE H. *Loro* Placement cliticizes *loro* to the right of a verb.

In general, *loro* cannot be moved across an infinitive to cliticize to the next leftmost verb, as shown in 37. Rizzi accounts for this fact with the Specified Subject Condition, since the subject of the infinitive would not be controlled by the next leftmost verb, and hence is a specified subject. However, *loro* can be so moved when the next higher verb is one that can occur with CC.<sup>10</sup> Therefore these cases can have no specified subject of the infinitive. Likewise, *loro* can cliticize to an auxiliary by moving across a past participle. Thus there can be no specified subject of the past participle. The following examples are from Rizzi (1978:139-40); note that CC is not permissible in 37-38, but is permitted in 39-41:

(37) a. *Pensavo di CONSEGNARE LORO i soldi.*

b. *\*Pensavo LORO di CONSEGNARE i soldi.*

'I thought to give them the money.'

(38) a. *Pensavo di CONSEGNAarli.*

b. *?\*Li pensavo di CONSEGNARE.*

'I thought to give them.' ('them' = 'the money')

<sup>10</sup> The ideal situation would be to use sentences with the potential for both CC and *Loro* Placement:

(a) *NE dovrei loro PARLARE al più presto.*

(b) *Dovrei loro PARLARNE al più presto.*

'I ought to talk to them about it as soon as possible.'

The prediction is that (a) should be good, whereas (b) should not. However, as Rizzi points out (140, fn. 29), there are some practical difficulties here, because speakers do not have strong intuitions about the crucial examples. Rizzi suggests that this may result from the fact that cliticized *loro* is largely restricted to a literary style of language, and many speakers do not use it comfortably.

In order for Rule H to be an argument, then, I am assuming that a sentence in which CC could apply if a clitic were present, but which contains no clitic, can have the same structure as the corresponding sentence with a clitic and CC. This assumption follows, of course, from my acceptance of Rizzi's Restructuring rule, discussed in §1.1.

- (39) a. *Dovrei PARLARE LORO al più presto di questa storia.*  
 b. *Dovrei LORO PARLARE al più presto di questa storia.*  
 'I should talk to them as soon as possible of this story.'
- (40) a. *Dovrei PARLARNE.*  
 b. *NE dovrei PARLARE.*  
 'I should talk of it.'
- (41) a. *Ho rapidamente CONSEGNATO LORO i soldi.*  
 b. *Ho LORO rapidamente CONSEGNATO i soldi.*  
 'I have soon given them the money.'
- (42) RULE I. *Tough Movement* in Italian allows extraction restricted by the Subjacency Condition, as argued by Rizzi 1978 and shown in 43 below.<sup>11</sup>

When we turn to sentences where the main verb of the cycle embedded under the 'tough' adjective is one that allows CC, we find that the object of an infinitive following this verb can be extracted.<sup>12</sup> Thus there is no clause boundary between this verb and the infinitive. Likewise, if an auxiliary plus a past participle are embedded immediately under the 'tough' adjective, an object can be extracted. One can conclude that there is no clause boundary between an auxiliary and its past participle. Note that CC is not permitted in 45, but is permitted in 47:

- (43) a. *È difficile risolvere questo problema.*  
 b. *Questo problema è difficile da risolvere.*  
 'It's difficult to solve this problem.'
- (44) a. *È facile promettere di finire questo lavoro per domani.*  
 b. *\*Questo lavoro è facile di promettere di finire per domani.*  
 'It's easy to promise to finish this work by tomorrow.'
- (45) a. *Prometto di FINIRLO.*  
 b. *?\*LO prometto di FINIRE.*  
 'I promise to finish it.'

<sup>11</sup> The Italian data which follow, then, have different acceptability judgments from their English counterparts. Indeed, *Tough Movement* is one of those rules for which an unbounded analysis has often been proposed in English.

Since Rizzi assumes that *Equi* structures have a specified subject for the infinitive, the ungrammatical 44b could also be seen as a violation of the Specified Subject Condition. Rizzi does not mention this fact.

<sup>12</sup> As in Rule H (see the discussion in fn. 10), the ideal situation would be to use sentences where the verb embedded under the 'tough' adjective could receive CC. This is precisely what is done by Radford (1977a:109), who offers these examples:

- (a) *\*Quella teoria sarà difficile da cominciare a SPIEGARGLI.*  
 'That theory will be difficult to begin to explain to him.'
- (b) *??Quella teoria sarà difficile da cominciareGLI a SPIEGARE.*

As expected, the sentence without CC totally disallows extraction, whereas the sentence with CC is better. The trouble is that extraction is really quite marginal even in (b). I do not know why (b) is so infelicitous, nor does Radford. Rather than relying on these marginal data, then, I will here invoke the same assumption outlined in fn. 10, and will use examples in which the verb embedded under the 'tough' adjective is one which can appear with CC (i.e. a verb which can undergo Restructuring) but in which there is no clitic present to climb.

- (46) a. *È difficile andare a chiamare Maria (perchè abita al di là del fiume).*  
 b. *Maria è difficile da andare a chiamare (perchè abita al di là del fiume).*  
 'It's difficult to go and call for Maria (because she lives on the other side of the river).'
- (47) a. *Vado a CHIAMARLO.*  
 b. *LO vado a CHIAMARE.*  
 'I'm going to call him.'
- (48) a. *Sarà difficile aver già organizzato un nuovo governo quando non hai ancora cominciato.*  
 b. *Un nuovo governo sarà difficile da aver già organizzato quando non hai ancora cominciato.*  
 'It will be difficult to have already organized a new government when you haven't even started yet.'

Here 43–47 are from Rizzi (1978:141–2). A context for 48 might be in response to *Mi presenterò come il presidente che ha già organizzato un nuovo governo in solo cinque giorni* 'I'll introduce myself as the president who has organized a new government in only five days.'

- (49) RULE J. Infinitival relatives introduced by *da* require that the relativized NP be a clause-mate of the complementizer *da* (according to Radford 1977a:108). However, when the infinitival relative consists of a sequence of two infinitives and CC has taken place between them, the relativized NP may be a complement of the second infinitive. This follows if the CC sentence has no clause boundary between the two infinitives.

Thus, we find contrasts like 50a vs. 50b. Likewise, there may be an auxiliary + past participle in these infinitival relatives, which would follow if there is no clause boundary between the auxiliary and its past participle:

- (50) a. *\*Cerco una cartolina da poter SPEDIRGLI.*  
 b. *Cerco una cartolina da poterGLI SPEDIRE.*  
 'I'm looking for a postcard to be able to send him.' (Radford 1977a:108)
- (51) *Cercava una teoria da aver inventato.*  
 'He was looking for a theory to have invented.' (Radford 1977a:114)

A third kind of argument for the identity of the derived structure of verbal complexes with CC and that of verbal complexes with auxiliaries depends upon the observation that these kinds of verbal complexes restrict in a similar way the kinds of elements which can intrude between their parts, and that they contrast in this respect with other kinds of verbal complexes.

It has frequently been pointed out that many adverbs do not freely intervene between a verb with CC and a following infinitive. Thus 52 shows a variety of (manner) adverbs which are accepted in this position, but 53–55 contain

examples of adverbs excluded from this position:<sup>13</sup>

- (52) a. *Sarebbe bastato un 'evviva' o un 'abbasso' per poterLI di nuovo IMPRIGIONARE.*  
 'A "hurrah for" or a "down with" would have been enough to imprison them again.' (Pratolini, 144)  
 b. ... *S'andò quasi a SEDERE in grembo a due matrone ...*  
 '... he almost went and sat in the lap of two ladies ...' (Calvino, 192)  
 c. *VI voglio appunto PARLARE seriamente.*  
 'I want to speak to you quite seriously.' (Pirandello, II, 371)  
 d. *LO verrò subito a SCRIVERE.*  
 'I'll come to write it immediately.' (Rizzi 1978:154)  
 e. *LI si continua stupidamente a COMMITTERE.*  
 'One continues to make them [mistakes] stupidly.'

Ex. 52e is adapted from Rizzi 1978, and accepted by my consultants with the reading given there.<sup>14</sup> Radford cites examples with *già* 'already', *mai* 'never', *benissimo* 'very well', and *mica* (a word which is not easily translated out of context; see Cinque 1974).

- (53) a. *??TI voglio nel parco VEDERE.*  
 b. *Voglio nel parco VEDERTI.*  
 'I want to see you in the park.'  
 (54) a. *??TI voglio fra un'ora VEDERE.*  
 b. *Voglio fra un'ora VEDERTI.*  
 'I want to see you in about an hour.'  
 (55) a. *\*Adesso GLI vado a casa sua a PROPORRE la tua idea.*  
 b. *Adesso vado a casa sua a PROPORGLI la tua idea.*  
 'Now I'm going to his house to propose your idea to him.'  
 (Rizzi 1976:12)

In these examples, multiple-word adverbs of location and time are excluded. The grammatical 53b and 54b, which are without CC, must be read with an intonation peak on the adverbial in order to be acceptable. However, 53a and 54a are not readily accepted with ANY intonation.

The same adverbs that can intervene in 52 can intervene between an auxiliary and a past participle:

- (56) *È di nuovo sparito* 'He's disappeared again.'  
*Ho quasi finito* 'I've almost finished.'  
*È appunto venuto* 'He came just for that reason.'  
*Ha subito gridato* 'He immediately screamed.'  
*Ha stupidamente scritto tutto a mia sorella.*  
 'He stupidly wrote everything to my sister.'

And the same adverbs that are excluded from the CC sentences of 53–55, but

<sup>13</sup> Many of the following examples come from written texts, identified by author's name and page number (cf. the references at the end of this paper).

<sup>14</sup> The example Rizzi gives is with Restructuring, but no clitic is present. I have modified the example to use a clitic.

accepted in the non-CC sentences, cannot readily intervene between an auxiliary and a past participle:

(57) ??È nel parco seduto 'He's in the park seated.'

??Avrò fra un'ora finito 'I will have in about an hour finished.'

\*Sono a proporre la tua idea andato là.

'I have to propose your idea gone there.'

Some of my consultants judge 57 better than 53a etc., but all judge both sets of sentences to be ones they would probably not use.

It is also frequently claimed in the literature on CC that *non* cannot intervene between a verb with CC and a following infinitive;<sup>15</sup> however, this is not true. Though it is infrequent to find *non* in intervening position, it is possible—and natural, particularly if *non* receives an intonation peak:

(58) a. *LO continua a non capire.*

'He continues to not understand it.'

b. *Non GLI potrai non parlare dei nostri progetti.*

'You won't be able to not speak to him about our plans.'

c. *LO puoi sempre non accettare.*

'You can always not accept it.'

Ex. 58a was offered to me by Vincenzo Lo Cascio; 58b, by Giulio Lepschy; 58c, by Marina Nespor. My consultants find all three perfectly acceptable.

In contrast, *non* frequently precedes an infinitival in non-CC sentences, and no intonation peak on the *non* is necessary or even preferred:

(59) *Dice di non capire.*

'He says he doesn't understand.'

*Preferisce di non parlarti.*

'She prefers not to speak to you.'

*Prova a non dire sciocchezze.*

'He tries not to say foolish things.'

As expected, *non* does not often intervene between an auxiliary and a past participle; however, it is possible and natural, particularly if *non* receives an intonation peak:

(60) A. *Ieri sera, da Piero, devi aver mangiato un sacco.*

'Last night, at Piero's, you must have eaten a lot.'

B. *Ieri sera? da Piero? Io, da Piero, ho non mangiato.*

'Last night? at Piero's? Me, at Piero's. I didn't eat.'

This is from Rizzi (1976, fn. 9), who puts the highest intonation peak in 60B on *non*.

Thus the two positions—(a) between a verb with CC and a following infinitive, and (b) between an auxiliary and a past participle—exclude and accept the

<sup>15</sup> In fact, van Tiel-Di Maio, who reports that *non* cannot intervene in CC sentences, uses the placement of *non* as a test for the beginning of a VP. However, the sentences in 58, with the evidence given in Rules A–D above (that the infinitive in a CC sentence does not form a constituent with following material) show that *non* placement is not a valid test for the beginning of a VP. Rizzi 1976, following van Tiel-Di Maio, claims that *non* cannot intervene in a CC sentence; however, he drops this in his extended revision published in 1978.

same adverbials; they thus contrast with non-CC sentences and with sentences which do not have auxiliary + participle verbal complexes. The same two positions accept *non*, most readily with an intonation peak, in contrast with other verbal complexes, which accept *non* regardless of intonation.

At least one kind of intervening element is accepted by a CC sentence, but not by an auxiliary + participle sentence. That is a complementizer. Thus *a*, *di*, and *per* appear below:

- (61) *LA vado a TROVARE. (la lettera)*  
       'I'm going to find it.' (the letter)  
       *LA finirò di LEGGERE. (la lettera)*  
       'I'll finish reading it.' (the letter)  
       *LA sto per SCRIVERE. (la lettera)*  
       'I'm about to write it.' (the letter)

But *a*, *di*, and *per* cannot come between an auxiliary and a past participle:

- (62) *Ho \*a/\*di/\*per capito* 'I've understood.'

However, the choice of *a*, *di*, or *per* is determined by the higher verb. Thus *andare* 'to go' is subcategorized to take *a* if an infinitival complement follows; *finire* 'to finish' takes *di* if an infinitival complement follows; and *stare* in the sense of 'be about to' takes *per* if an infinitival complement follows.<sup>16</sup>

These complementizers, then, are present before Restructuring, at the point when the infinitive and the following material form a constituent (see Rules A–D above). That is, there is a complementizer position introducing the infinitive and following material. The complementizers appear in the surface after Restructuring because it merely changes branching relationships, without deleting anything. Auxiliaries, by contrast, are not subcategorized to take any complementizer before the past participle.<sup>17</sup> Thus the appearance of complementizers in CC sentences is explainable from the subcategorization facts of the verbs involved, and from the underlying structure before Restructuring; it does not constitute evidence against the proposal that the surface structure of CC verbal complexes and auxiliary + participle complexes are the same with regard to constituency and with regard to category labels (Rules E–J).<sup>18</sup>

<sup>16</sup> The status of the *a* plus infinitive (following *andare* and other verbs of motion) as a complement of the verb is discussed in §2.32 below.

<sup>17</sup> One could argue that this is because the source for an auxiliary + participle verbal complex is monoclausal, in contrast to Radford's 1977a analysis of auxiliaries (see particularly Puglielli 1970).

<sup>18</sup> Another consequence of the fact that CC sentences come from a source in which the infinitival complement is introduced by a complementizer position is that, theoretically, rules may move material into this COMP position. Thus, if Restructuring follows an application of WH-movement on the infinitival complement, we should wind up with examples like (a) as opposed to more frequent (b):

- (a) *Non TI so cosa DIRE.*  
       'I don't know what to say to you.'

In fact, (a) is accepted by some of my consultants, and is also reported in Radford 1976. However, WH-words can never intervene between auxiliaries and past participles, which would follow if past

Not all verbs which can take infinitival complements are subcategorized to take a phonetically realized complementizer; e.g., *volere* 'want' does not take such a complementizer. Other verbs optionally take such complementizers for some speakers, e.g. *intendere* 'intend'. Radford 1976 notes that for speakers who optionally allow *di* with *intendere*, CC is fine without the *di*, but questionable with it (among my consultants, most cannot allow *di* at all):

(63) a. *LO intende FARE* 'He intends to do it.'

b. *?\*LO intende di FARE*.

Given that complementizers may not intervene between an auxiliary and its past participle, and given my argument that the surface structure of a verbal complex with CC is identical to that of an auxiliary + participle complex, the preference which Radford notes may be caused by a tendency to keep the surface strings of the two verbal complexes as similar as possible.<sup>19</sup> Thus, whenever it is possible to have CC without a complementizer, this will be the preferred choice.

Perhaps this choice is better understood in the framework of Emonds' Struc-

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participles were not introduced by a COMP position (i.e., if the past participles did not arise in a separate clause from their auxiliaries in the underlying structure).

However, (a) is a very unusual example. My consultants reject most CC sentences with an intervening *wh*-word: only certain combinations of higher verb plus *wh*-word plus infinitive are accepted. In all the cases which my consultants find acceptable, *sapere* 'know (how)' is the higher verb. Furthermore, *cosa* 'what' is accepted with *dire* 'say', as in (a), but judged strange by the same speakers with *dare* 'give' and other verbs. *Quanto* 'how much' is accepted with *dare*, but judged strange with other verbs. *Come* 'how' is accepted with *ringraziare* 'thank', but found strange with other verbs; etc. It has been suggested to me by several people that, in the acceptable cases, the combination of *wh*-word plus verb is so common that it can be considered a fixed phrase, and re-analysed as a verb unit (cf. the remarks of Chomsky 1973, fn. 26, on *know how* in English). Thus, in (a), *cosa* would not be analysed as filling a COMP node, but rather as forming a verb with the following infinitive, *dire*. If this is the proper explanation, then (a) would pose no new problems for the Structure Preserving Hypothesis discussed immediately below in the text.

<sup>19</sup> Reis 1973 says that her S-erasure rule occurs when no complementizer introduces the embedded clause. The preference in 63a, then, suggests a possible further similarity between the Italian and German phenomena.

Also relevant is Borkin 1974 (and, more succinctly, 1973) in her study of *to be* deletion in English. She notes semantic distinctions between S's with *to be* and those without, as in *I find this chair (to be) uncomfortable*. She claims (1973:46) that, in the S's without *to be*, the higher verb becomes more like an 'adjunct' to the material that follows it, both syntactically and semantically. Turning back to CC, we have just seen that, when an optional complementizer is present, only the lack of the complementizer is accepted with CC. Since I am arguing that Restructuring changes the syntactic structure in such a way that the higher verb assumes the same structure as an auxiliary, we could say (in Borkin's terms) that, in these optional complementizer cases, the higher verb can be more like an 'adjunct' to the lower verb only when the complementizer is missing (parallel to Borkin's cases where *to be* is missing). Thus far I have only discussed syntax, but in §2, below, I discuss semantics; and there we will see that Borkin's comments about syntax and semantics are paralleled not only in the syntax but also in the semantics of CC sentences.

Borkin's work suggests that linear juxtaposition may be an important factor in the relationship between the syntax and semantics of many phenomena, including CC. This idea is more explicitly developed in Lindholm 1975 (cf. Appendix A, below) and Bolinger 1978 (cf. §4, below).

Finally, note that Schroten 1980 mentions in passing that a verbal complex which has undergone CC 'se interpreta como una unidad semantica' (24).

ture Preserving Hypothesis (1976). Emonds claims that all syntactic rules fall into one of three categories: local movement rules, root rules, and structure preserving rules. Restructuring is clearly neither a local movement rule (in fact, it is not a movement rule at all) nor a root rule (since it can apply in embedded clauses). Therefore, if Emonds is correct, it must be a structure preserving rule. The fact that the output of Restructuring is identical to that of auxiliary + participle complexes would confirm this conclusion, so long as auxiliary + participle complexes have the same underlying and surface structures. I have not argued here for this derivation of auxiliary + participle complexes, although such a derivation would not be inconsistent with any of the claims or data in this paper, and would nicely account for some of them (see especially fnn. 17-18 and 20); however, a thorough analysis of the derivation of these verbal complexes, with an examination and criticism of the growing literature on the topic, is beyond the scope of this paper. Thus I introduce Emonds' hypothesis as a strong suggestion. The most obvious snag for the Structure Preserving Hypothesis involves complementizers: CC surface sentences have them, but auxiliary + participle ones do not. Thus the preference reported in 63a avoids this difficulty, and conforms closely to the Structure Preserving Hypothesis.<sup>20</sup>

A final argument for identical structure based on intervening elements is offered from diachronic evidence. In Old Italian, many elements which are excluded today could intervene either in a CC verbal complex or in an auxiliary + participle verbal complex:<sup>21</sup>

(64) ... *a mano a mano il dì seguente VI cominciarono le genti ad ANDARE e ad accender lumi e ad adorarlo ...*

'... gradually the following day the people began to go there and light candles and adore him ...' (Boccaccio, 42)

Here the subject NP (*le genti* 'the people') intervenes between the two verbs in a CC sentence. Today such intervention is not accepted. Again, in Old Italian, the subject could come between a syntactic auxiliary and a past

<sup>20</sup> Independent support for the claim that Restructuring is a structure preserving rule is offered by Rizzi (1978:155-6), who points out that the Structure Preserving Hypothesis may well account for the fact that Restructuring can apply with sequences V-V, AUX-V-V, V-AUX-V, but not AUX-V-AUX-V, since base-generated verbal complexes do not contain more than one perfect aspect marker. Note that Rizzi here assumes auxiliary + participle verbal complexes to be base-generated.

There are certainly ways other than the Structure Preserving Hypothesis to frame the concept that CC verbal complexes tend to exclude the same intervening elements as auxiliary + participle verbal complexes. Ross 1975 offers the notion of a 'canonical string' in which an auxiliary is followed by a main verb, with severe restrictions on what can intervene. Thus we could say, following Ross, that CC verbal complexes tend to conform to the canonical string for auxiliaries.

<sup>21</sup> In the following, I have used examples from Boccaccio. Italianists may object to my choice of this writer over others (such as, perhaps, Villani), claiming that his style is not representative of Old Italian in general. However, the correlation to which I am pointing does not rely on any assumptions about the representativeness of Boccaccio's prose; any writer could be quoted. All that matters is whether the constraints on intervention in the two types of complexes are the same: and they are for Boccaccio (as well as for Villani, so far as I have examined his works).



participle:

(65) *Dunque hai tu fatto Cristo bevitore ...?*

'Well, then, did you make Christ a drinker ...?' (Boccaccio, 53)

In Modern Italian, this word order is unacceptable. But such intervention, while not preferred, is possible in Modern Italian non-CC sentences which do not involve an auxiliary + participle complex:

(66) *Dico io di capire tutto!* (cf. the preferred *Dico di capire tutto io!*)

'I say I understand everything!'

Now consider another Old Italian example:

(67) ... *non NE posso altra testimonianza FARE che ...*

'... I can't make other testimony of it than ...' (Boccaccio, 369)

Here the direct object of the tenseless verb (*altra testimonianza*) intervenes between the two verbs in a CC sentence. Again, such intervention is highly stylized in CC sentences in Modern Italian, if grammatical at all. And once more a direct object may come between a syntactic auxiliary and a main verb in Old Italian, but not in Modern Italian:

(68) ... *ho tanto amore in lui posto ...*

'... I have so much love placed in him ...' (Boccaccio, 372)

(Of course, a locative also intervenes here.) Once more, the intervention, while not preferred, is possible in Modern Italian in non-CC sentences which do not involve an auxiliary + participle complex:

(69) *Voglio Parigi visitare!* (cf. the preferred *Voglio visitare Parigi!*)

'I want to visit Paris!'

In sum, the rules or constraints which are responsible for word order in these verbal complexes treat the two types similarly in Old Italian and in Modern Italian, and they treat other verbal complexes differently. This would follow from the hypothesis that CC verbal complexes and auxiliary + participle complexes have the same structure.

1.3. CC VERBAL COMPLEXES AND CAUSATIVES. CC verbal complexes do not have the same derived structure as verbal complexes in causatives (with the verbs *fare* 'make', *lasciare* 'let', and verbs of perception); for arguments, see Rizzi 1978, who also refers to additional discussion in Kayne 1975. Since this claim is already strongly supported in the literature, I will not defend it further here. Accordingly, causative sentences will not be discussed in §2 below.<sup>22</sup>

<sup>22</sup> Causatives have been the topic for much recent literature (e.g. Aissen 1974a,b, van Tiel-Di Maio 1975, Cinque 1975, Radford 1977a, Bordelais 1978). There is certainly controversy over the syntactic analysis of causatives, although the arguments of Rizzi 1978 (cited in the text immediately above) convince me that CC sentences and causatives do not have the same derived structure. Still, the semantic factors discussed in §2 might lead one to ask whether *fare* 'make' and other causative verbs are subject to the rules of semantic interpretation outlined there. For a suggestion that the historical development of the causative structure involved sensitivity to semantic factors of context, see Hyman & Zimmer 1976 (esp. p. 203).

## SEMANTICS

2.1. THE PREDICTION. Chomsky & Lasnik 1977 propose a grammar in which rules of semantic interpretation apply after all rules of movement, adjunction, and substitution have applied. Rules of deletion, however, are separate (cf. Besten 1975): they follow the other transformations, and do not affect rules of semantic interpretation. Restructuring does not, as already noted, fall among the types of syntactic rules outlined by Chomsky & Lasnik; it is a rule which changes branching relationships without permuting, adding, or deleting any elements (with regard to effect on the terminal string). Still, it is reasonable to assume that, if this type of rule must be included in the grammar, it would fall with the first set of transformations rather than with rules of deletion. The division between movement, adjunction, and substitution, on the one hand, and deletion, on the other, was made precisely because deletion has a unique relationship to semantics, in that its structural change involves loss of elements. There is no reason to assume that Restructuring should be likewise unique.

It follows that rules of semantic interpretation should apply after Restructuring. Such rules, then, will see CC verbal complexes and auxiliary + participle complexes as identical, and will apply to them in the same way.<sup>23</sup> This means that CC complexes and auxiliary + participle complexes should be constrained in the same way as to possible readings. I will argue below that this is precisely the case.<sup>24</sup>

2.2. SEMANTIC INTERPRETATION. The function of the auxiliary verbs *essere* 'be' and *avere* 'have' is to supply information about the state or action expressed in the past participle. In the light of this function, many descriptive statements can be made about these auxiliaries. Here I list only three, chosen

<sup>23</sup> If auxiliary + participle complexes are base-generated with the same structure they have in the surface, then rules of semantic interpretation will of course apply to these complexes in the same way as to CC complexes. But even if auxiliary + participle complexes are derived from a biclausal source, the evidence is that the rules involved in their derivation do not include deletion. Instead, if some sort of Equi is involved here, it must be interpretive, since the past participle can never have a subject distinct from the subject of the auxiliary. (See Chomsky & Lasnik for further discussion of the possibility of two types of Equi rules.) Therefore, rules of semantic interpretation will operate on the derived structure of these complexes, and will thus apply in the same way as to CC complexes.

<sup>24</sup> Other linguists have come to similar conclusions for different reasons. Saltarelli (1978:296) argues that the possibility of CC 'is the direct result of a relational condition of "auxiliary"'. He offers the syntactic test of whether an infinitive clause can be replaced by an anaphor for 'auxiliary'. If an anaphor is impossible, the higher verb 'is most likely to be an auxiliary' (300). Saltarelli does not precisely define the relational condition of auxiliary; and I suspect he would define it in syntactic rather than semantic terms, since Relational Grammar, the framework which he adopts, is a syntactic rather than semantic theory. However, if he is referring to a semantic notion of auxiliary, then he has in mind a correlation between CC and certain semantic constraints—which agrees with my approach. However, Saltarelli is approaching the problem from the opposite direction. He says the possibility of CC follows from the relationship of auxiliary. Instead, I argue that CC's possibility follows from whether the structural description of Restructuring is met. Then sentences with CC are interpreted in the same way as sentences with auxiliary + participle complexes.

because of their potential relevance to CC sentences:

- (70) a. The auxiliaries do not express states or actions in themselves.  
 b. The main verbs homophonous with the auxiliaries are frequently-used lexical items, expressing basic, unqualified concepts.  
 c. Any adverbs which modify the auxiliaries also modify their past participles.

These statements are empirically verifiable.<sup>25</sup> Whether these statements constitute defining characteristics of Italian auxiliaries, or merely characteristics which are typical of auxiliaries, is not clear. But these characteristics always hold for auxiliary + participle complexes. Lacking evidence to the contrary, I will take these three statements as reflections of rules of semantic interpretation. The actual rules can be stated as in 71a-c below, where a more general case is given in each instance.

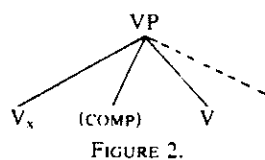
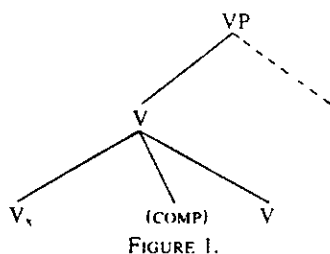
The action or state of a verbal complex is expressed by the main verb. Hence,

- (71) a. The auxiliary offers supplemental information about this action or state, introducing no additional independent action or state.

The auxiliary must be, in its non-auxiliary usage, a type of lexical item that can successfully carry out the service role outlined in 71a when it is used as an auxiliary. Therefore,

- (71) b. The auxiliary adds conceptually basic or simple information.  
 c. A complement of the auxiliary other than the main verb must be interpreted as a complement (or as binding a complement) of the main verb, as well.

In 71a and 71c we must be able to identify the 'main verb' and the 'auxiliary'. In §1, I argued that CC verbal complexes and auxiliary + participle verbal complexes had the same structure. However, I presented no tree for that structure. Since I am adopting Rizzi's 1978 syntactic analysis of CC sentences, the structure involved is that either of Figure 1 or of Figure 2 (see Rizzi 1978:152 for discussion).



<sup>25</sup> In support of 70a, note that the only action expressed in (a), below, is that of eating:

(a) *Ho mangiato* 'I've eaten.'

In fact, in a discourse such as (b), *ho* by itself has no interpretation whatsoever:

(b) Q. *Hai mangiato?* 'Have you eaten?'

A. \**Si, ho* 'Yes, I have.'

In either structure we can say that the auxiliary is the leftmost V (here  $V_{\lambda}$ ), and the main verb is the sister to the auxiliary (here the V following COMP). Thus both types of verbs can be identified by the structure.

In §2.1, we concluded that CC verbal complexes and auxiliary + participle verbal complexes should be constrained in the same way as to possible readings. In particular, then, 71a-c should apply to CC verbal complexes. I will now demonstrate that they do.

**2.3. THE AUXILIARY'S STATE OR ACTION.** The verb which receives CC should not express an independent state or action in itself; rather, it should express a concept which adds to our information about the state or action of the sister verb (the non-finite verb).<sup>26</sup> It is important to note that this requirement is imposed only upon the verb which receives CC. That same verb, when used in a sentence without Restructuring, may well express a state or action independent from the state or action of the following infinitival. With Restructuring, however, the action or state of the verb in question cannot be taken as independent from the action or state of the infinitive. That is, the rules of interpretation posed here apply only to surface structures which have verbal complexes of the structure outlined in §1 above. For 71a, this is, in fact, true. In order to demonstrate this, we need an overview of the types of verbs which occur with CC.

**2.31. EXAMPLES.** Three of the types of verbs which are often found with CC are modals, aspectuals, and verbs of motion:<sup>27</sup>

If deletion is not possible in the production of a discourse utterance like (b) (see 22 above), then it is deviant for semantic reasons: no proper interpretation is available.

Point 70b is easily verified. *Essere* and *avere*, when used as in (c)-(d), below, occur with great frequency among all speakers, expressing the basic notions of the copula and possession:

(c) *È alta* 'She's tall.'

(d) *Ha tanti libri* 'She has a lot of books.'

In support of 70c, note that even when the adverb modifying an auxiliary receives the intonation peak, this adverb tells us about the past participle as well:

(e) A. *Mangia, mangia!* 'Eat, eat!'

B. *Ho già mangiato* 'I've ALREADY eaten.'

I know of no cases in which an adverb which is a complement of the auxiliary cannot be taken to modify the past participle, as well as the auxiliary. This is also true of negation. However, the reverse is not true. In (f), the negative has scope only over the past participle:

(f) *Ho non mangiato.* (See ex. 60, in the text, for a context.)

<sup>26</sup> Relevant here are many concepts which have been developed in the recent literature: see Appendix A, below.

<sup>27</sup> Newmeyer 1975 includes, among English aspectuals, predicates like *happen*, *chance*, *occur*, *turn out*, *likely*, *false*, and *sure*. I am not using the term 'aspectual' as Newmeyer does (pp. 9-10): I do not include all subject-embedding one-place predicates (but cf. my discussion of exx. 80-81, below). Rather, I include only those verbs which are traditionally called aspectual, in that they contribute semantically to the aspect. (See Comrie 1976:3: 'aspects are different ways of viewing the internal temporal constituency of a situation.' Much of Comrie's elaborate discussion of aspect leaves me confused, but the kind of examples he gives of full verbs are of the type I would want to include in the term 'aspectual verb'.) Thus I include verbs of beginning, duration, ending, being in the habit of, imminence etc.

## (72) Modals:

- a. *Ma come se di tutti questi disagi sapesse che solo la fame poteva essere alleviata, e riconoscesse che questi infidi essere umani GLI potevan DARE—oltre a sofferenze crudeli—un senso di protezione, di domesticità di cui pur aveva bisogno ...*  
 'But as if, of all these discomforts he knew, only hunger could be relieved, and [as if] he recognized that these treacherous human beings could give him—in addition to cruel sufferings—a sense of protection, of domesticity of which he had need ...' (Calvino, 181)
- b. *Guarda che CI dev'ESSERE un guasto, non senti il rumore?*  
 'Look, there must be something wrong, don't you hear the noise?' (Calvino, 136)
- c. *Questo pane Pietro LO ha da MANGIARE.*  
 'This bread Pietro has to eat it.' (This example is taken from Lo Cascio & Napoli 1979. It is constructed rather than spontaneously produced.)

## (73) Aspectuals:

- a. *È così come TI sto DICENDO io!*  
 'It's just as I'm telling you!' (Pirandello, I, 698)<sup>28</sup>
- b. *Credevano che fosse una banda, e l'Andreuccio e il Titta, LO andavano CERCANDO.*  
 'They thought that it was a gang, and Andreuccio and Titta, they went looking for him.' (Alvaro, 104)
- c. *L'ho appena FINITO di fare.*  
 'I just finished doing it.' [spontaneously produced by a house guest of M. Stiller's from Firenze, spring, 1978]
- d. *Man mano che parlava SI veniva DESIGNANDO la scena nei suoi particolari.*  
 'Gradually, as he spoke, the scene outlined itself in detail.'  
 (This is example 32.10 of Lo Cascio 1970:150; the source is not given there.)
- e. *Lei L'ebbe a DIRE in confessione e il pievano la tolse dalle Figlie di Maria ...*<sup>29</sup>  
 'She said it in confession, and the rector took her from the Daughters of Maria ...' (Pratolini, 155)

<sup>28</sup> In all the examples of CC in this paper thus far, the verb from which the clitic has climbed is an infinitive (the *-re* form of the verb). Here we have CC with the *-ndo* form of the verb (*dicendo*). Thus, throughout this paper, the term 'infinitive' should be read as 'non-finite form', which will cover both the *-re* and the *-ndo* forms of the verb.

<sup>29</sup> *Avere a* is now literary for most speakers. But it is used in very colloquial contexts by various authors, including Svevo, Pirandello, Levi, and Pratolini. (See Lo Cascio, 221, for examples.)

According to Zingarelli 1970, *avere a* 'trasferisce il valore del suo tempo e modo al verbo che lo segue' ('transfers its tense and mood to the verb which follows it'), and nothing more. He gives, as an example, *Temo che abbia a rovinarsi*, which he equates with *Temo che si rovini* 'I fear that he's ruining himself' (153). Since tense and mood are what *avere a* contributes, perhaps it should not be grouped with the aspectuals (see fn. 27 above). Still, it seems to fit better here than elsewhere.

- f. *I primi pensieri ... MI incominciarono a RITORNARE ...*  
 'The first thoughts ... began to come back to me ...' (Defoe, 241)<sup>30</sup>
- g. *Non si nasconda, MI stia a SENTIRE.*  
 'Don't hide, do listen to me!' (Pratolini, 78)
- h. *Sicuramente SI starà per SPOSARE.*  
 'Surely he's about to get married.' (Villa, 109)
- i. *Allora si ricordò meglio del male che gli avevano fatto e GLI tornò a DOLERE.*  
 'Then he remembered better the harm they had done him, and he began to hurt again.' (Alvaro, 86)
- j. *CI suole ANDARE.*  
 'He's accustomed to going there.' (Lo Cascio, 160)
- k. ... *a mano a mano il dì seguente VI cominciarono le genti ad ANDARE e ad accender lumi e ad adorarlo, e per conseguente a botarsi e ad appicarvi [sic] le immagini della cera secondo la promession fatta.*  
 '... gradually the following day the people began to go there and to light candles and adore him, and as a consequence to take vows and attach there the images of wax according to the promise made.' (Boccaccio, 42)<sup>31</sup>

<sup>30</sup> This example is cited in Lo Cascio (223) without a context (*incominciare* is also found with CC in Boccaccio, 368).

<sup>31</sup> I intentionally chose this astounding example from Boccaccio, which is Old Italian and not acceptable today. The cause of the present-day unacceptability is not CC with *cominciare*: many speakers today allow CC with that verb, as witness ex. 731. But ex. 73k violates the generally accepted 'universal' constraint on movement (out of a coördinate structure—see Ross 1967), thus calling into question the universality of this constraint: and it displays a word order which is unacceptable today (as has already been discussed above with regard to ex. 64).

I would like to suggest here, however, that while this violation of the Coördinate Structure Constraint is alarming, it is a kind of 'minimal' violation. I venture that a violation such as the following would have been impossible even for Boccaccio:

(a) \**LO cominciarono (le genti) ad andarci e ad accender lumi e ad ADORARE ...*

It is not unheard of that a rule should treat the first conjunct (or the first *n* conjuncts) of a coördinate structure as though it (or they) were the only element(s). Thus it is a familiar fact that agreement in *there* sentences, for some English speakers, has the option of taking either the first element of a coördinate structure or the entire structure—but not the second (or third) element—as the determining factor for agreement (though for some speakers, of course, the singular verb with a *there* sentence is always allowed). Similar facts hold for Italian existential sentences using *esserci* 'there be'. Thus, while Boccaccio's example is startling, it may still be observing some recognizable constraint(s).

Note also that this example is not uncharacteristic of Boccaccio. I could have chosen others with the same unusual syntactic characteristic: e.g.,

(b) ... *ci ero venuto per doverGLI AMMONIRE e GASTIGARE e togli da questo abbominevole guadagno ...*

'... I had come there to have to admonish and chastise him and take him from his abominable gain ...' (Boccaccio, 38)

(I do not know why the CC here is *gli* instead of *lo*.)

1. *Ma CI comincio a LAVORARE domani e poi ti scrivo come vorrei cambiare io il tutto.*

'But I'll begin working on it tomorrow, and then I'll write you how I'd like to change the whole thing.' [in a letter from M. Nespor, dated Aug. 14, 1978]

These examples of CC with aspectuals are all found in the literature, or are generally agreed upon as acceptable today by many speakers. However, many aspectuals other than just these are reported by my consultants as allowing CC; and traditional grammars often cite many others. Thus Fornaciari 1909 cites more examples with *finire* 'finish'. Lo Cascio discusses a multitude of verbs, citing examples from the literature when he has found them. He also discusses, however, several verbs for which he has not found examples in the literature, e.g. *iniziare* 'begin', *continuare* 'continue', *seguire* (a) 'proceed', *prendere* (a) 'begin, take to' (as in 'Now that I've taken to playing bridge, I don't play anything else'), and once more *finire*. For most of these, he says that CC is unlikely; but I have found speakers who allow CC with *iniziare*, *continuare* (including Lo Cascio himself), and *finire*. The very fact that Lo Cascio feels compelled to discuss these verbs indicates some question on his part—at least as regards others' expectations, if not his own. To the above list of questionables, I add *usare* 'be in the habit of', which for some speakers allows CC.

(74) Motion verbs:

- a. *Bisognava venirLO a SAPERE in qualche modo.*  
'It was necessary to come to know it somehow.' (Parise, 137)
- b. ... *S'andò quasi a SEDERE in grembo a due matrone ...*  
'... he almost went and sat in the lap of two ladies ...' (Calvino, 192)
- c. *L'importante, anche se fosse durato poco, era tornare in squadra, sotto un'impresa che poi, quando c'è lavoro, TI manda a CHIAMARE.*  
'The important thing, even if it lasted only a short while, was to return to the squad, under a firm, which then when there's work, will have you called.' (Pratolini, 82)

Other verbs for which speakers agree that CC is possible include *volere* 'want', *sapere* 'know (how to)', and *riuscire* 'succeed'.

- (75) *Siamo rovinati! CI vogliono FAR pagare i danni!*  
'We're ruined! They want us to pay the damages!' (Calvino, 201)
- (76) *Me LO sa DIRE?*  
'Can you tell it to me?' (Pirandello, I, 127)
- (77) ... *erano passati dei signori in carrozza vestiti da Pierrot da Pierrette [sic] e tutti ubriachi, il cavallo andava a gran carriera come fosse infuriato, nessuno LI riuscì a FERMARE, anche quello che stava a cassetta era mascherato ...*  
'... some men in a coach had passed dressed like Pierrots and Pierrettes and completely drunk, the horse ran full gallop, as if

it were mad, no one succeeded in stopping them, even that one who was in the box was masked ...' (Pratolini, 129)

The list of verbs that speakers disagree upon grows longer every time I find another consultant, or every time I open another work from Italian literature. Thus many speakers use CC with *intendere* 'intend', and it is attested in Old Italian:

(78) ... *con poche parole VE LO intendo di DIMOSTRARE.*

'... with few words I intend to show it to you.' (Boccaccio, 63)

(Here two clitics have climbed.) Lo Cascio (157) gives an example with *osare* 'dare', and many of my consultants agree:

(79) ... *non L'ho osato DIRE.*

'... I didn't dare to say it.'

Lo Cascio also mentions *preferire* 'prefer', *desiderare* 'desire', and *amare* 'love' in the same passage. Some of my consultants rate *preferire* and *desiderare* with one question mark, and *amare* with perhaps two; but others fully accept or reject one or more of these. Other verbs noted in the literature as 'marginal' include verbs of trying like *cercare* and *provare* (Rizzi 1976). Again I have found corroboration of these reports from my consultants. Also, Boccaccio allows CC with the 'impersonal' verb *convenire* 'suit'; and some speakers today (including M. Nespor and some of Andrew Radford's consultants) use CC with *sembrare* 'seem' (although others say it is glaringly bad):

(80) *Signor mio, la quistione la qual voi mi fate è bella, e a volervene [sic] dire ciò che io ne sento, mi VI convien DIRE una novelletta, qual voi udirete.*

'Dear sir, the question you pose me is good, and to go about saying that which I feel about it, it suits me to tell you a little story, which you will hear.' (Boccaccio, 46)

(81) *LO sembra CAPIRE.*

'He seems to understand it.'

Boccaccio also has CC with *credere* 'believe':

(82) ... *per certo io me NE credo di MORIRE ...*

'... for certain I believe myself to die of it ...' (Boccaccio, 372)

Appendix B, below, contains three lists of verbs: those which I have found, either in literature or in speech, with CC; those that consultants respond to with doubts, or disagree about; and those that consultants consistently reject.

**2.32. DEMONSTRATION.** Given the examples discussed immediately above, we can now turn to a demonstration of how the verb to which a clitic climbs adds information about the sister verb's state or action, without expressing an independent state or action in itself.

The first two classes of verbs, modals (as in 72) and aspectuals (in 73), have been the topic of much linguistic literature. In many languages, the concepts of modality and aspect are expressed through syntactic auxiliaries, or even morphological markers; and it is open to debate whether modals are syntactic auxiliaries even in English (as shown by the references in Pullum & Wilson



1977, though they themselves do not take this position). Given the nature of the concepts of modality and aspect, and given the fact that many languages clearly express them by auxiliary verbs, I expect little surprise or resistance to the claim that they conform to 71a. However, there is one further step. Not only must the relevant verb in a CC sentence conform to 71a, but I predict that, in a corresponding sentence without CC, the same verb might or might not conform to 71a, or it might conform less strictly. That is, 71a is relevant only to the sentence that has undergone Restructuring, and thus has an auxiliary in a syntactic sense. While the differences between such sentence pairs are slight, and the judgments are delicate, we have evidence that this prediction is correct. Consider the following:

(83) *Il semaforo segnava giallo, giallo, giallo, continuando ad ACCENDERSI e RIACCENDERSI.*

'The traffic light showed yellow, yellow, yellow, continuing to flash and flash again.' (Calvino, 190)

There is no CC here, though the author uses CC rather frequently with a wide variety of higher verbs in this story, and in his works generally. Thus it is reasonable to assume that CC is not blocked here for syntactic or lexical reasons.<sup>32</sup> The point of the sentence in the story is that the traffic light blinks constantly. The main character becomes obsessed with this, and the very act of repetition seems to madden him. Thus the action upon which attention is focused is characterized by simple continuation or repetition, without much interest in what particular activity is repeated. Certainly *continuando* is not here functioning primarily to lend information to the act of lighting expressed in the following infinitives. And it is no accident that CC fails to occur here. My consultants agree that, while CC would certainly be grammatical in 83, it would be less appropriate to the context of the story. We can now see one of the major benefits of 71a: it helps us isolate possible semantic distinctions between CC and non-CC sentence pairs (but see the caveat in fn. 35 below).

Motion verbs (as in 74) require a more detailed demonstration. First, let us set aside a possible confusion. In many languages, motion verbs can be used to express future readings (as in the *go* progressive of English); but this is not the case in Italian. The motion verbs which are found in CC sentences do not lend a future reading to the sentence. Exactly what, then, is the semantic relationship between the motion verb and the infinitive in sentences such as these?

(84) *Vado a TROVARLO; LO vado a TROVARE.*

'I'm going to find him.'

Native speakers, when asked, often respond that the infinitival here expresses

<sup>32</sup> Across the board, CC is not syntactically precluded from coördinate structures such as that in 83. Thus both (a) and (b) are perfectly natural:

(a) *LI POSSO ACCENDERE e RIACCENDERE.*

(b) *POSSO ACCENDERLI e RIACCENDERLI.*

'I can light and relight them.'

See also the comments and examples in fn. 31 above.

the reason or purpose for the motion. But this is not true. Beniak et al. (MS) argue that such infinitivals in Ontarian French do not express reason or purpose. They point out that the kinds of presuppositions expressed by sentences with motion verbs and these infinitivals are different from those of sentences with reason or purpose clauses. While I have not read their work (I saw only an abstract of it, since the written version is not yet available), Italian clauses of this type behave in much the same way as they claim for Ontarian French. In particular, note the following questions and answers, in which *andare* 'go' is used in one case with a *per* infinitival (purpose), and in the other case with an *a* infinitival:

(85) Q. *Perchè ci vai?* 'Why are you going there?'

A. *Ci vado per trovarlo* 'I'm going there in order to find him.'

(cf. \**Ci vado a TROVARLO*; \**Ce LO vado a TROVARE* 'I'm going there to find him.')

(86) Q. *Cosa fai?* 'What are you doing?'

A. *Vado a TROVARLO* 'I'm going to find him.'

(or: *LO vado a TROVARE*; cf. ??*Vado per trovarlo* 'I'm going in order to find him.')

To the 'why' question, the answer with a *per* infinitival is appropriate, and that with an *a* infinitival is not. But when the going (the motion verb's action) is not presupposed, as in 86, the infinitival with *a* is appropriate, and the one with *per* is not. Only with the *a* infinitivals, never with the *per* ones, can clitics climb to a verb of motion. Thus we are not dealing with reason or purpose clauses in 74, 84, and 86.<sup>33</sup> Instead, the motion verb expresses the action which results (or will, or did result) in the realization of the proposition of the embedded infinitival. This action leads to that of the infinitive: it functions as a comment on how the action of the infinitive is (or is to be, or has been) brought about.<sup>34</sup> In 86A, the subject is not performing two separate actions of going and finding (in contrast to 85A); rather, he is performing a single action of finding brought about by means of motion. Ross (1975:467) makes a similar point for Spanish verbs of motion with CC. There is a strong affinity between the function of these motion verbs in Italian and that of the aspectuals. Indeed, English has uses of motion or position verbs that are decidedly aspectual (see also Bolinger 1978):

(87) I finally came to see it his way.

We stand to lose money on this deal.

Mustanoja 1960 has also argued for English that verbs of motion and position act as auxiliaries when followed by participles. Thus the motion verb sentences, which allow CC, conform to 71a.<sup>35</sup>

<sup>33</sup> This observation is similar to (and, perhaps, explains) Morin's observation for French (1979:26) that non-stative complements are excluded from non-purpose sentences.

<sup>34</sup> Of particular relevance here is Schmerling 1975, also discussed in Appendix A, below.

<sup>35</sup> It would be ideal to offer here a pair of sentences with motion verbs, one having CC and the other not, which displayed the same kind of slight semantic distinction that we saw above for aspectuals in 83. Unfortunately, I have not been able to come up with a pair which elicits a

The next set of verbs requires an even more extensive demonstration. *Volere* 'want' (as in 75) and other verbs of desire (*desiderare* 'desire', *amare* 'love', mentioned in Lo Cascio), choice (*preferire* 'prefer', also in Lo Cascio), intention (*intendere* 'intend', as in 78), and the verbs *riuscire* 'succeed' (as in 77), *osare* 'dare' (as in 79), and *sapere* 'know (how)' (as in 76)—all of which allow CC for some or all speakers—can be accounted for by a single extended explanation. All of them can be used in a discourse which implies the truth (or in some cases, as with  *fingere* 'pretend', the falsity) of their complements, as augmented by their own tense and modifiers, or as augmented by a tense future to them or a modal of possibility.<sup>36</sup> How this ties in with 71a will be shown after I support the claim itself.

As an initial illustration of the notion of a discourse which implies the truth or falsity of a proposition, consider the use of *want* in English:

(88) Q. Why weren't you home when I got here, Johnny?

A. Well, Mamma, I passed the movie house and suddenly I just wanted to go in.

If the discourse ends there, the message Johnny has delivered is that he went into the movie house.<sup>37</sup>

Certainly, whether the complement of a verb can be implicated by the discourse has played a part in the history of the syntax, morphology, and semantics of many languages, including English. Mustanoja, in his extensive and comprehensive study of Middle English, points out (489) that main verbs of obligation and volition were 'reduced' to future auxiliaries. His explanation is enlightening: 'Eventually the idea of futurity latent in the notions of obligation and volition becomes predominant, with the result that *sculan* and *willan* become auxiliaries expressing pure futurity.' It is not surprising, then, that Italian verbs of obligation (such as the modal *dovere*) and volition (as with *volere*, *desiderare*, *amare*) can appear with CC in proper discourses.

Let me begin my Italian illustration with *volere* 'want':

(89) 'Va bene, accetto,' disse. 'Non VI voglio FAR freddare il desinare.'

'“OK, I accept,” he said. “I don't want to make you let your dinner get cold.”' (Pratolini, 163)

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convincing consensus from my consultants. This is not, however, to be taken as evidence against 71a. Instead, 71a-c are rules to which auxiliaries must conform; but other verbs which are not syntactic auxiliaries are not precluded from having this property. The claim is that auxiliaries must conform to 71a; and the prediction is that non-auxiliaries are free to conform to 71a or not. Still, even though I do not predict a necessary meaning difference between CC sentences and their non-CC counterparts, I suspect that my lack of appropriate examples for the motion verbs is caused by my own inability to create contexts that highlight precisely the semantic distinction involved.

<sup>36</sup> Karttunen 1971 discusses implicative verbs; Grice 1975 discusses implicatures. In the discussion below, both notions are relevant. However, Grice's proposals are more germane here, since only a few of these verbs are true implicatives (as I bring out in the text below).

<sup>37</sup> Of course the discourse need not end there. Johnny could go on to explain that he didn't have enough money for the movies, so he went to a friend's house to console himself. The entire context is crucial to whether the listener understands the complement of *want* to be true. (See also the comments below in fn. 39.)

The context is one in which a character, by answering with acceptance, puts an end to the conversation: people can thus proceed to the hot dinner that awaits them. Not only does the speaker not want dinner to get cold, he indeed does not LET dinner get cold.

A particularly convincing example is this:

- (90) *Aspetta. TI voglio REGALARE qualcosa. Una cosa proprio bella. Vieni.*  
 'Wait. I want to give you something. Something very pretty.  
 Come.' (Calvino, 21)

Here a boy meets a young girl and wants to give her a gift; he has in mind the clear intention of giving her such a gift. His statement of desire is really a statement of intent, with confidence that he will succeed. He proceeds to try to convince her to accept a gift; but she refuses. After a while he concludes that, while he would like to give her a gift, he cannot. He says,

- (91) *Peccato; io voglio FARTI un regalo e tu non vuoi.*  
 'What a shame! I want to give you a gift, and you don't want (me to).' (Calvino, 23)

The second time he does not use CC; and this time the statement is one of desire, but not of intention. He knows now that what he desires will not be realized. In 90, with CC, the boy presents the proposition of making a gift as something that will be true in the future. In 91, without CC, that same proposition is not presented as something that will be true in the future.

As for choice (as with *preferire* 'prefer'), in examples which I have constructed, consultants who allow CC (albeit marginally) agree that, with CC, one is more likely to interpret the over-all S as a statement of intent—that the complement will become true at some time future to the intention. For *intendere* 'intend', S's with CC are felt to be 'more forceful' or 'more definite' about the ability of the higher subject to carry out the intention.

*Riuscire* 'succeed' is a true implicative verb, as is *osare* 'dare' (at least in the past tense). *Sapere* 'know (how)' often acts as a modal in a discourse which implicates that the complement clause, as augmented by the modal of possibility, is true (and, perhaps, should have been placed with the verbs in 72).<sup>38</sup>

Let me offer an example with *sapere* that illustrates how a clever author can capitalize upon the potential differences in meaning between sentences with and without CC. Here we are listening to a group of actors and their manager:

<sup>38</sup> A caveat to those not familiar with Italian is in order here. There are at least two ways to express 'know how' in Italian. Compare the following:

(a) *So come si fanno bambini.*

Literal translation: 'I know how one makes babies.'

(b) *So fare bambini.*

Literal translation: 'I know how to make babies.'

In (a), the knowledge need not be first-hand; but in (b), it must. Another translation for (b) might be, 'I can make babies', but this would not be a proper translation for (a). Only in the sentences like (b), where *sapere* is followed immediately by an infinitive (without the complementizer *come* 'how') is CC ever found. This fact is predictable if my discussion in the text is on the right track.

- (92) Il Padre: ... *MI sa DIRE chi è lei?* 'Can you tell me who you are?'  
 Il Capocomico [upset, with a half smile]: *Come, chi sono? Sono io!*  
 'What do you mean, who am I? I'm me!'  
 Il Padre: *E se le dicessi che non è vero perchè lei è me?* 'And what if I told you that it wasn't true, because you are me?'  
 Il Capocomico: *Le risponderei che lei è un pazzo!* 'I would answer you that you're a crazy person.' [The actors laugh.]  
 Il Padre: *Hanno ragione di ridere: perchè qua si giuoca;* [to the director] *e lei può dunque obbiettarmi che soltanto per un giuoco quel signore là* [he indicates the main actor] *che è «lui», dev'esser «me», che viceversa sono io, «questo». Vede che l'ho colto in trappola?* 'They're right to laugh; because we're playing here; and you can then object to me that only through a game that man there who is "him" must be "me", who am vice-versa myself, "this one". See that I've caught you in a trap?' [The actors laugh again.]  
 Il Capocomico [annoyed]: *Ma questo s'è già detto poco fa. Daccapo?* 'But this was already said just a little while ago. And now again?'  
 Il Padre: *No, no. Non volevo dir questo, infatti. Io invito anzi a uscire da questo giuoco* [looking at the main actress, as if anticipating]—*d'arte! d'arte!*—*che lei è solito di fare qua coi suoi attori; e torno a domandarle seriamente: Chi è lei?* 'No, no. I didn't want to say this, in fact. I, rather, invite you to end this game—art, art!—that you are accustomed to playing here with your actors; and I ask you again seriously: Who are you?' (Pirandello, I, 125)

When the father asks in the first line, 'Can you tell me [literally, Do you know how to tell me] who you are?', with CC, the manager is caught off guard. He takes the question as a simple request to state his identification; and since the father knows him well, he does not understand the motive for the request. Nothing in the phrasing of the question would lead the manager to interpret it as an investigation into the manager's existential knowledge of himself. The immediate interpretation of this sentence has *sapere* as a modal of possibility. Accordingly, *dire* 'tell' is the action questioned here, and the manager thinks the issue is his ability to state his identity, rather than to think it out. G. Lepschy tells me that the existential question would be phrased with CC, and my consultants agree. Thus the manager here is assuming the natural interpretation of the father's question. The father, then, turns around and makes fun of the manager. He has set a trap—a double trap. There is the game of the play, in which people 'are' other people for the purposes of the play; and there is also the game of language, in which an innocent looking question (the one with CC) can suddenly be turned around, with an unexpected and serious interpretation. When the father finally returns to the question in the last line, he says that he is now asking 'seriously': 'Who are you?' The higher clauses in which this question was originally embedded are no longer present, nor is the source of the confusion. The play can now proceed as an investigation into the nature of a play. And the question at the end of the passage, 'Who are

you?', while interpretable in at least two ways, is no longer MISLEADING. The linguistic games which Pirandello engages in throughout this work can be viewed as parallel to the over-all themes of the work. Language is contorted into a mischievous tool to study language—and, ultimately, thought. The form of the play is contorted into a mischievous tool to study plays—and, ultimately, life.

While the reader may disagree with my (admittedly naïve) analysis of this Pirandello play, *Six characters in search of an author*, the fact remains that the father's initial question with CC is purposely misleading; and any alternative analysis of this passage must account for this. Restructuring, with the rule of semantic interpretation in 71a, explains it nicely.

In all the above cases, the common thread is that such a verb can appear in a discourse which implicates its complement (or the negative of its complement); and when it does appear in such a discourse, it is open to the interpretation that its state or action is not independent from that of the complement verb, but rather is a comment upon—or even a part of—the state or action of the complement. If CC (i.e. Restructuring) actually applies, this interpretation is forced. Bolinger's comment (1976:10) that implicatives tend to 'do what auxiliaries do: provide a commentary—a modality, a value judgment, an inceptive, or whatever—to modify the main action (expressed by the "subordinate" verb) much as an adverb would', is right to the point. We could generalize Bolinger's comment to cover any verb which appears in a discourse which implicates that verb's complement or its negation.

The next set of verbs are those of trying, mentioned in Rizzi 1976. If these verbs conform to 71a, we would expect that, in sentences with CC, the verb of trying would somehow be inextricably connected to the infinitive semantically. I believe this to be true. Only a few of my consultants feel comfortable about CC with verbs of trying, but those speakers find the following gradations of acceptability in the contexts given:

- (93) a. *Cercherò di FINIRLO. Te lo prometto.*  
       b. *\*LO cercherò di FINIRE. Te lo prometto.*  
           'I'll try to finish it. I promise you.'
- (94) a. *Cercherò di FINIRLO. E ci riuscirò.*  
       *?LO cercherò di FINIRE. E ci riuscirò.*  
           'I'll try to finish it. And I'll succeed.'
- (95) a. *Ho cercato di FINIRLO. Ma ho fallito.*  
       b. *\*L'ho cercato di FINIRE. Ma ho fallito.*  
           'I tried to finish it. But I failed.'
- (96) a. *Ho cercato di FINIRLO. E ci sono riuscito.*  
       b. *L'ho cercato di FINIRE. E ci sono riuscito.*  
           'I tried to finish it. And I did.'

In 93–94, the future tense is used; thus we know that the proposition of the infinitival clause has not yet been realized. In 93, the promise following the *cercare* 'try' sentence is meant to assure the listener of the speaker's sincere

attempt.<sup>39</sup> It is the act of trying, of putting out effort, to which the speaker draws attention. *Cercare*, then, is not used only and primarily to add information to the infinitival's action. And CC is judged unacceptable here. In 94, however, the assertion (or promise) of future success following the *cercare* sentence points out that succeeding in finishing, rather than just sincerely trying, is of greater importance. That is, the infinitival's action is the focus of attention; and the act of trying serves to tell us how the infinitival's action will be brought about. Still, the use of the future tense keeps the success only hypothetical, allowing for the possibility of failure—and hence drawing some attention to the effort expressed in the matrix verb. As we might expect, CC is impossible in 93b, but marginal in 94b.

In 95–96, the past tense is used. In 95, the statement of failure shows that the *cercare* sentence was meant as a declaration of the subject's efforts, even though they went unrewarded. The very act of trying is the focus, and CC is not acceptable. In 96, however, the statement of success following the *cercare* sentence favors the reading in which the embedded clause (the finishing) is focused. The effort expended is not important in itself, but only insofar as it helped to bring about the finishing. As we expect, CC is acceptable in 96b.

Three other verbs are attested in §2.31: *convenire* 'suit' (in 80), *credere* 'believe' (in 82), and *sembrare* 'seem' (in 81). The first two are attested in Old Italian, and my consultants do not accept them today; thus it is impossible for me to take attested examples, and to alter the context to test whether or not they conform to 71a. From the context that Boccaccio uses, I see nothing inconsistent with 71a. As for *sembrare*, as I noted above, my consultants do not allow CC with this verb, though other people have reported it, and it is perfectly acceptable in the speech of many. Since I now have no group of consultants with whom I can readily test this verb, I am unable to see if it conforms to 71a. Again, the examples which M. Nespor has given me are consistent with 71a; but this judgment must, unfortunately, stand in isolation. All three verbs do conform to 71b–c, discussed in §§2.4–2.5. And it is interesting that both *convenire* and *sembrare* take sentential subjects in the base, thus conforming somewhat to Newmeyer's definition of aspectual verb (see fn. 27 above), given that the aspectual verbs shown in §2.31 can occur with CC. I will thus take the ability of these three verbs to occur with CC (for at least some speakers, in at least some period in the history of Italian) as consistent with 71a until proved otherwise.<sup>40</sup>

In conclusion, the verbs exemplified in §2.31 do conform to 71a.

<sup>39</sup> In speaking of sentences that follow the *cercare* sentences, I am only attempting to give a context which will clarify how the speaker is using the sentence. A consultant who is asked to judge a sentence needs a context, in order to figure out how the speaker was using the sentence, and whether CC is appropriate. I am in no way suggesting that a speaker needs to know what he is going to say in the next sentence in order to decide whether to use CC in a given sentence.

<sup>40</sup> Why CC may be acceptable with a verb at one point in time, but unacceptable with the same verb at another point in time, is discussed in §2.4, below, where synchronic variation is also discussed (see also §3).

2.4. THE BASIC INFORMATION OF THE AUXILIARY. The verb which receives CC should add conceptually basic or simple information to the action or state of the sister verb. Again, this claim appears to be true.

Looking over the examples in §2.31, one can see that many of the verbs obviously conform to 71b. For other verbs, rather than debating the point in each case, I offer two arguments that the verb which receives CC conforms to 71b.

First, consider the following two sets of contrasted sentences:<sup>41</sup>

- (97) a. *LO voglio CAPIRE.* (cf. *Voglio CAPIRLO.*)  
'I want to understand it.'
- b. *?LO desidero (di) CAPIRE.* (cf. *Desidero (di) CAPIRLO.*)  
'I desire to understand it.'
- c. *\*LO anelo di CAPIRE.* (cf. *Anelo di CAPIRLO.*)  
'I yearn to understand it.'
- (98) a. *LO intendo FARE.* (*Intendo (di) FARLO.*)<sup>42</sup>  
'I intend to do it.'
- b. *??LO propongo di FARE.* (*Propongo di FARLO.*)  
'I propose to do it.'

In 97, we find three verbs of desire arranged in order of increasing emotional strength. All speakers, so far as I know, accept 97a. Some speakers also accept 97b, while others find it marginal, and still others reject it. All speakers whom I have asked reject 97c. One could conclude that the concept of simple desire is judged basic enough by all speakers to conform to 71b. But as the concept of desire is somehow more descriptively specified (refined, strengthened, qualified), people judge that concept to be less basic, and accordingly they have increasing difficulty in viewing it as conforming to 71b.

In 98, the two verbs of intention differ by a new factor. The first seems to be a commonplace verb among all but the very youngest and most nearly illiterate of speakers. The second, however, while understood by most speakers, is judged the kind of verb one would use in a formal setting. Whatever factors are involved in contributing to the formal tone of *proporre* 'propose', they seem to make this verb one that people judge as less basic. The contrast between the uses of *intendere* and *proporre*, and their concomitant contrast in

<sup>41</sup> Erteschik 1973 gives a test frame for semantic complexity which she attributes to J. R. Ross. She claims that, in the frame 'to x is to y', x is more semantically 'complex' than y. Hence:

(a) To mumble is to say.  
(b) \*To say is to mumble.

The asterisk on (b) is Erteschik's judgment (p. 20). However, this testing frame doesn't work. A. Radford has argued to me that this is more a test of known vs. unknown than of relative complexity. G. Lepschy has further pointed out to me that (b) is acceptable in the context of a discussion of the philosophy of language, in which one conveys the idea that expressing things clearly is impossible. Thus I do not employ Erteschik's test here.

<sup>42</sup> For the variation in use of *di* with *intendere*, and the corresponding variation in acceptability of CC with this verb, see the discussion of ex. 63 above.



acceptability with CC, are exactly as expected if 71b is a proper rule of interpretation for auxiliaries.

Second, there is a great amount of variation in acceptability of CC with a given verb, both diachronically and synchronically. Thus *ardire* 'dare' could occur with CC at an earlier stage of Italian. Today, however, this verb is obsolete; and although literate speakers understand it, it cannot appear with CC for them. But its modern counterpart, *osare*, is accepted with CC by some speakers (see the discussion in §2.31). Certainly an obsolete or archaic word should not be judged basic. Hence, this particular type of diachronic change (the transition of a lexical item from daily to literary style) has a corresponding change in acceptability of CC, which gives support to 71b.

Synchronic variation, and diachronic variation which does not involve the obsolescence of a lexical item, are susceptible to a different sort of explanation. The notion of 'basic' is subjective and SHOULD lead to some variation, perhaps even idiosyncratically. It should come as no surprise that not a single consultant classed every example as simply acceptable or unacceptable: all needed to qualify their judgment for at least a few examples.

One of the qualifications given was particularly enlightening. A young woman from Milano judged CC with *amare* 'love' as good. Then she returned to this example and explained that she might easily use CC with *amare* with her friends, a group for which the verb had become highly frequent; but that she would not use CC with *amare* with her mother, unless she was willing to risk being corrected. In her group of friends, *amare* no longer expressed a serious emotional attachment, but rather a generalized good feeling. But for her mother, *amare* had strong connotations, too strong to allow CC. To her peers, *amare* was a basic, simple verb; but for her mother, a verb to be used sparingly and with good judgment. The difference in acceptability that she noted is further support for 71b.

If we look back at §2.31, we find that some of the examples from Boccaccio are judged unacceptable today, e.g. those with *credere* 'believe' and *convenire* 'suit'. Both verbs are still very much in use. Why Boccaccio found them acceptable with CC, but none of my consultants do today, is something I can only speculate about, since I don't have access to the judgments I'd need in order to argue strongly for one explanation over another. In light of the comments above about *amare*, one might wonder if these verbs weren't somehow less semantically full for Boccaccio than for present-day speakers (and, perhaps, even for his contemporaries).

The cases cited here, then, insofar as I have access to speakers' judgments on contrasting examples and contexts, conform to 71b.

**2.5. COMPLEMENTS.** A complement of a verb with CC must be interpreted as a complement (or as binding a complement) of the verb from which the clitic has climbed, as well. Once more this claim holds true—with, perhaps, one type of exception.

The least obvious and potentially most problematic case is that of adverbial complements. I claim here that an adverbial cannot be understood as modifying

the verb with CC to the exclusion of the verb from which the clitic has climbed.<sup>43</sup> It takes a great amount of skill to devise examples where a clear difference of meaning can be discerned, depending upon which verb of the two is modified by an adverbial. However, I came across one example in the literature that is particularly instructive:

- (99) *Sarebbe bastato un 'evviva' o un 'abbasso' per poterLI di nuovo IMPRIGIONARE. Ma si erano fatti astuti, erano dei fiorentini, dei toscani, che avevano imparato la lezione.*

'A "hurrah for" or a "down with" would have been enough to imprison them again. But they had become astute, they were Florentines, Tuscans, who had learned their lesson.' (Pratolini, 144)

The context is one in which the Florentines have already been imprisoned once: and having learned their lesson, they are not now going to say anything which would lead to repeated imprisonment. The adverb *di nuovo* 'again', then, modifies *imprigionare* 'imprison', as well as *potere* 'can'. Admittedly, there may be only a fine distinction between once more being able to imprison again vs. once more being able to imprison (perhaps for the first time—in the case where the potential was not realized before). But the distinction exists, and my consultants note only the former reading in 99, which is consistent with the intended reading in the text. The distinction is more obvious, perhaps, with the matrix verb *volere* 'want':

- (100) a. *Voglio di nuovo IMPRIGIONARLI.*  
b. *LI voglio di nuovo IMPRIGIONARE.*

When consultants are presented with 100, we find the following interpretations. In 100a, two readings emerge: 'I want once more to imprison them' (and I may have never done so in the past, although I have wanted to) vs. 'I want to imprison them another time' (and I have done so in the past, although I may or may not have wanted to). No CC occurs in 100a. But in 100b, in which CC has applied, only the second reading emerges—i.e., only the reading in which the adverbial is taken to modify the infinitive (and, optionally, *volere*).

All the adverbs I have found in attested cases of CC work as predicted. In 101–102, we find a locative and a time adverbial, respectively:

- (101) *Bisognava andarLI a RICERCARE a casa del diavolo.*  
'It was necessary to go to look for them again at the devil's house.'  
(Palazzeschi, 216)

- (102) *Ora stateMI a SENTIRE.* 'Now stay to listen to me'  
or 'Do listen to me now!' [imperative] (Pratolini, 155)

<sup>43</sup> Erteschik notes (17) that the presence of certain adverbs in the matrix clause forces 'an interpretation where the matrix is dominant.' Thus, once more, the relevance of the notion of semantic dominance is suggested. Hooper (1975:107) says that, if a matrix clause with a 'weak assertive predicate' has 'additional lexical items' (such as modifiers), then the weak assertive predicate cannot be interpreted as parenthetical. The result is that the main assertion cannot be in the embedded clause. Once more, the notions of assertion and main assertion may be relevant to the semantics of CC (see Appendix A, below, for more discussion of these and other potentially relevant notions).

The adverbials can be read as going either with the infinitival, or with both the infinitival and the verb to which the clitic has climbed. But they cannot be read as complements of the verb to which the clitic has climbed to the exclusion of the verb FROM which the clitic has climbed.

There is one potential type of counter-example with adverbials, however, which I have devised and which my consultants accept: of two time adverbials, one modifies the verb TO which the clitic climbs, while the other modifies the verb FROM which the clitic climbs:

- (103) *Ieri TI volevo VEDERE il 15 giugno, ma oggi le cose sono cambiate e non posso.*

'Yesterday I wanted to see you on the 15th of June, but today things are different and I can't.'

*Ieri* 'yesterday' here modifies *volevo* to the exclusion of *vedere*, and CC has taken place. According to 71c, ex. 103 should not be acceptable, and speakers should have a strong preference for its non-CC counterpart:

- (104) *Ieri volevo VEDERTI il 15 giugno, ma oggi ...*

But, in fact, my consultants find both 103 and 104 perfectly acceptable.

Why only time adverbials, of those I have tested, do not operate as predicted is unclear to me. The problem has at least two possible sources: 71c itself, and time adverbials in particular. One might try to modify 71c to mention only NP complements, thereby avoiding the whole question of the interpretation of adverbial complements. But evidence like that in 99–102 militates against such a revision. Therefore, I take the position that 71c is not at fault, and that the problem is specifically one of time adverbials. Ex. 103 will be taken then as an exception, not a counter-example, to 71c.

Turning to NP complements of the verb which receives CC, we find very convincing confirmation of 71c. Of the verbs introduced in §2.31, *sembrare* 'seem' is the only one which allows for a complement of its own which absolutely cannot be interpreted as a complement of its infinitive:

- (105) *Elena mi sembra CAPIRLO.*

'Elena seems to me to understand it.'

The *mi* here is in no way interpreted as a complement (or as binding a complement) of *capire* 'understand'. Radford 1976 reports that his consultants, who allow CC with *sembrare*, do not allow a matrix dative to be present:<sup>44</sup>

- (106) \**Elena me LO sembra CAPIRE.*

While the judgment is delicate, M. Nespor also prefers 105 to 106.

However some of the verbs discussed in §2.31 allow complements of their own which must also be interpreted as complements (or as binding complements) of the infinitive. We have already seen two examples from Old Italian, 80 and 82, in which an NP complement—which arguably originates as a complement of the higher verb—must be interpreted as the subject (or as binding

<sup>44</sup> The change from *mi* in 105 to *me* in 106 is not relevant to CC in particular: it is a regular sound change that occurs when two successive clitics have certain phonological characteristics, regardless of the syntactic source of each clitic. The same rule applies in 110 to turn *ti* into *te*.

the subject) of the infinitive in a CC sentence. And one of my consultants, Laura Pizer (from Napoli), reported to me in 1973 that CC is acceptable to her in 107, where *me* is interpreted as a complement of both verbs:

- (107) *Me LO affretto a FARE (cf. Mi affretto a FARLO.)*  
 'I'm hurrying to do it.'

Finally, there are verbs which allow NP complements that are neither barred from being interpreted as complements to infinitives, nor obligatorily so interpreted. One such is *promettere* 'promise':

- (108) *Ti prometto di RIEMPIRLO.*  
 'I promise you to fill it out.'

Here *ti* 'you' is the person promised; it is left unstated whether the action of the infinitive is for *ti*. We could easily exclude the latter interpretation by adding a *per* 'for' phrase:

- (109) *Ti prometto di RIEMPIRLO per il ragazzo.*  
 'I promise you to fill it out for the boy.'

Most of my consultants do not allow CC with *promettere* (and Rizzi 1978 even uses this verb in his starred CC sentences). A few, however, do accept it, though hesitantly. For these speakers, 110 is acceptable, but only with the reading in which *ti* is not only promised, but is the beneficiary of the infinitive's action. Thus a *per* phrase is excluded:

- (110) *Te LO prometto di RIEMPIRE (??per il ragazzo).*

Marisa Escribano (from Barcelona) has told me that the Spanish counterpart of 110 is perfectly acceptable in her variety of Spanish, with the same restrictions on interpretation noted by my Italian consultants.<sup>45</sup>

Other linguists have noted that a verb to which a clitic climbs is severely restricted as to what NP complements it can take. Lo Cascio, who claims that no NP complements are possible, offers the following illuminating explanation (204): '... gli ausiliari nella funzione di verbi reggenti non possono selezionare un loro sintagma nominale. "Ausiliare" e "verbo indipendente", sono due funzioni incompatibili tra di loro. I verbi che in una struttura fungono da ausiliari, adempiono soltanto alla loro funzione di reggenti.' That is, 'The auxiliaries in the function of higher verb cannot select their own NP. "Auxiliary" and "higher verb" are two mutually incompatible functions. The verbs that act in a given structure as auxiliaries have only their function as higher verb.' I am indebted to Lo Cascio's work for the basic idea of this section.

In conclusion, although time adverbials present an unexplained problem (and one that could be avoided by simply limiting 71c to nominal complements), 71c is confirmed for all other types of complements.

**2.6. MISCELLANY.** There are at least two other constraints on the interpretation of CC sentences that one might consider. One possibility is that the tense of the verb to which a clitic climbs determines the interpretation of the tense

<sup>45</sup> Other people tell me that 110 is acceptable for most Spanish speakers. However, I have not asked Spanish speakers other than Escribano—whose volunteered comment in 1978 started my investigation into the possible interpretations of the Italian sentence.

of the verb FROM which the clitic climbs. This could, however, be a result of the syntax. The Tensed-S Condition of Chomsky 1973 could be invoked to restrict Restructuring to untensed complements.

A second possibility is that the non-finite verb cannot be interpreted adverbially. Thus the following are impossible:

(111) \**Iole MI viene per DAR fastidio.* (cf. *Iole viene per DARMI ...*)

'Iole is coming to annoy me.'

\**Sofia LO riuscirà STUDIANDO.* (cf. *Sofia riuscirà STUDIANDOLO*)

'Sofia will succeed by studying it.'

Once more, however, this could be the result of the structural description of Restructuring. All we need do is limit Restructuring to apply only to non-adverbial VP complements. Or, instead, this could be the result of a general constraint upon extraction from adverbial clauses.<sup>46</sup>

Finally, many linguists have noted a variety of constraints on acceptable clitic combinations. Some of them have suggested that the possibility of CC is affected by these constraints. I have not listed them here, however, since they seem to have no relevance to semantics. I refer the reader to Lo Cascio 1970 (especially pp. 201-2), Roldán 1974, 1975, and Radford 1976 for some problems; and to Napoli 1973, 1974b, Cinque 1975, and Radford 1976, 1977a for possible solutions.

3. THE VALUE OF THIS ANALYSIS. Given that Restructuring is valid (which is the position taken in §1), there are at least two ways to account for the fact that not all verbs which take sentential complements can appear with CC in an acceptable sentence. One way, that taken by Rizzi 1978 and every other analysis of which I know, is to say the rule is lexically governed. The other way, proposed here, is to say that the rule applies to a certain structural description which does not mention lexical items, and that the output structure must be interpreted in a particular way.

I will make four arguments here for the semantic interpretation analysis over the lexical governance analysis. The first is theoretical in nature—based on a separation of the syntactic and semantic components of the grammar. The second is empirical—based on adequacy to handle the data. The last two are theoretical—based on explanatory power.

One tenet of the Extended Standard Theory (EST), on which Rizzi 1978 bases his Restructuring rule, is that syntactic rules do not have access to semantic information (see especially Jackendoff 1972). That lexical items supply semantic information is undeniable. Still, one could argue that a syntactic rule was lexically governed by some particular lexical item for reasons other than semantics (e.g. some historical fact). However, this argument cannot be made for Restructuring, which can occur with many verbs. Thus the rule would be governed not by one or two lexical items, but by whole classes of verbs, such as modals, aspectuals, and motion verbs—i.e. SEMANTIC classes. A lexically governed rule of Restructuring would be a rule which had access to

<sup>46</sup> See Radford's inclusion condition (1976), and Cinque's condition on extraction rules (1977).

semantic information. For this reason, within the EST, Restructuring cannot be lexically governed.

However, if we allow rules of semantic interpretation to do the work outlined in §2, we do not run into the same problem. With this approach, Restructuring is free to apply whenever its structural description is met, regardless of lexical items. Thus the syntactic rule of Restructuring does not require access to semantic information. Instead, the semantic information is handled, properly, by rules of semantic interpretation.

The second argument, the empirical one, is much more important. Lexical governance is simply inadequate: it cannot account for the judgments of speakers, whereas semantic interpretation can.

Consider the examples of §2. Over and over, we found that the context in which a sentence is couched is relevant to a speaker's judgment regarding the acceptability of CC. Only from the larger context can we tell whether a verb is used simply to supply information about another verb—or whether it conveys an action or state which is treated by the speaker as somewhat independent from any other verb's action or state (as discussed in §2.3). Contextual factors of this sort, and of the other types described in §2, could in no way be handled by a lexically governed rule.

We also saw that the interpretation of complements is relevant to speakers' judgments about CC. It may be relevant whether an NP complement of a verb binds a trace which is a complement of another verb. Certainly, information of this sort is semantic; and, as mentioned above, it should not be accessible to syntactic rules. Furthermore, it is relevant whether an adverb is interpreted as modifying a particular verb. If the interpretation of adverbs were easily described in terms of syntactic domains (as suggested in various works, including Reinhart 1976, but which is still a highly debatable hypothesis), perhaps this factor could be written into the structural description of Restructuring. Still, a string formalism does not allow us to insert a negative factor which blocks Restructuring if an adverb which does not have scope over the embedded verb appears anywhere in the matrix clause, even if we add Boolean Conditions on Analysability.

Thus no simple list of verbs which govern Restructuring will be adequate. No such list can account for the fact that CC is appropriate with a given verb in one context, but not in another for the same speaker. The semantic approach, however, not only allows this variation, but accounts for it. Many linguists have been confused at speakers' seemingly arbitrary vacillations in judgments with a given verb (see the comments in Aissen & Perlmutter 1976 and in Suñer 1980, among many other such complaints). The fact is that speakers are not as capricious as linguists have thought. Rather, our data-gathering methods have been at fault: we have failed to note the important factor of context.<sup>47</sup>

<sup>47</sup> Two quotations help to make this point. Bolinger (1976:12), in his study of entailment, says: 'Not much is gained by seeking well-defined categories of verbs that reflect the types of logical entailment. To assign a verb to such a category is only to express what is in general a rather loose statistical fact: given this verb, plus X number and kind of predisposing factors, a hearer

The rules of semantic interpretation outlined in §2 bring in the factor of context since they delimit the possible interpretations. If the allowed interpretations are not appropriate for the discourse, the example is not accepted by native speakers.

The third argument is based on explanatory value. A list of lexical items which govern a rule is arbitrary (why modals, for example, but not verbs of persuading?) unless we have some criteria to predict which lexical items will appear on the list. The only criteria that match the list for CC are semantic ones; but, as I argued above, a semantic classification for the lexical items would amount to a semantic condition on a syntactic rule, which is taboo within the EST. Thus the lexical governance analysis is left with no choice but to present an unexplained list of lexical items. The semantic interpretation approach, however, offers no list, but rather explains why CC applies only with certain verbs in certain contexts.

A final argument, quite distinct from the three above, is that the analysis which uses semantic interpretation offers a nice correlation between the existence of a rule of Restructuring and the semantics of CC sentences. This explanation is the topic of §4 below. A lexically governed rule fails here: indeed, the very nature of a list of lexical items obscures the fact that the items are present on the list because of semantic properties they may have in discourse. Thus such a list cannot illuminate the correlation between semantics and syntax.

4. THE CORRELATION BETWEEN SYNTAX AND SEMANTICS. Restructuring changes the branching relationships of a sentence so as to demote a full verb (in one clause) to auxiliary-verb status, syntactically, and to promote an embedded verb (in the next lower clause) to main-verb status of the next higher clause (see §1). The output structure is subject to the same rules of interpretation that apply to other verbal complexes which include auxiliaries (see §2). This means that the verb which was a main verb syntactically before Restructuring, and an auxiliary after Restructuring, is limited in its interpretations in ways that do not apply if Restructuring does not occur; and these limitations basically involve a kind of weakening or bleaching of the lexical value of the verb. In sum, we get a verb which has been demoted both syntactically and semanti-

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will infer the entailment that the speaker desires, and the speaker will choose the verb and the predisposing factors accordingly.'

It is for an exactly analogous reason we can give no simple list of verbs which govern Restructuring. A second quotation comes from Borkin's study of clefts in English (1979:35-6):

'Linguists recognize that the appropriateness of the more "marked" sentence structure is particularly context-dependent, and linguists are also very inventive in thinking of SITUATIONS in which certain sentences might be spoken: but I think we often don't realize the limits on our abilities to imagine appropriate TEXTS in which certain less common structural types might function, and to imagine what kinds of discursal settings might detract from or enhance the acceptability of a particular construction.'

CC is one more example of our failure to consider contextual factors, and our subsequent failure to see the proper distribution of work between the syntactic and semantic components of the grammar.

cally. The syntax and the semantics have, of course, operated in two different ways: the syntax changes structure conditioned by only syntactic factors, while the semantics interprets lexical items in a given structure regardless of their syntactic history. Thus we cannot say that syntax and semantics have operated in analogous ways. Rather, the syntax feeds the semantics, and the over-all effect is one of suitability between syntax and semantics.

This consistent effect of the two components of the grammar cannot be captured by any other analysis of CC. Those analyses which fail to point out that the derived structure of a CC sentence is the same as that with an auxiliary in its verbal complex (i.e. all analyses of which I know, except Radford 1977a) miss this correlation entirely. Those analyses which fail to point out the semantic interpretation of CC sentences (i.e. all of which I know, except to some extent Lo Cascio; but see fn. 24) likewise miss the correlation. Only analyses which point out both the resulting semantic interpretation and the resulting syntactic structure can bring forth this correlation. The present analysis does just this.

That syntax and semantics can work together in the way outlined above has been pointed out by many. Langacker 1974 goes so far as to say that syntax operates to create a specific semantic effect. He claims that movement rules such as raising, lowering, and fronting 'all serve to make the objective content of sentences more prominent' (650; see Appendix A, below, for a discussion of 'objective content'). Givón points out (1969:236) that the 'bulk of Bantu modality morphemes have probably arisen, historically, from main verbs dominating sentential complements'. He outlines a syntactic transition from dominating modal verbs, to auxiliary, to modality-marker—paralleled by a semantic transition—and he points out (133) that this same change occurs in many other languages, including Germanic, Swahili, colloquial Arabic, Romance, and Hebrew. Erteschik argues that syntactic extraction is possible only from semantically dominant clauses (see Appendix A, below, for a discussion of 'semantic dominance'). Bolinger, in his study of the *go* progressive in English, points out (1978:23) that linear juxtaposition leads to semantic amalgamation; and he hypothesizes that this is a factor in the rise of copulas and auxiliaries in many languages. Lord 1976 shows how the verb for 'say' in many languages becomes semantically bleached and is eventually re-analysed as a 'that' complementizer, which can be generalized to introduce even purpose, reason, conditional, and relative clauses. Larkin (ms) discusses a similar development in Tamil and in English. Lord also suggests that syntactic juxtaposition in the serial verb constructions of various languages leads to a syntactic and semantic re-analysis of these verbs as prepositions. In fact, Li & Thompson's 1973 examples of serial verbs in Mandarin include many which can occur with CC in Italian. Perhaps the most eloquent claim is that of Hale, when he discusses grammaticalization processes involving relative clauses. He points out (1975:309–10) that such a process

'effects a decrease in the prominence of a clause which does not constitute the primary focus in a complex sentence (i.e., is not the location of the main assertion in a declarative, or the principal inquiry in an interrogative, or the principal request in an imperative). That is to say, each such reduction has the effect of decreasing a syntactic-semantic disparity in subordination.'



Hale himself notes (in his fn. 21) that his approach is similar, if not equivalent, to that of Langacker.

In conclusion, the fact that the present analysis allows us to draw a correlation between the syntax and semantics makes it superior to other analyses, particularly since such a correlation allows one to see the similarities between a process such as CC in Italian and processes of greatly varying types in many other natural languages.

**5. CONCLUSION.** I have argued here that an analysis of CC which includes a syntactic rule which is not conditioned by semantic factors, but which feeds rules of semantic interpretation, is superior to analyses previously proposed. My approach has both empirical and theoretical benefits; it can handle all the data adequately (which an analysis with a lexically governed rule cannot do); it allows us to maintain a separation of the syntactic and semantic components of the grammar, while still noting a significant correlation between the two; and it explains many facts that other analyses can only note as problematic.

Many phenomena other than CC may benefit from a similar approach, as mentioned above. Other possibilities include rules of raising (McCray 1977, Borkin 1973, 1974), negative transportation (Shnukal 1980), *L-tous* in French (discussed in Kayne 1975, with relevant semantic facts brought out in Bordelois 1976), and even anaphora (McCray 1980). Chomsky's 1980 shift from conditions on rules to surface filters which handle semantic factors can also be seen as a step in this direction. Guéron's study of PP extraposition in English (1978, 1980) takes a parallel approach, with insightful results. Thus I hope that the present study will lead not just to a better understanding of CC in Italian, but to a better understanding of the way syntax and semantics work together in natural language.

#### APPENDIX A

Concepts relevant to §2.3, above, include Langacker's notion of 'objective content', defined as follows (1974:645) 'Roughly speaking, the objective content of a sentence is the basic situation which the sentence describes and which the remainder of the sentence takes a position on.' Langacker goes on to say that objective content tends to be realized through main verbs, while non-objective content is realized through modals, auxiliaries, and particles; and he suggests in a passing comment (656) that the verb which receives CC in Romance languages may well express non-objective content. Langacker himself points out the difficulties in distinguishing objective from non-objective content (646): he has no clear, simple syntactic tests to help us make the distinction.

Another notion which may be useful here is that of 'semantic dominance'. Erteschik (1973:22) states, 'A clause or phrase is semantically dominant if it is not presupposed and does not have contextual reference.' She offers four tests for semantic dominance besides her definition: for a variety of reasons, however, all these tests are inapplicable to CC sentences. Still, one might wonder if the verb which receives CC is barred from being semantically dominant, particularly because Erteschik claims that extraction can operate only out of semantically dominant clauses or phrases. However, once more it is difficult to distinguish semantically dominant from non-dominant phrases, since the notion of presupposition is not easily pinned down (and may not even be a linguistic notion: see Karttunen & Peters 1977). However, it is true that, in most of the examples of CC that I have found, the verb from which the clitic climbed did not have contextual reference, and thus was eligible for semantic dominance status. With regard to this point, G. Lepschy has pointed out the following example:

- (a) *Calena dormiva, Calena SI doveva SVEGLIARE e tutti trovavano che Calena doveva SVEGLIARSI.*

'Calena was sleeping, Calena had to wake up, and everyone knew that Calena had to wake up.' (Jovine, 158)

Here the Fascists feel that the village of Calena is too sleepy. In the first instance of *svegliare*, it is semantically dominant, and CC has occurred. In the second instance, it is not semantically dominant (having contextual reference), and CC has not occurred. Lepschy reports that CC in the second instance does not feel natural to him: Thus the choices in (a) are not random, and they are just as expected if the verb to which a clitic climbs cannot be semantically dominant.

However, there are many counter-examples to this hypothesis; e.g.,

- (b) *Il pane del povero è duro, e non è giusto dire che dove c'è poca roba c'è poco pensiero. Al contrario. Stare a questo mondo è una fatica, soprattutto saperCI STARE.*

'The bread of the poor is hard, and it isn't right to say that where there's little material goods there's little thought. On the contrary. Just existing in this world is an effort, especially knowing how to exist here.' (Pratolini, 275)

Here the verb to which the clitic climbs (*sapere*) must be semantically dominant; since *stare* has contextual reference. Other examples can easily be constructed. Thus I cannot at present find any obvious connection between Erteschik's notion and the semantics of CC sentences. Still, a more refined definition of semantic dominance might offer some insight on CC sentences.

The Prague School notion of 'communicative dynamism' (CD), also discussed by Erteschik, may well be essentially the same as semantic dominance. CD is, briefly, used to mean 'a property of communication, displayed in the course of the development of the information to be conveyed and consisting in advancing this development' (Firbas 1972:78). The various elements of an utterance carry various 'degrees' of CD. Thus, in CD terms, one might claim that the verb to which a clitic climbs carries a lower degree of CD than the embedded verb from which the clitic climbs.

Another idea which may help in understanding the semantics of a CC sentence is that of Lindholm, who looks at sentences with asymmetrical *and* in English and at the 'verb-expectant' in Tamil, and concludes (1975:39) that the (near) juxtaposition of verbs or verbal elements is associated with 'a perception of conceptual unity'. Lindholm defines the essence of conceptual unity as

'the sense of the combination of the notions expressed by the conjoined verbs impinging as a whole on the object. Thus, there is essentially just a single perceived relation between the object and the complex predicative idea embodied in the conjoined verbs.' (27-8)

Certainly, an auxiliary and main verb are involved in conceptual unity of this sort. And if my hypothesis is correct, the two verbs in a CC sentence are also involved in such a conceptual unity.

Schmerling (1975:219-20) also studies asymmetrical *and*, concluding that 'the first conjunct is, in a sense, a comment on the second'. She says that each conjunct alone lacks a 'semantic integrity' which is not lacking in the over-all sentence. Once more, her notion of semantic integrity may be applied to CC verbal complexes and to auxiliary + participle complexes. The complexes have a semantic integrity which their parts in isolation lack.

Other notions which may be relevant to an understanding of the semantics of CC sentences are 'assertion' and 'main assertion' (Hooper & Thompson 1973, Andersson 1975 [especially Chap. 2], Green 1976—and, for an important modification, Hooper 1975 and Dalgish 1979), as well as 'clausemateness' (Ross 1975), and 'clausal independence' (Horn 1978, esp. p. 200).

In the main text, I have avoided using any of these terms because of difficulties both in defining them precisely (difficulties that the authors in each case point out) and in testing them, and also because their import for the analysis of CC sentences is unclear. I cite them here as promising areas for potential future research.

#### APPENDIX B

List A gives verbs which are attested with CC in my files, or which consultants agree (to a large extent) are acceptable with CC. Some of the attested examples are not acceptable to many speakers, especially the ones from Old Italian. I have marked these with a plus sign.

List B gives verbs which cause doubts in my consultants' minds, or upon which they disagree, sometimes strongly.

List C gives verbs which all my consultants reject with CC, regardless of context.

## LIST A

<i>andare</i> 'go' (with both <i>a</i> plus an infinitive and the - <i>ndo</i> form)	* <i>intendere</i> 'intend' (Old Italian)
<i>avere a</i> (see fn. 29)	<i>mandare</i> 'send'
<i>avere da</i> 'must'	* <i>osare</i> 'dare'
<i>cominciare</i> 'begin'	<i>potere</i> 'can'
<i>continuare</i> 'continue'	<i>riuscire</i> 'succeed'
* <i>convenire</i> 'be suitable' (Old Italian)	<i>sapere</i> 'know'
* <i>credere</i> 'believe' (Old Italian)	* <i>solere</i> 'used to'
<i>detestare</i> 'detest' (used with CC in Rizzi 1978)	<i>stare a</i> (a form which carries tense)
<i>dovere</i> 'must'	<i>stare per</i> 'be about to'
* <i>finire</i> 'finish'	<i>stare</i> plus the - <i>ndo</i> form 'be in the process of'
* <i>imparare</i> 'learn'	<i>tornare</i> 'return'
<i>incominciare</i> 'begin'	<i>venire</i> 'come' (with both <i>a</i> plus an infinitive and the - <i>ndo</i> form)
* <i>iniziare</i> 'initiate'	<i>volere</i> 'want'

## LIST B

<i>affrettarsi</i> 'hurry'	<i>offrire</i> 'offer'
<i>amare</i> 'love'	<i>ordinare</i> 'order'
<i>apprestarsi</i> 'hurry'	<i>pensare a</i> 'think about'
<i>ardire</i> 'dare'	<i>pensare di</i> 'intend'
<i>arrivare</i> 'arrive'	<i>permettere</i> 'permit'
<i>cercare</i> 'try'	<i>preferire</i> 'prefer'
<i>cessare</i> 'stop'	<i>prendere a</i> 'take up'
<i>chiedere</i> 'ask'	<i>proibire</i> 'forbid'
<i>consentire</i> 'consent'	<i>promettere</i> 'promise'
<i>consigliare</i> 'advise'	<i>proseguire</i> 'proceed'
<i>correre</i> 'run'	<i>provare</i> 'try'
<i>decidere</i> 'decide'	<i>restare</i> 'stay'
<i>desiderare</i> 'desire'	<i>rifiutare</i> 'refuse'
<i>dimenticare</i> 'forget'	<i>ringraziare</i> 'thank'
<i>dire</i> 'say'	<i>rinunciare</i> 'renounce'
<i>domandare</i> 'ask'	<i>scendere</i> 'descend'
<i>dubitare</i> 'doubt'	<i>seguire</i> 'proceed'
<i>esitare</i> 'hesitate'	<i>sembrare</i> 'seem'
<i>fare bene a</i> 'do well at'	<i>smettere</i> 'quit'
<i> fingere</i> 'pretend'	<i>stentare</i> 'have difficulty'
<i>giurare</i> 'swear'	<i>tardare</i> 'delay'
<i>insegnare</i> 'teach'	<i>tenerci</i> 'keep on, persist'
<i>mettersi</i> 'begin'	<i>tentare</i> 'try'
	<i>tralasciare</i> 'overlook'
	<i>usare</i> 'used to'

## LIST C

<i>abituarsi</i> 'be accustomed'	<i>degnare</i> 'deign'
<i>aspettarsi</i> 'expect'	<i>desistere</i> 'desist'
<i>astenersi</i> 'abstain'	<i>essere l'ultimo a</i> 'be the last to'
<i>bastare</i> 'be enough'	<i>forzare</i> 'force'
<i>bisognare</i> 'be necessary'	<i>godere</i> 'enjoy'
<i>bramare</i> 'burn with desire'	<i>impedire</i> 'impede'
<i>capitare</i> 'happen'	<i>incoraggiare</i> 'encourage'
<i>comandare</i> 'command'	<i>ingegnarsi</i> 'manage'
<i>contentarsi</i> 'be content'	<i>invitare</i> 'invite'
<i>costringere</i> 'force'	<i>obbligare</i> 'obligate'

*odiare* 'hate'  
*ostinarsi* 'persist'  
*otterrare* 'get permission'  
*pentirsi* 'repent'  
*persuadere* 'persuade'  
*piacere* 'please'  
*pregare* 'beg'  
*preoccuparsi* 'worry'

*prepararsi* 'prepare'  
*proporre* 'propose'  
*sforzarsi* 'force oneself'  
*stimolare* 'stimulate'  
*supplicare* 'beg'  
*trattenere* 'restrain'  
*valere* 'be worth, merit'  
*vantarsi* 'boast'

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