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Romance Clitics and PRO

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Introduction.

Pronominal clitics in Romance may either precede or follow the verb that they are associated with, depending on a number of factors some of which we shall try to elucidate in this article. Our analysis will take Romance clitics to invariably left-adjoin to a functional head. This will, in cases where that functional head dominates the verb, straightforwardly yield the order clitic-verb. The order verb-clitic will, on the other hand, be claimed to result from the verb having moved leftward past the functional head to which the clitic has adjoined (rather than having the clitic right-adjoin to the verb). We shall focus our attention on the question of clitic/verb order as it applies to embedded sentences, leaving for future work certain extra possibilities which appear in root sentences such as imperatives, and in certain other types of root sentences in languages such as Portuguese and Galician.

The order verb-clitic is found in embedded infinitives in Italian, but not in French. We shall take the Italian infinitive to move leftward past the clitic and to adjoin to the maximal projection whose head the clitic has adjoined to. This will produce in the case of control infinitives a structure in which the controlled subject PRO is governed by the infinitive. It will be claimed that government of PRO by the infinitive always holds in Italian (not only in the presence of a clitic). Such government is not compatible with the LGB theory of PRO, but we shall argue that it is compatible with, and in fact supports, a particular

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interpretation of the modification of the LGB binding theory that Chomsky has suggested in Knowledge of Language.

More specifically, we shall argue that controlled PRO is always governed and, paradoxically, that the PRO theorem nonetheless continues to hold to a significant degree of generality and continues to play a major role in determining the distribution of PRO.

It will further be claimed that this approach makes better sense of the little studied contrast with respect to control between whether and if, and in particular of the corresponding complex array of data in Romance, than alternative approaches to control. If this is correct, then we will have found evidence in this area to support the general approach to PRO that takes its distribution to follow from binding theory (and hence for the specific analysis of PRO as being simultaneously anaphoric and pronominal), as well as having found evidence for the presence of an element PRO in syntactic representations.

Part I. Romance Clitics.

Section 1.1. Infinitives.

French and Italian differ in that French clitics precede embedded infinitives whereas Italian clitics follow them:

- (1) Lui parler serait une erreur. (him_{dat}.to-speak
would-be an error)
- (2) *Parler-lui serait une erreur.
- (3) Parlargli sarebbe un errore. (to-speak him_{dat}.
...)
- (4) *Gli parlare sarebbe un errore.

A possible approach to this contrast would be to distinguish the two languages in terms of type of adjunction - French would left-adjoin its clitics to the infinitive while Italian would right-adjoin its. In earlier work,¹ we rejected this approach, in part because it would allow no interesting account of the fact that Italian does not permit its clitics to follow a finite verb:

- (5) Sarebbe assurdo che tu gli parlassi. (it-would
-be absurd that you him spoke)
- (6) *Sarebbe assurdo che tu parlassigli.

The contrast between (3) and (6) will turn out to be indirectly related to the fact that the embedded

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verb in (6) is specified for both agreement and tense, while the infinitive of (3) is not. We can note immediately, however, that no simple statement of the sort 'a clitic may not follow an agreeing verb form' would suffice (even descriptively), since the order verb-clitic is possible with Portuguese infinitives, even with those that show agreement, and since clitics may follow agreeing finite verbs in Portuguese root clauses, as well as in both French and Italian imperatives. Similarly, there is no simple prohibition against a clitic following a tensed verb, as seen again in Portuguese root clauses, as well as in a Friulian construction to be discussed below.

On the basis of these considerations and others that will follow, we continue to consider that an approach to (1) vs. (3) in terms of left- vs. right-adjunction of the clitic is not to be pursued. This leaves us, in turn, with the question of why right-adjunction is not available to clitics. One possible answer would be that right-adjunction is not available at all, but that seems too strong a position to take, especially thinking of Chung and McCloskey's (1987, 195) discussion of pronoun postposing in Irish, as well as our (1980', sect. 2.2) and Rizzi's (1982, chap. IV) analysis of subject inversion/postposition in French and Italian. A potentially more promising answer would be to generalize Williams's (1981) proposal about right-headedness in morphology to instances of X^0 constituents created by adjunction. If such constituents must be right-headed (at least in languages of the sort under discussion), then adjunction to X^0 must always be left-adjunction, given the standard interpretation of adjunction as creating a category of the same type as the element adjoined to.

We are assuming that Romance clitics have the (perhaps defining) property that they must adjoin to some X^0 element.² Let us assume further, at least for the purposes of exposition, that they must adjoin to a non-lexical X^0 , i.e. to a functional head. Thus in (5) the clitic gli has adjoined to the functional head position in which the verb is found as a result of V-to-I movement of the familiar type.³ The same will be true of lui in (1), assuming the verb to move out of VP in French infinitival structures, as Pollock (1989, sect.2.4.1) argues.

Turning to (3), we see that if gli there is not right-adjoined to the infinitive itself, then it must be left-adjoined to some empty head position. It seems

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unlikely that that position could be that of the V-trace within VP, since that would amount to allowing a trace to be a proper subpart of an X^0 constituent.⁴ Furthermore, that would prevent us from making the required distinction between infinitives and finite verbs (i.e., if (3) had the clitic adjoined to the V-trace, why would (6) not be able to?).⁵ We conclude, instead, that gli in (3) must be left-adjoined to an empty I-type position. Moreover, the preceding considerations that count against the idea of having a clitic adjoined to a V-trace carry over to the idea that a clitic might be adjoined to an I-trace. In other words, the empty I position to which the clitic is adjoined in (3) must not have been moved through by the infinitive.

The representation that this leads us to is the following:

(7) ...V...CL+I...[vp [v e]...].

in which the clitic has adjoined to I and V has moved leftward skipping over I. Let us propose that in so doing V adjoins to IP. We return to the implications for PRO in Part II below. Adjunction of the infinitive to IP is actually compatible with Chomsky's (1986a, 73) discussion of restrictions on head movement, since the infinitive does not move back into a head position and consequently avoids creating an 'improper movement' violation.⁶ As far as Chomsky's (1986a, sect.8) Minimality Condition is concerned, the above representation requires that I' be defective, as he assumes.

We are now in a position to return to the contrast between (3) and (6), i.e. to the question of why V in (7) can be an infinitive but not an embedded finite verb. We adopt a suggestion made to us by Esther Torrego in response to an earlier presentation of this work, namely that finite verbs cannot mimic infinitives here because the former, contrary to the latter, must pick up a suffix corresponding to each functional head. In effect, our earlier claim that I in (7) cannot be a trace⁷ means that the I in (7) corresponds to a functional head position that V need not move through. Put another way, our proposal concerning the structure of sentences with verb-clitic order requires that there exist such an abstract I for the clitic to adjoin to. Torrego's idea amounts to saying that in finite sentences there can be no such abstract I.

In the context of Pollock's (1989) proposals concerning multiple I positions, more must be said, however. If in certain cases there can be two I posi-

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tions: ...I₁...I₂...V... (e.g. AGR and T(ense)) such that V must move through both, then it is true that the clitic has no (non-trace) empty I position to attach itself to and so must adjoin to the I position in which the verb finds itself at S-structure. What needs to be said further is that UG does not permit the use of a 'wild card' I-type node (call it I_W) which could appear in a representation like this: ...I_W...I₁...I₂...V... in such a way that the clitic could adjoin to I_W, while V moves through the two usual nodes (AGR and T) and subsequently adjoins to I_WP, yielding the order ...V...CL+I_W... with V an embedded finite verb. Let us assume, then, that UG permits empty I nodes of only two types: a) traces (to which a clitic may never adjoin) and b) non-trace abstract I nodes that are the non-overt counterpart of an otherwise legitimate I-type category. More specifically, b) will allow an abstract T or an abstract AGR, but if T and AGR are the only two functional categories that appear in embedded S's,⁸ then b) allows for nothing else. Given this restriction on available I nodes, the absence of embedded V-CL order in the case of finite verbs will follow from the unavailability of any free I node for CL to adjoin to, as a function of the fact that a finite verb must merge with both T and AGR.

In (7) on the other hand, i.e. in the case of infinitives, we can take CL to adjoin to the free I node that is available by virtue of the infinitive not being obliged to merge with both T and AGR.⁹ The precise identity of the free abstract I node in (7) is not immediately clear, however, since the infinitive verb shows neither an overt AGR suffix nor an overt T suffix in Italian. For much of what follows, the exact label of the free I to which CL attaches in (7) will not be relevant. For concreteness, let us tentatively take it to be T,¹⁰ rather than AGR.¹¹ Let us in addition follow Raposo (1987) in taking the infinitival -r(e) suffix of Italian and French to correspond to a functional head having nominal properties, somewhat like English -ing. Calling this element INFN and adding it to (7), we arrive at the more highly specified representation in (8):

(8) ...V+INFN...CL+T...[INFN e]...[vp [v e]...
(Italian)

in which V has adjoined to INFN and V+INFN then adjoined to TP.

From this perspective, French infinitives will involve raising V to INFN, but will have no additional movement of the V. Furthermore, instead of adjoining

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to T, as shown in (8) for Italian infinitives, CL in French will adjoin to INFN:

- (9) ...T...CL+[INFN V+INFN]...[vp [v e]...
(French)

On the assumption that certain adverbs can be generated between INFN and VP (e.g. left-adjoined to VP), the raising of V to INFN will have the effect of moving V across those adverbs, much as in Pollock (1989, sect. 2.4), while leaving open the question of why there is no comparable raising of V to INFN in mainland Scandinavian.¹²

Consider now the case of adverbs or similar elements generated (or subsequently placed) between T and INFN (e.g. left-adjoined to INFN-P). V-to-INFN raising will not change the relative order of such adverbs and the verb, so that in French, they will appear at S-structure to the left of the infinitive. In Italian, on the other hand, there is additional movement of the infinitive which left-adjoints to TP. This additional movement will carry the infinitive to the left of any adverb occurring in between T and INFN. Put another way, Italian will differ from French, with respect to these adverbs, in having them necessarily to the right of the infinitive at S-structure. This point is essentially equivalent to that made by Pollock (1989, 412).¹³

If some adverbs can be left-adjoined to VP, and others to INFN-P, the question arises as to whether any can be left-adjoined to TP. If there are adverbs with that property, then we might expect to be able to see that property reflected in Italian, since such adverbs would, if able to be adjoined above the also adjoined infinitive, appear at S-structure to the left of the infinitive, unlike those adjoined to INFN-P (or VP). (In French, it would be harder to distinguish them from those adjoined to INFN-P, given the reduced scope of infinitive movement.) Some examples of adverbs appearing to the left of Italian infinitives are given in Rizzi (1982, 103). In addition, the Piedmontese negative morpheme nen obligatorily appears to the left of the infinitive, despite appearing obligatorily to the right of the finite verb.¹⁴

In its positioning with respect to the infinitive and finite verb, Piedmontese nen strongly resembles French pas, discussed by Pollock (1989), who takes pas to be generated in between T and AGR (in between T and INFN, from the perspective of (8) and (9)). The finite

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verb in French raises to T, across pas, whereas the infinitive raises only as far as AGR, leaving pas to its left. This analysis of pas does not transpose to Piedmontese in a way compatible with our analysis of verb-clitic order. The problem (which does not arise within French) is that Piedmontese is exactly like Italian (and unlike French) in having the order infinitive-clitic. Thus, one must account for the fact that Piedmontese infinitives cannot move past nen even though they can move past the clitic. More specifically, the problem is that if the order nen-infinitive is attributed to a (French-like) necessarily short movement of the infinitive (up to INFN, from our perspective), then there is no way to account for the position of the clitic, and in particular for the Piedmontese-French contrast with respect to clitic order.

We are led to propose, then, that nen is higher up (further to the left) than what Pollock suggested for pas:

- (10) ..nen..V+INFN..CL+T..[INFN e]..[vp [v e]...
(Pied.)

in which V has moved through INFN and then adjoined to TP as before, but where nen is to the left of T rather than in between T and INFN. Taking nen to be adjoined to the left of TP, we have a consistent structure, but the question arises as to why the two elements adjoined to the left of TP could not be so in the opposite order: *...V+INFN...nen...[Tp.... This question will be left open, but it is tempting to think that there might be a link between this restriction and that seen in English '*John not knows Bill', in particular if Rizzi's (to appear) approach to the latter is on the right track, with a minimality violation created (in English, at LF) by the negative morpheme intervening between the adjoined (crucially) verb and its trace.

The similarity between nen and pas is emphasized by the fact that in auxiliary - past participle sentences the preferred position for nen, like that of pas, is to the left of the infinitival auxiliary.¹⁵ One is led to wonder, then, if pas should not also be considered to be adjoined to the left of TP, rather than below T, as Pollock has it. This would raise the question of how exactly to allow for the order infinitive - pas where the infinitive is an auxiliary (a question that arises in any event for Piedmontese), and would presumably require postulating the presence of another functional head node above T into which (only) the auxiliary could move. Somewhat similarly, if it is

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the case that pas/nen are left-adjoined to TP in finite clauses, too, there would have to be a higher X^0 for the finite verb to move into, presumably the AGR of Chomsky (1988) and Belletti (1988).

Summing up, we have claimed that infinitives in Italian left-adjoin to TP, that clitics in Italian infinitival clauses left-adjoin to T, that infinitives in French move up only to INFN and that clitics in French infinitival clauses left-adjoin to INFN. We have in addition taken Piedmontese infinitives and associated clitics to behave as in Italian, despite certain differences with respect to negation.¹⁶

In the languages discussed so far, infinitive adjunction to TP is paired with clitic adjunction to T and infinitive movement to INFN is paired with clitic adjunction in INFN. Given the constraint assumed earlier against clitic adjunction to trace, it is not possible to combine clitic adjunction to INFN with infinitive adjunction to TP, since the latter presupposes infinitive movement through INFN (to pick up the infinitival suffix). However, there is no reason why in some language clitic adjunction to T could not be paired with infinitive movement to INFN.¹⁷ This, we would argue, is precisely the case in Occitan, in earlier French and to some extent still in literary French. For example, in literary French (but not in colloquial French) it is possible for the clitics y and en to be separated from the following infinitive by certain adverbs:

(11) ...en bien parler... ('of-it well to-speak')

We can take this possibility to correspond to (12):

(12) ...CL+T...ADV...V+INFN...[vp [v e]...]

in which V has raised to INFN and CL moved across ADV to T.¹⁸

Another configuration that comes to mind would be one in which V moved up through INFN, but instead of adjoining to TP, moved into T itself. As before, this would preclude the CL adjoining to INFN, since INFN would be a trace, but would be compatible with CL adjoining to T:

(13) ..CL + [[V+INFN] T]..[INFN e]..[vp [v e]..]
(Sard.)

This arguably corresponds to the situation in Sardinian, which has the order clitic-infinitive, apparently like French and Occitan, but in fact differs from them in prohibiting in most contexts the order ADV-infinitive where ADV is of the type that can precede the infinitive in French and Occitan, but not

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in Italian.¹⁹ Having the infinitive move into T accounts directly for the position of the clitic, since under our analysis, a verb can be followed by a clitic only if the verb is adjoined to some XP. The adverb contrast between Sardinian and French/Occitan will follow if the adverbs in question (those corresponding to French bien, mieux, mal ('well', 'better', 'badly')); also the moved quantifiers like French tous, tout, rien ('all', 'everything', 'nothing')²⁰ can adjoin to INFN-P, but not to TP.²¹

Sardinian does allow these moved quantifiers to precede the infinitive in modal constructions of the sort that show clitic climbing. We suggest that in such sentences the moved quantifier has moved out of the embedded sentence entirely, i.e. is not found anywhere in the representation shown in (13). Instead, we have:

(14) ..Modal...QP...[Modal e]...[[V+INFN] T]...
in which the QP has moved out of the embedded clause past the base position of the modal verb and adjoined probably to the higher VP. Since the modal verb itself will have raised to its T or AGR, the QP will end up in between the modal and the embedded infinitive. In this way, we can maintain the account suggested in the preceding paragraph for the fact that in contexts with no higher modal into whose sentence to raise the QP must remain post-infinitival. Such raising of QP past the base position of a higher modal is supported by French examples such as (15):

(15) ...tout pouvoir faire.. ('everything to-be-able to-do')

in which the object of the lower infinitive appears visibly to the left of the higher modal. Of course, the Sardinian example looks more like (16):

(16) Jean peut tout faire. ('J is-able everything to-do')

That Sardinian does not have the word-for-word equivalent of (15) is akin to the fact that French does not have (17):

(17) *Jean tout peut faire.

When the modal itself must move up to T or beyond, as is true of French finite modals and all Sardinian modals, the raised QP will appear to the right of the modal in S-structure even though the QP is contained in the matrix clause.²²

This approach to Sardinian '..Modal..QP..Infin...' will probably turn out to be supported by the very fact that there is no counterpart in Sardinian with QP replaced by one of the above-mentioned adverbs (taken

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to modify the infinitive). This asymmetry between QP and ADV can be related, given our proposal, to the fact that there is a corresponding asymmetry in French between QP and these adverbs as far as raising into a higher sentence is concerned, namely that whereas (15) and similar examples are perfectly common in French, parallel examples with a moved adverb are very difficult to find (although not completely non-existent).²³

Further support may come from a contrast between English and mainland Scandinavian concerning negation. In English, one can have double negation of the following sort:

(18) He says that he has not not done it.

In mainland Scandinavian, this seems to be impossible:²⁴

(19) *Han saeger att han inte har inte gjort det.

('he says that he not has not done it')

Without the second inte, the sentence would be fine (embedded inte precedes the finite verb in mainland Scandinavian). If the second not in the English example were contained in the participial clause, we would have to say that for some unclear reason Scandinavian participial clauses differ. Our proposal is that neither English nor Scandinavian past participial clauses can contain the negative morpheme, and that the contrast between (18) and (19) should be related to the independently needed contrast between English and mainland Scandinavian concerning auxiliary raising, which takes place in the former, but not in the latter.²⁵ More precisely, let us take English (18) to have a D-structure of the form: '...not...not...have...', with have raising to T or AGR not merely across one not, as is generally supposed to be possible, but here across two.²⁶ If this is the only way of deriving (18), then (19) will be unavailable in mainland Scandinavian simply as a consequence of the fact that those languages lack auxiliary raising. If this is correct, then (18) is like (14) in having an element in a higher clause (the second not of (18), the QP of (14)) which at first glance seemed to be in the lower clause (participial in (18), infinitival in (14)).

In conclusion, then, the Sardinian '...Modal... .QP...infinitive...' construction seems ultimately to be compatible with the analysis of Sardinian infinitives as moving to T, i.e. to a higher functional head than the one French infinitives move to. The extra distance moved by the Sardinian infinitive as compared with the French one is what is responsible for the much more limited availability in the former of infinitives

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preceded by QP or ADV. Italian is more like Sardinian than like French in this respect, due, we claim, to Italian infinitives also moving up to the T level.²⁷ At the same time, the difference between Italian infinitive adjunction to TP and Sardinian infinitive movement to T accounts for Italian having infinitive-clitic order and Sardinian clitic-infinitive.

Before leaving infinitives for past participles, let us ask if the above differences in verb movement could possibly be correlated with other properties of these languages. One point to consider is that Occitan, Sardinian and Italian are all null subject languages, in the core sense of the term, i.e. all three are languages that normally fail to express a pronominal subject. If we are correct in taking Occitan to have V-to-INFN with the possibility of no further V-movement, then it follows that having null subjects cannot be a sufficient condition for having systematic V-raising to a position above INFN. On the other hand, it might be the case, in the spirit of Kayne (1989a, 241) and Belletti (1988) that having null subjects is a necessary condition for such long V-raising, i.e. that French infinitives raise no further than INFN for principled reasons.²⁸

The Italian-Sardinian contrast between adjunction to TP and movement to T does not lend itself to any simple null subject approach. However, there may possibly be a link with the so-called 'free (subject) inversion' construction, insofar as Sardinian, according to Jones (to appear), tends to avoid that construction with indefinite NPs that are in an agreement relation with the verb.²⁹

Section 1.2 Past participles.

Clitics occur with past participles in Romance rather little. The order clitic-past participle is attested in Belgium,³⁰ but is absent from standard French. There are two kinds of environments in which one might have expected to find it, one with and one without a preceding auxiliary. In French, when there is an auxiliary, the clitic adjoins to the left of that auxiliary:

(20) Marie nous a parlé. ('M us has spoken')

(21) *Marie a nous parlé.

This might be related in part to the sometimes obligatory raising of clitics to the causative verb in complex causative constructions:³¹

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(22) Jean nous fait photographier par Paul. ('J us makes to-photograph by Paul')

(23) *Jean fait nous photographier par Paul.
But that would not cover (24), in which there is no auxiliary:

(24) *tout individu nous présenté ('any person us introduced')

Here the participial relative clause provides no well-formed means of using a dative clitic, in standard French. Examples comparable to (24) are given by Grevisse (1964, sect. 477) for Belgian French. The order participle-clitic is found in no French, as far as we know:

(25) *tout individu présenté-nous

We have no interesting proposal to make concerning (24).

The absence of (25) from all French is almost certainly related to the absence of infinitive-clitic order, and perhaps to the absence of a certain kind of subject inversion, as mentioned in the last paragraph of section 1.1. Of the languages that have infinitive-clitic order, some, but not all, do have participle-clitic order. One is Italian, which allows the equivalent of (25),³² although not that of (21):

(26) ogni persona presentataci... ('every person introduced us_{dative}')

(27) *Maria ha parlatoci.

(28) Maria ci ha parlato. (= (20))

Italian also allows past participle-clitic order in the so-called absolute construction studied by Belletti (1981; 1989) and Kayne (1989c, sect. 6):

(29) Una volta conosciutami, Gianni.. ('once known me, G...')

The analysis of verb-clitic order developed so far has the clitic in such cases left-adjoined to an empty (non-trace) functional head position. In (26) and (29) the a in presentataci and conosciutami represents feminine singular agreement (with the head of the relative in (26) and with the accusative object clitic in (29)), so that the (following) clitic can clearly not be taken to be left-adjoined to AGR. Let us therefore take it to be adjoined to an abstract T:

(30) ...V_{pp}+AGR...CL+T...[AGR e]...[vp [v e]...]

in which the past participial V merges with AGR and then left-adjoins to TP.

This allows in turn a potentially interesting account of the ungrammaticality of (27), if we assume that a past participle can be associated with an abstract T only in the absence of an auxiliary. Put

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another way, the abstract T and the auxiliary play the same role with respect to the past participle, so that if the latter is present the former cannot be. If this is correct, then (27) is excluded since the clitic has no functional head to adjoin to: T is absent because of the presence of the auxiliary,³³ and the empty AGR is a trace and so not a possible adjunction site.

The equivalent of (27) is possible, however, in Piedmontese.³⁴ It is tempting to try to relate this to the fact that the Piedmontese counterpart of (27) has no a or o, i.e. displays no morpheme corresponding to the Italian agreement morpheme. This is not a general fact about Piedmontese past participles, which can have an a in those cases in which the clitic does raise to the auxiliary (possible when the auxiliary is non-finite).³⁵ It suggests the following: Piedmontese past participles are not different from Italian past participles as far as cooccurrence with T is concerned. Rather, the absence of any agreement morpheme in Piedmontese (27) allows taking AGR there not to have been picked up by V, and hence allows us to claim that (27) in Piedmontese actually has the clitic left-adjoined to AGR:

(31) ...Aux...V_{pp}...CL+AGR...[vp [v e]...
 in which V_{pp} has left-adjoined to AGRP.

Note that Italian (27) has an o that is an agreement morpheme in the sense that in an agreement context it alternates with a, i, and e: o=m.sg., a=f.sg., i=m.pl., e=f.pl.:

- (32) Tu lo hai visto. ('you him have seen')
- Tu la hai vista. ('you her ...')
- Tu li hai visti. ('you them (masc.)...')
- Tu le hai viste. ('you them (fem.)...')

However, (27) itself is not an instance of an agreement context. Past participle agreement in Italian is found in the presence of auxiliary 'have' when there is a preceding accusative clitic of an appropriate sort. The clitic of (27) is dative, and such a clitic does not trigger past participle agreement in Italian, as seen in (28), where the participle ends in -o, despite the clitic being plural. (The participle never agrees with the subject of 'have', which here is feminine.) Put another way, the -o of (27) and (28) is an agreement morpheme which happens to have nothing with which to agree, so that one might say that it shows the 'default' m.sg. form. The point is that for our account of the ungrammaticality of (27) in Italian to go through, it must be the case that this -o counts as AGR and forces V_{pp} to adjoin to AGR even when the -o

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represents the default spelling. It is only when this morpheme is missing entirely, as in Piedmontese (27), that V_{pp} can skip over AGR leaving AGR as a possible adjunction site for the clitic.³⁶

Section 1.3 Finite verbs.

The fact that embedded finite verbs do not show the verb-clitic possibility in Romance was discussed earlier - cf. the text surrounding (6) and (7). Here we briefly mention two exceptions. The first is found in written Italian and seems to be limited to the anaphoric clitic si.³⁷ We have not seen any attestation for a spoken dialect. Conceivably, si in this written Italian can be taken to be a true suffix, i.e. to be an X^0 element to which the inflected verb adjoins, reversing the usual relation between clitic and inflected verb/empty functional head.³⁸

The second case does come from a spoken dialect, more exactly from certain varieties of Friulian, in which what looks like an embedded finite verb can be followed by a clitic when it is preceded by the impersonal clitic si.³⁹ In Italian, this clitic precedes the finite verb, along with other clitics:

- (33) Si parla. ('SI speaks')
 Se ne parla. ('SI of-it speaks')
 Lo si vede. ('him SI sees')

In these varieties of Friulian, one has instead 'Si V CL'. We do not know why this possibility is found in these dialects and not in others, or not in Italian, but will attempt to account for the fact that within the relevant dialects the order finite verb-clitic seems to depend on the presence of impersonal si.

Burzio (1986, 59) (cf. also Cinque (1988, 537)) discusses the fact that with Italian impersonal si the tensed verb never shows agreement, even in cases where a participle does:

- (34) Si è arrivati. ('SI is(3sg.) arrived(3pl.)

More exactly, he takes the 3sg. form to be the neutral (default) form of the tensed verb, so that there is truly no agreement between è and si in sentences like (34) (for reasons not directly relevant here). Thinking of our discussion of agreement with past participles in (26)-(32), an important question is whether the absence of finite verb agreement in (33) and (34) corresponds to the absence of any agreement morpheme or simply to the presence of an agreement morpheme in default form. For past participles, it is

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clear that there is a morpheme in default form in Italian. But the finite verbs of (33) and (34) arguably show no comparable morpheme - the final vowel on the verb in (33) can be taken to be the theme vowel for the given conjugation class. Compare the fact that in J.W. Harris's (1969) analysis of Spanish, the person-number morpheme for 3sg. is taken to be zero for several tenses. Let us conjecture that a phonological analysis of the relevant varieties of Friulian will be compatible with taking the 3sg. person-number morpheme to be zero in all cases of 'Si V CL'. If so, that would allow us to claim that in those cases there is in fact no person-number morpheme at all suffixed to the verb, so that the representation (35) would be available:

(35) ...si...V+T...CL+AGR...[T e]...[vp [v e]...
 in which V raises to T followed by the tensed V left-adjoining to the AGRP headed by the abstract AGR which was not obliged to merge with V by virtue of there being no syntactic agreement.⁴⁰

In conclusion, then, the Friulian 'Si V CL' construction may provide support for the general approach to (embedded) verb-clitic order that we have adopted, one in which the clitic left-adjoins to an abstract T or AGR and the verb to the maximal projection of that T or AGR. In Part II, we explore the way in which such verb-adjunction impinges, in the case of infinitives, on patterns of control.

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Part II. PRO

2.1. English.

There is in English a contrast between whether and if with respect to control:

(36) He doesn't know whether to go to the movies.

(37) *He doesn't know if to go to the movies.

Both whether and if are of course possible in the finite counterparts to these:

(38) He doesn't know whether he should go to the movies.

(39) He doesn't know if he should go to the movies.

The grammaticality of (36) can be straightforwardly assimilated to that of other Wh-infinitive constructions such as (40) if, following Katz and Postal (1964, 96) and Larson (1985, 238), we take whether to be a Wh-phrase:

(40) He doesn't know when to go to the movies.

From this perspective, the whether construction of (41) is akin to (42):

(41) Whether they give him a seat or not, he'll be happy.

(42) Wherever they put him, he'll be happy.

The ungrammaticality of (37) leads naturally to the claim that if is not a Wh-phrase, which is supported by the absence of (43):

(43) *If they give him a seat or not, he'll be happy.

Both Katz and Postal and Larson take whether to be the Wh-counterpart of either (cf. neither, as the negative counterpart). This presumably contributes to licensing the combination whether or not, as in (44):

(44) He doesn't know whether or not he should go to the movies.

If if has no direct relation to either and in particular is not a Wh-phrase counterpart of it, the ungrammaticality of (45) is not surprising:

(45) *He doesn't know if or not he should go to the movies.⁴¹

Conversely, the if of (39) almost certainly bears some relation to that of conditionals:

(46) If you had not left, he would have been a lot happier.

Since this if does not alternate with Wh-phrases, it is not surprising that whether, a Wh-phrase, is not found:

(47) *Whether you had not left, he would have been happier.

The conclusion that we would like to draw from all this is that the primary difference between whether and

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if is that the former is a Wh-phrase and the latter is not, and furthermore, that it is this difference in syntactic status that is responsible for the contrast in behavior with respect to control seen in (36) vs. (37).

As for the exact status of if, we will, in agreement with Emonds (1985, 287) take it to be a complementizer, and more precisely, to be an X^0 element. Emonds takes if, like other complementizers, to be of category P^0 , as opposed to Chomsky's (1986a) C^0 . We will call it C^0 , while keeping in mind that P^0 might perhaps be compatible with what follows, in particular a non-Case-assigning P^0 .

The basic proposal will be that control is incompatible with the presence of a lexical complementizer, and hence incompatible with if. Control is, on the other hand, compatible with whether since whether is not a lexical complementizer, but a Wh-phrase, i.e. is not a C^0 , but a phrase in the Specifier position of CP; nor is there any element in (36) that is a C^0 . As for the exact reason why a lexical complementizer inhibits control in (37), let us adopt as a first approximation the theory of control developed in Chomsky (1981) (LGB), which takes the controlled subject NP to be the element PRO, having the features +anaphoric and +pronominal. Principles A and B of the Binding theory combine to yield the so-called PRO theorem, which states that PRO must be ungoverned. Assume now that a lexically-filled C^0 counts as a governor for the PRO in subject position, but that a non-lexical C^0 position does not. (This is straightforward if IP is an inherent barrier⁴², if government of Spec,IP by C^0 depends on L-marking in Chomsky's (1986a) sense, and if a lexically-filled C^0 is an L-marker.⁴³ If IP is not an inherent barrier, then the irrelevance of a non-lexical C^0 should be taken to follow directly from the requirement that for the purposes of binding theory, a governing category can be induced only by a lexical governor.⁴⁴) Then the contrast between (36) and (37) follows from the LGB theory of control, via the PRO theorem.

2.2 French.

If we turn now to French, we see that French is substantially like English with respect to the phenomena of the previous section, once we abstract away from a major difference, namely that French lacks

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completely any counterpart to English whether. Corresponding to (38) and (39) French has only (48):

(48) Marie ne sait pas si elle devrait aller au cinéma.

This alone is not sufficient to tell us whether French si corresponds more to English if or to English whether. If we run through the various distinguishing properties noted above, we see that si corresponds strongly to if and not at all to whether. For example, the control counterpart of (48) is ungrammatical, like if in (37):

(49) *Marie ne sait pas si aller au cinéma (ou non).

Second, the French for (41) cannot have si, just as English does not use if (cf. (43)):

(50) *Si on lui donne une place ou non, il sera heureux.

(Possible is 'Qu'on lui donne...', with the basic complementizer que.) Third, the contrast between whether or not and *if or not in (44) vs. (45) places si with if:

(51) *Marie ne sait pas si ou non elle devrait aller...

Finally, conditionals in French do use si as English uses if (cf. (46)):

(52) Si vous n'étiez pas parti, il aurait été plus heureux.

The very fact that si corresponds to if and not to whether (plus the fact that no other French word corresponds to whether either) can be understood in terms of the Katz and Postal and Larson idea discussed earlier that whether is a Wh-phrase based on either. This is so because French lacks any single word for either, too (and similarly for neither).⁴⁵

That si is a complementizer⁴⁶ and more specifically a C⁰ makes it possible to account for (49) in exactly the same way as proposed earlier for English (37), i.e. in terms of the PRO theorem and government of PRO by si.⁴⁷

Both si and if must of course be taken not to be Case-assigners (contrary to English for) to exclude (53) and (54):

(53) *Marie ne sait pas si Jean aller au cinéma.

(54) *Mary doesn't know if John to go to the movies.

In being non-Case-assigning governors (across-IP), si and if have something in common with adjectives such as English likely. With respect to ECP effects, these C⁰

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pattern like the usual complementizers que and that, i.e. they do not permit extraction from the subject position just below them. This indicates that government by X^0 is not a sufficient condition for a Wh-trace to meet the ECP.⁴⁸

The de that precedes many French infinitives must now not be an instance of C^0 in, for example, (55), since if it were it would induce a PRO theorem violation parallel to that of (49) and (37):

(55) Jean essaie de comprendre. ('J tries DE to -understand')

At the same time, we would like to maintain our earlier account of the fact that de is incompatible with core cases of raising to subject position, with the nearest French counterpart to ECM constructions and with a Wh-phrase in Spec of CP, as well as of the fact that de must precede negation. The arguments given there⁴⁹ show clearly that de is not configurationally parallel to English to, and that it is at the CP level. Let us propose, then, that it is in Spec of CP. This leaves intact the account given of the four properties just listed, while allowing de to cooccur with PRO.

De can now cooccur with PRO because from the Spec position it does not govern PRO. If IP can be an intrinsic barrier,⁵⁰ this follows from there not being any lexical C^0 in (55) combined with the fact that it is in general not possible for a Specifier to be an L-marker. (If IP cannot be an intrinsic barrier, then we would have to allow C^1 to inherit barrierhood from IP (and Wh-phrases to adjoin to IP⁵¹).)

Taking de to be in Spec of CP (and generalizing that hypothesis to the very similar Italian di) has the additional advantage of permitting a straightforward account of the fact that Italian di can to some extent be crossed by clitics moving out of the infinitive up into the matrix, whereas Italian se (the counterpart to French si and a C^0 also, as we shall see below) cannot be.⁵² A further advantage lies in the fact that, although many French dialects have doubly-filled Comps with finite complementizer que, we know of none that allow de to cooccur with an immediately preceding (or following) Wh-phrase. This asymmetry will follow from que= C^0 vs. de=Spec,CP under the standard assumption that Wh-phrases must occupy Spec,CP themselves (plus the equally standard assumption that a Spec position can host only one phrase).

Finally, we note that there is a sharp asymmetry in Italian between che (=that) and di with respect to

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the possibility of being preceded by a preposition. Cinque (to appear, sect. 1.7.1) discusses the fact that che can in a more formal style be preceded by the preposition a:

(56) Sono contrario a che tu parta subito ('I-am
against to that you leave right-away')

If di were a C⁰ like che, we might expect it to behave the same, but in fact (57) and similar sentences are impossible:

(57) *Sono contrario a di partire subito ('I-am
against to DI to-leave right-away')

What is possible is (58), without the di:

(58) Sono contrario a partire subito.

Cinque argues that although the a of (58) looks like a true preposition, it is better analyzed as a complementizer, the simplest reason being that infinitives in Italian can never be preceded by a subcategorized preposition; the only exceptions are with a and di, precisely those prepositions which independently occur as complementizers. Cinque's argument against taking the a of (58) to be a true preposition (i.e. a P⁰ taking CP as complement) is convincing, but since he takes that a to be a C⁰, he is unable to bring (56) into the same paradigm (given the presence there of che=C⁰).

The perspective developed above permits us to put forth a partially different proposal: The a of (58) is not a true preposition, but neither is it a C⁰. Rather it, like French de (and Italian di) in (55) is a P⁰ occupying the Spec of CP position. This immediately accounts for the ungrammaticality of (57) (which would have had two Specs of CP),⁵³ in a way parallel to our account of (59) (cf. the discussion two paragraphs back):

(59) *Jean ne sait pas où de dormir. ('J neg.
knows not where DE to-sleep')

Furthermore, it allows us to extend Cinque's analysis of these a to that of (56) by saying that there, too, the a is in Spec of CP. The special stylistic status of (56) then correlates, presumably, with the fact that it, unlike (58), has a particular sort of doubly-filled Comp, i.e. a P-filled Spec of CP at the same time as a filled C⁰.⁵⁴

In conclusion, the syntax of French infinitival de appears to be compatible with our proposal to exclude French si and English if from control structures by using the PRO theorem and the C⁰ status of si and if.⁵⁵

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2.3 Italian.

There is no single word for either (or neither) in Italian, and, as we would then expect, no word corresponding to whether. There is, on the other hand, a word se, which resembles French si, and which, like French si, has much in common with English if. Like si and if, Italian se occurs both in embedded interrogative contexts and in conditionals:

(60) Gianni non sa se dovrebbe andare al cinema.
('G neg knows if he-should to-go to-the movies')

(61) Se Gianni avesse fatto questo, Paolo... ('if G had done this, P...')

It is, furthermore, not used in the construction represented by English (41), just as French si is not, as noted in (50). Nor can it occur in a constituent like whether or not, and in that respect again resembles French si in (51), as well as English if. There thus appears to be every reason to take Italian se to be an instance of C^0 .

Additional support for this hypothesis comes from clitic climbing considerations. As noted in Kayne (1989a, 245), se blocks clitic climbing into a matrix sentence more strongly than Wh-phrases do in general. This asymmetry, which is the opposite of what is often found with respect to extractions of other phrases, can be made sense of by taking se to be a C^0 (and Wh-phrases not to be), and by having clitic climbing forced to use C^0 as an escape hatch. A somewhat similar and at least as surprising asymmetry is found in the Italian counterpart to the easy to please construction, which is in general much more constrained than it is in English - in particular, the Italian equivalents of sentences like (62) are usually ungrammatical:

(62) This book is hard to convince people to read. For the empty category bound by the matrix subject to be able to appear in an embedded sentence the verb below the adjective must be of the type that allows clitic climbing. Our proposal (pp.251, 257) was that Italian (and French) easy to please involved an abstract equivalent of clitic movement. Relevant to the present discussion is the fact that an intervening se seems to block this construction more strongly than an intervening Wh-phrase:

(63) ??Questi libri sono difficili da sapere dove mettere. ('these books are hard DA to -know where to-put')

(64) *Questi libri sono difficili da sapere se

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rileggere. ('these books are hard DA to
-know if to-reread')
Again, we can take the asymmetry to follow from the
blocking of (abstract) clitic movement by se=C⁰.

Despite these many ways in which Italian se seems
definitely to be a C⁰ like French si and English if,
there is one major unexpected disparity in behavior:
Unlike si and if, Italian se is compatible with control:

- (65) Gianni non sa se andare al cinema. ('G neg.
knows if to-go to-the movies')

In light of the first two paragraphs of this section,
it would be totally implausible to try to interpret se
as an Italian equivalent of whether. But if so, the
contrast between (65) and its French counterpart (49),
repeated here as (66), seems mysterious:

- (66) *Marie ne sait pas si aller au cinéma.

The analysis we have developed so far would lead us
expect (65) to be ungrammatical, too - se, being a C⁰,
should govern PRO across IP and thereby induce a PRO
theorem violation.

2.4 Romance.

In the spirit of the comparative syntax work of
the past ten years, we must ask whether this Italian-
French difference is related to any other, in the hope
that if a correlation is discovered, it will point the
way toward a solution to the problem. In Kayne (1989a,
252) we suggested a correlation with the null subject
parameter, but consideration of additional Romance lan-
guages seems to indicate that that was incorrect.⁵⁶

While it is true that the null subject languages
Catalan⁵⁷ and Spanish appear to pattern with Italian as
far as (65) vs (66) is concerned, the null subject lan-
guages Occitan and Sardinian pattern instead with
French, i.e. they do not allow control with their
counterpart to if (se in Occitan (67), si in Sardinian
(68)):⁵⁸

- (67) *Sabi pas se anar al cinema. ('I-know not if
to-go to-the movies')

- (68) *No'isco si andare. ('neg. I-know if to-go')

We conclude that being a null subject language is not a
sufficient condition for permitting control with if and
therefore that there must be some other factor at issue
in the Italian/French contrast between (65) and (66)
that we started with.

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The question, then, is to figure out what Italian, Catalan and Spanish have in common that sets them off from French, Occitan and Sardinian. Our proposal is that the key property is that of infinitive-clitic order, which holds for the first three, but not for the last three, which show clitic-infinitive order.⁵⁹ Before going on to ask what the reason might be for control with if correlating with infinitive-clitic order, we will briefly mention some further Romance languages.

The languages/dialects of northern Italy are what we might informally call partial null subject languages, in that they typically allow a pronominal subject to fail to appear at all in some cases, but not in the systematic way found in Italian.⁶⁰ In most of these languages, a pronominal subject, when required to appear overtly, appears as a pronominal clitic.⁶¹ Within this set of languages, we have information concerning control with if in four. In Piedmontese, Milanese and Paduan, such control is possible,⁶² as in Italian. In Gardenese, it appears not to be.⁶³ Piedmontese, Milanese and Paduan are infinitive-clitic languages, like Italian. Gardenese is a clitic-infinitive language.

In the remainder of this article, we shall attempt to explain why control with the equivalent of if is possible in Romance only in infinitive-clitic languages.⁶⁴

2.5 Infinitive Adjunction Interferes with c⁰-Government

In Part I, we took infinitive-clitic languages to differ from clitic-infinitive languages in having their infinitive left-adjoin to the IP just below the C projection, with the clitic itself left-adjoined to the corresponding I (which we took to be T in most cases, AGR in some):

(69) ...V_{infin}+ [IP ...CL+I...]

The order clitic-infinitive in the other class of languages involved no such adjunction to IP, but rather the infinitive moving into some I position and the clitic adjoining either to that I position or to some higher one.

Recall now that we have suggested interpreting the ungrammaticality of control with if/si/se in French, Sardinian, Occitan, Gardenese (and English) as due to

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the government of PRO by the lexical C^0 and to the consequent violation of the PRO theorem:

(70) ...if...[IP PRO...]

In clitic-infinitive languages, the infinitive ends up in an I position below PRO. In the absence of if, control is perfectly possible and the standard conclusion is that the infinitive there does not govern PRO. In the presence of if, the infinitive moves to the same I and the same conclusion holds. In other words, in (71) PRO is governed by si/se and is not governed by the infinitive (independently of whether any clitic is present):

(71) ...si...[IP PRO...V_{infin}+I...]

By virtue of being governed by C^0 , PRO in (71) is in violation of the PRO theorem, i.e. of the conjunction of Principles A and B of the LGB binding theory.

Fleshing out (69) to show PRO and to show where the lexical C^0 is (when it is present) we have (72):

(72) ...se...V_{infin}+I...[IP PRO...(CL+)I...]

We have taken the infinitive to left-adjoin to IP, in these languages, whether or not a clitic is present. Put another way, in the infinitive-clitic languages like Italian, the infinitive will move into a position in between C^0 and PRO in the general case.

Let us propose, now, that in so doing, the infinitive blocks off government of PRO by C^0 and thereby eliminates the potential PRO theorem violation induced by that C^0 .

The precise mechanism involved will probably be minimality, in the sense of Chomsky (1986a, 10). We take government to be defined in terms of exclusion, as in his p.9, so that the adjoined infinitive in (72) clearly governs PRO. The question now is whether in (72) se governs PRO. Since V_{infin} is a closer governor, it would seem that it should not. However, the definition of minimality barrier given on his p.42 requires that the minimality barrier be a projection of the relevant closer governor, which is not the case in (72), given standard assumptions about adjoined structures. Thus we must revise the characterization of minimality barrier to allow for the case in which the node immediately dominating the closer governor is not a projection of that governor.⁶⁵

Summing up, the idea that we are pursuing is that a lexical C^0 will be expected to induce a PRO theorem violation when PRO is the subject of the IP sister of that C^0 . However, the government relation between C^0 and PRO that would be the cause of such a violation can

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be blocked by an intervening closer governor. In languages that have the order infinitive-clitic, and only in those, the infinitive itself can be the required closer governor, having moved into an appropriate position by adjoining to IP.

It should be noted that this account of the correlation between control with a lexical C^0 and infinitive-clitic order, insofar as it depends crucially on the sensitivity of PRO to government by that C^0 , supports the very postulation of a category PRO, i.e. of a type of empty NP with a particular position in the syntactic structure and with the features +anaphoric and +pronominal given it by the LGB binding theory.

In effect, we can think of the process of looking at a set of Romance languages, moving from one with clitic-infinitive order to the opposite type and back, as a kind of experiment in which we hold the basic structure of a language - Romance - (relatively) constant,⁶⁶ while varying the position of the infinitive. What we learn is that as we so vary its position, the grammaticality of control sentences with si/se varies in step. If our theoretical proposal is correct, then we can interpret this covariance as reflecting the sensitivity of PRO to the position of the infinitive, i.e. to the presence vs. absence of a government relation with si/se.

2.6 Binding Theory and PRO

The question arises as to why the infinitive adjoined to IP in the Italian-type languages does not itself induce a PRO theorem violation. There are two kinds of possible answer. One might take the position that the blocking effect of the adjoined infinitive does not actually depend on its governing PRO at all. For example, it might be feasible to allow some category X to create a minimality block with respect to Y without X governing Y itself, as in Reuland (1983, 117, 122). Or, thinking of what was said in note 65, it might be L-marking that is at the heart of se not governing PRO in Italian, in which case one could conceivably try to interpret government in terms of inclusion rather than exclusion, with the result that the adjoined infinitive would be separated from PRO by a barrier segment of IP. If some variant of the preceding turned out to be workable, then we could take the adjoined infinitive in Italian not to govern PRO at

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all, in which case no PRO theorem problem would arise, and we could keep to the LGB binding theory. We shall, however, pursue a different approach (still compatible with the basic idea that infinitive movement in the Italian-type languages blocks the potentially offending government from lexical C^0), in part because we do not see precisely how to formulate the preceding approach satisfactorily (e.g. Reuland's specific proposal would not carry over to this case, and government in terms of inclusion raises a number of problems - cf. Chomsky (1986a, 83)), and in part because of a consideration that will become clearer below, having to do with the determination of the antecedent of PRO, which is left open by the LGB binding theory.

Let us adopt the paradoxical position that infinitive adjunction in Italian does create a configuration in which the infinitive comes to govern PRO, that the PRO theorem continues to play an important role in UG, and yet that there is no PRO theorem violation here.

Consider the revision of Binding theory suggested by Chomsky in Knowledge of Language (KoL) (pp.170ff)⁶⁷ in which a slight discrepancy is introduced (in terms of BT-compatibility) between the governing category for an anaphor and the governing category for a pronoun. This discrepancy concerns in particular anaphors and pronouns in subject position. It is relevant when the subject position in question is governed by a lexical category that is found within (rather than the more usual without) the x^{\max} of which the anaphor or pronoun is the subject. In that case, the governing category of the pronoun would be x^{\max} , the smallest category containing both the governor and a subject position.

However, in the case of an anaphor in such an internally governed subject position, the governing category is not x^{\max} , but rather the next category up containing a subject position, the reason being that although x^{\max} contains the governor of the anaphor, its subject position is not a potential binder for the anaphor (informally put, it would be unreasonable to require an anaphor to be bound within a category containing no position that could contain a potential binder - comparable unreasonableness is not an issue in the case of pronouns).

It follows from the simplest interpretation of this revision that the PRO theorem should no longer hold in full generality, although it will continue to hold over a restricted (but wide) range.⁶⁸ This is so

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since the PRO theorem follows from the strict parallelism between conditions A and B of the Binding theory. To the extent that strict parallelism fails to hold over some range of environments, the PRO theorem will fail to hold for that range. More specifically, it will fail to hold for any subject PRO governed by a lexical category found within the category of which PRO is the subject, since in such a case, the governing category for PRO qua anaphor will not be identical to the governing category for PRO qua pronoun.

On the other hand, the PRO theorem will continue to hold, as in LGB, for all object PRO⁶⁹ as well as for all subject PRO governed by an element outside the category of which PRO is the subject.

In particular, when a lexical complementizer governs PRO, a PRO theorem violation continues to hold, since the complementizer is outside the IP of which PRO is in subject/Spec position. This is what excludes '...if PRO to go to the movies' and the comparable examples discussed above for French, Occitan, Sardinian and Gardenese (cf. (66)-(68)).

The difference between the KoL binding theory and the LGB binding theory becomes important when we turn to the languages like Italian that have leftward adjunction of the infinitive to IP:

(73) ...se...[IP V_{infin} [IP PRO...]

By hypothesis, se no longer governs PRO in this configuration, but V_{infin} does. In the LGB theory, this would have led to a PRO theorem violation. In the KoL theory, on the other hand, that is not the case, as follows: The governing category for PRO qua pronoun is IP, on the reasonable assumption that the governing category is the smallest category that contains a subject position and contains the governor of the pronoun, where 'contains' is interpreted to mean 'does not exclude'. (Put another way, at least one segment of the governing category must dominate the governor in question.)

This is not yet different from the LGB state of affairs. The crucial difference lies in how the two theories determine the governing category of PRO qua anaphor in (73). For the LGB theory, it is again IP, the same as for PRO qua pronoun, leading to a typical PRO theorem violation. For the KoL theory, that is not the case. IP in (73) does contain the governor, but it does not contain a suitably accessible potential binder and so does not qualify as governing category for PRO

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qua anaphor. Rather the governing category for PRO qua anaphor will be the next category up containing a subject position, in effect, the next IP up (not shown in (73)). Since this governing category is distinct from that assigned to PRO qua pronoun, there is no violation of the PRO theorem sort, as desired.

Thus the KoL binding theory⁷⁰ is capable of distinguishing the Italian construction represented by (73) from the corresponding French and English one.⁷¹

In assigning to PRO qua anaphor the next IP up as governing category, the binding theory adopted here excludes the possibility that the antecedent of PRO in (73) could be taken to be a subject NP two IPs up. This accounts correctly for the fact that in (74) the antecedent of PRO must be Gianni and cannot be Maria:

- (74) Maria pensa che Gianni non sappia se andare al cinema. ('M thinks that G neg. knows if to-go to the movies')

This pattern is of course widespread for control infinitivals that are verb complements, e.g.:

- (75) Maria pensa che Gianni abbia deciso di andare... ('M thinks that G has decided DI to-go...')

in which again the antecedent of PRO must be the subject of decide and cannot be that of thinks.

This resolves a paradox noted by Lasnik (1989), namely that the LGB binding theory accounts for the distribution of PRO (by excluding it from governed positions), but at the same time fails to assign it a governing category and so makes no claim at all about the location of its antecedent. Our extension of the KoL binding theory to PRO retains the distributional account (by excluding PRO from all governed positions except those subject positions governed by an element inside (i.e. not excluded by) the XP of which PRO is the subject) and at the same time does assign PRO a governing category⁷² and so does make some claim about the location of the antecedent.

This approach to PRO, in having binding theory determine a governing category for PRO and hence delimit the possible positions for the antecedent of PRO, is significantly similar to that of Manzini (1983), but has the advantage that there is no need to add to binding theory any notion of domain-governing category. From our perspective, the same effect is achieved in the Italian infinitive cases by the basic characterization of Principle A as picking out the

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smallest category containing a governor and an accessible subject. Since, where PRO is the subject of an infinitive that subject position does not count as accessible, Principle A will look for the next largest category containing one, which, in the cases of the infinitive as complement of V, will straightforwardly be the next IP up (and there will be no PRO theorem violation, as discussed).

The approach developed here has the further advantage of allowing an account of the Italian-French contrast with respect to control in the presence of se/si, which depends on the KoL binding theory and in particular on the analysis on PRO as simultaneously anaphoric and pronominal, whereas Manzini took PRO here to be a pure anaphor.⁷³

2.7 Levels.

Our account of the Italian-French contrast with respect to control in the presence of se/si ('if') depended in part on the postulation of a rule of leftward infinitive adjunction to IP that applies in Italian, but not in French. The left-adjoined infinitive intervenes between C⁰ and PRO in Italian, and governs the latter, with the consequences noted in the previous two sections. The absence of comparable infinitive movement in French means that in French the infinitive does not govern PRO - this is precisely what allows a lexical C⁰ in French to induce a PRO theorem violation. In the absence of a lexical C⁰, as in (76), French PRO is therefore ungoverned:⁷⁴

(76) Jean veut aller au cinéma. ('J wants to-go to-the...')

This is of course expected within the LGB perspective and is perfectly compatible with what we have said so far. This is so, in the sense that we have argued that PRO can be governed under certain very specific conditions, but have in effect left open the possibility that it can also be ungoverned.

A problem arises, however, with respect to the paradox adduced by Lasnik that was mentioned earlier. We argued that his paradox is resolved for Italian by the fact that PRO there is governed by the preposed infinitive, hence gets a governing category, so that binding theory actually does provide an indication of where the antecedent of PRO must be. But if PRO remains ungoverned in French, his paradox reappears there. Let us propose, then, that French is to Italian

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with respect to leftward infinitive adjunction to IP as Chinese is to Italian with respect to Wh-movement,⁷⁵ i.e. that French actually does have such infinitive movement, but only at the level of LF.⁷⁶

This leads to the following proposal:

(77) All controlled PRO are governed at some level of representation.

(77) holds, we recall, even though the PRO theorem is largely true, in the sense that the PRO theorem continues to hold for all PRO other than those that are in subject position and governed by an internal governor. On the other hand, if we are correct in putting forth (77), then any controlled PRO that is ungoverned at all levels of representation is equally excluded.

We take the reason for the existence of (77) to be that it is via government that PRO *qua* anaphor receives a governing category. Assuming further that an antecedent for PRO must be within PRO's governing category, i.e. that an ungoverned PRO would not be able to be associated with any antecedent at all, (77) follows. In effect, we have reached the conclusion that PRO is less exotic than it was in the LGB framework, since PRO is now like other empty categories in being licensed in part via government; at the same time, the present theory maintains the specificity of PRO, and in particular its exclusion from most governed positions.⁷⁷

(77) is stated in such a way as to allow for the possibility that there exist instances of ungoverned non-controlled PRO, i.e. instances of ungoverned PRO_{arb}. However, PRO_{arb} seems to exist in Italian with infinitives, e.g.:⁷⁸

(78) Tu conosci il modo migliore per comportarsi a tavola. ('you know the way best for to -behave-self_{arb} at table')

But by our analysis, the infinitive in (78) has moved into a position from which it governs PRO (notice the clitic in (78) following the infinitive and serving as a visible indication of that general movement). Therefore the PRO_{arb} of (78) cannot be ungoverned, which suggests in turn that (77) should be taken to extend to all instances of PRO, i.e. that PRO_{arb} is really a sub-case of controlled PRO, as was proposed by Epstein (1984), who argues that many instances of PRO_{arb} should be taken to be controlled by a hidden dative. The most recalcitrant cases are those of (79) and (80):

(79) ?John knows how to get oneself elected.

(80) John knows the best way to get oneself elected.

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John knows the best way of getting oneself elected.

The fact that these seem best when embedded within a larger NP⁷⁹ might indicate that these PRO_{arb} must, in the spirit of Lebeaux (1984) and Authier (1989), be bound by some null operator sitting in a position provided by the NP.

Returning to the idea that controlled PRO is governed even in French (at LF), let us reconsider two kinds of examples:

- (81) *Jean ne sait pas si aller au cinéma. ('J neg. knows not if to-go to-the movies')
 (82) Jean veut aller au cinéma. ('J wants to -go...')

Our idea has been that (81) is excluded because the lexical C⁰ si governs PRO and induces a PRO theorem violation. Yet we are now proposing that in (82) PRO is governed by the infinitive at LF. There is no contradiction, since in (82) government will be of the internal type (i.e. the infinitive will not be excluded by the IP of which PRO is the subject), whereas in (81) it is of the external type (si is excluded by that IP), and in our analysis the (revised) PRO theorem holds for subject PRO only over the domain of external government configurations.

We must be careful, however, to insure that LF movement of the infinitive does not have the undesirable consequence of making (81) legitimate, the point being that subsequent to such LF movement PRO in (81) will be governed by the infinitive and will no longer be governed by si. We conclude that a PRO theorem-type violation at S-structure, as in (81), cannot be neutralized at LF. Considering more closely the exact nature of the violation in (81), we note that by virtue of being governed by si, PRO qua anaphor receives as governing category the matrix IP, which is perfectly reasonable - if (81) were grammatical, that is where we would expect the antecedent to be. The problem with (81) is really that PRO qua pronoun also receives the matrix IP as governing category,⁸⁰ yielding the familiar contradiction. If LF movement of the infinitive were able to neutralize such a violation, it would have to be by virtue of changing what counts as the governing category of PRO qua pronoun. Since the violation remains, we conclude that a governing category assigned by Principle B to a given pronominal element must be taken to stick to it.

Put more perspicuously, a given indexing must respect Principle B at all levels.⁸¹ Thus if PRO in

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(81) is coindexed with Jean, a violation will ensue since Principle B will not have been respected at S-structure. On the other hand, if we are correct in thinking that PRO cannot be assigned an antecedent without having a governing category, then in (82) PRO has an antecedent only at LF. In other words, Principle A must be met at some level of representation, but does not need to be met at all levels. This asymmetry between Principle A and Principle B recalls the conclusion reached in Belletti and Rizzi (1988, 318).⁸²

If we now ask why there should exist such an asymmetry, the following answer suggests itself: Binding principles are properly thought of as applying to a set of levels of representation associated with a given sentence. Principle A has intrinsically existential character (for a given anaphor there must exist an antecedent within the appropriate syntactic domain). Interpreting this existential character consistently yields: For a given anaphor, there must exist some antecedent at some level (i.e. somewhere in the set) within the appropriate syntactic domain. Principle B, on the other hand, has intrinsically universal character (a given pronoun must be free from all antecedents within the appropriate syntactic domain). Interpreting this consistently yields: A given pronoun must be free from all antecedents at all levels (i.e. everywhere in the set) within the appropriate syntactic domain.

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Notes

- 1 Cf. Kayne (1989a, 241).
- 2 Cf. Baltin (1982, 4).
- 3 Cf. Chomsky (1986a) and Pollock (1989) for recent discussion.
- 4 Cf. Baker (1985, 89).
- 5 As in the previous paragraph, we suspect that a clitic may not be adjoined to a filled V position, either (as opposed to a filled, or empty (in the sense given below), functional head position).
- 6 A clitic could not adjoin to XP and stop there since a clitic must arguably be licensed by adjunction to X^0 . Nor could a clitic adjoin to XP and then continue on to adjoin to a higher Y^0 , by Chomsky's discussion; this is relevant to questions involving clitic climbing - cf. Kayne (1989a, 241).
- 7 Cf. also Kayne (1989a, sect.9).
- 8 Recall that Portuguese and Galician do allow in root contexts the order finite verb - clitic, suggesting either the existence of another I-type node limited to root contexts (a possibility explored in Uriagereka (1988) or the adjunction of clitics to a root C. Equally beyond the scope of this article is the potential category M as discussed recently by Rivero (1988).
- 9 The idea of an I node not obliged to merge with V is supported by an English construction discussed in Kayne (1989b).
- 10 On the possibility of an abstract T in (English) infinitives, cf. Stowell (1982) and McCawley (1988, 216).
- 11 It is also possible that at least some infinitives have both abstract T and abstract AGR. If I in (7) were AGR, it would probably have not to be coindexed with PRO, thinking of the fact that inflected infinitives in Portuguese give the impression of not corresponding to true cases of control.
- 12 Pollock's approach was to take French AGR to be transparent to theta-marking even in infinitives.
- 13 And to the 1986 suggestion of ours that he mentions, with the difference (among others) that that earlier idea, like Pollock's formulation, as well as Belletti's (1988), did not contain the proposal about infinitive adjunction to XP.
- 14 Unlike Italian non, which obligatorily precedes both infinitives and finite verbs, and which we take to be itself an X^0 element, as in Kayne (1989a, 243), rather than an adjoined adverb-like element. (On Piedmontese negation, cf. Zanuttini (1987; this volume.)
- 15 Luigi Burzio (p.c.).

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16 Beyond the scope of this article is the question of how best to express the fact that clitic climbing (into a matrix sentence) is marginal in Piedmontese as compared with Italian, though available to a greater degree than in French.

17 In using the word 'movement' rather than the more explicit 'adjunction', we are leaving open the possibility that V-to-*INFN* might be substitution in the sense of Rizzi and Roberts (1989).

18 The contrast here between Occitan, etc. and colloquial French may be related to null subject considerations - cf. Kayne (1989a). The possibility of '*...n'en pas parler...*' in literary French might indicate that CL can move to an X^0 higher than T - cf. the text discussion two paragraphs above concerning the order of auxiliary and *pas*. Such an X^0 might also be available to those varieties of Occitan which allow, like Catalan, the order infinitive-*pas* - cf. also the dialect of Bergamo, whose *mia* appears (v. Bernini (1987, 115)) to thus differ minimally from Piedmontese *nen*. Alternatively, it might be that languages can differ as to where they attach their (non-head) negative morpheme.

19 All the Sardinian data discussed are due to Michael Jones (p.c.); cf. in general Jones (1988).

20 Cf. Kayne (1975, chap. 1).

21 This will at the same time correctly exclude '**...V...ADV...CL...*' in Italian and Piedmontese infinitives. Cf. also the fact that these adverbs and quantifiers must follow negative *pas*.

22 From this perspective, French (16) is probably ambiguous between the finite counterpart of (15) and the finite counterpart of '*...pouvoir tout faire...*'.

23 For example: '*J'ai mal dû raccrocher*' ('I have badly must to-hang-up', i.e. 'I must have hung (the phone) up badly/wrong').

24 Example from Christer Platzack (p.c.), in Swedish.

25 Why auxiliary raising is limited to English, of the two, is unclear - perhaps there is a link to the extra agreement morphology in English - cf. Kayne (1989b).

26 Some Scandinavian speakers actually accept to some degree '*...att han inte inte har gjort det*'; the reason for the greater acceptability of English (18) is unclear to us.

The acceptability of 'You could have not done it' implies raising of non-finite *have* - cf. Pollock (1989, 376) and Johnson (1988).

27 The fact that Italian lacks the '*...Modal...QP...infinitive*' construction (where QP is

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associated with the infinitive) that Sardinian has is not yet accounted for.

28 If the text decision to have CL adjoin in infinitival clauses to T rather than AGR is correct, then the null subject parameter would have to involve T in a way not envisaged by Kayne (1989a). This is not implausible if Rizzi (1986, 518) (cf. Rizzi (1982, 130)) is correct in distinguishing a 'formal licensing' aspect of the null subject phenomenon, and if formal licensing depends on some property of T.

The implications of our analysis of infinitive-clitic order for Rizzi's (1982, 83ff.) Aux-to-COMP construction are as follows: It is possible to have '*...Aux_{infin}...CL...NP...V_{pp}...*' where the NP is the nominative lexical subject of the Aux. Thus, this NP cannot systematically be in standard subject position unless CL is adjoined to C and Aux to CP. More plausibly, Aux is adjoined to TP (or conceivably AGRP) and CL to T (or AGR) as in the text, with the NP in a Spec position not that of the highest non-C functional head, but somewhere lower in the structure.

The impossibility of having the lexical NP separate Aux from CL in the above, i.e. '**...Aux...NP...CL...*' seems completely general in Romance when CL follows V and contrasts with the possibility of '*...CL...NP...V_{fin}..*' in Galician (cf. Alvarez et al. (1986, 205); Uriagereka (1988)). Adapting an idea of Naoki Fukui's (1989), we might say that adjunction of X⁰ to YP is actually not possible if YP is truly maximal, that YP is truly maximal in this sense only if its Spec agrees with its head, and that PRO does not agree with the head of the maximal projection of which it is the Spec.

29 Perhaps agreement with an postverbal indefinite NP somehow involves adjunction of V to XP. Occitan, which is like Sardinian in having clitics precede the infinitive, also seems to have less subject inversion than Italian (and less than Sardinian), despite being a null subject language in the core sense - cf., for example, Doniol (1877): "Généralement, le bas-auvergnat n'admet pas le pronom devant le verbe...l'usage qui se fait du pronom dans les parlers limanien et dorien ne saurait...infirmier cette règle..."(p.40) and "Quant à l'inversion, on ne s'en sert pas plus que dans le langage ordinaire français."(p.52)

The fact that Sardinian (but not Occitan) gerunds precede their associated clitics, however, suggests that Sardinian does not systematically refuse V-adjunction to XP.

Consideration of Gascon is beyond the scope of this article.

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- 30 Cf. Grevisse (1964, sect. 477) and Remacle (1952, 228n, 265; 1956, 131). Also Mattoso Camara (1972, 226) on Brazilian Portuguese.
- 31 Cf. Kayne (1975, chaps. 4 and 6; 1984, chap. 2, fn. 31), Rouveret and Vergnaud (1980), Burzio (1986).
- 32 Cf. Burzio (1986) on small clause relatives.
- 33 For some speakers, whether or not the auxiliary itself is tensed seems to play a role, in that they accept to some degree some sentences like (27) in which the auxiliary is untensed (infinitival or gerundial).
- 34 Cf. Burzio (1986, 123). Note also the nearby dialects studied by R. Harris (1969), some of which, in the aux-past part. construction with two clitics, allow one to raise to the left of the auxiliary and the other to appear post-participially:
 ...CL₁+Aux...V_{pp}...CL₂... with CL₂ presumably adjoined as discussed below in the text. Such dialects show that the commonly held (cf., for example, Aissen and Perlmutter (1983, 366)) non-splittable character of (non-causative) clitic groups is even more wrong than Kayne (1989a, 248) had thought - cf. also the infinitival examples from 17th century French brought together by de Kok (1985, 594).
- 35 Judgments from Luigi Burzio (p.c.).
- 36 Left open by this approach is the question of Catalan, whose participles in non-agreement contexts show no final vowel; yet Catalan appears never to allow past participle-clitic (although it does have infinitive-clitic). Perhaps, Catalan (and Spanish) past participles can never left-adjoin to any XP, like Romance adjectives in general (there is no *adjective-clitic), for reasons unclear.
- 37 Cf. Fornaciari (1974(1881), 456).
- 38 Cf. perhaps Russian -sja and Scandinavian -s.
- 39 Cf. Benincà (1989). On Italian impersonal si, cf. most recently Cinque (1988).
- 40 As opposed to the case of 3sg. verbs without si. The absence of verb-clitic order there might have to be attributed to V having to pass through AGR despite AGR not corresponding to an overt morpheme. In essence, a non-overt coindexed AGR would appear to pattern here with overt coindexed AGR (vs. the non-overt non-coindexed AGR of (35)) with respect to V-AGR merger; this would, however, conflict with Kayne (1989b).
 Alternatively, the solution might be that adjunction of V+T to AGRP is possible only when AGR is not coindexed with the NP in its Spec position (and similarly for the AGR of (31), which bears on the theory of NP movement), as suggested in note 28. This seems more promising.

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41 Cf. Kayne (1972, note 17) and Emonds (1985, 286n). The construction '...if he should...or not' is presumably to be thought of as a reduction, in some sense to be made precise, of '...if he should...or if he should not'.

42 Cf. Kayne (1989a, 246). Notice that the I that fails to count for minimality in (7) above is also non-lexical, abstracting away from the adjoined material - cf. Chomsky (1986a, 47).

43 If L-marking is defined as in Chomsky (1986a, 70), then such a C⁰ must be taken to theta-mark IP.

44 Cf. Chomsky (1986b, 169).

45 Cf. Kayne (1972, note 17).

46 Cf. Huot (1974, 47).

47 Over the years, we have found one speaker who accepts (some sentences like) (49). Conceivably, he can allow si to occur in Spec of CP (contrary to the general case).

48 Cf. Kayne (1983), Chomsky (1986a, 47, 79) and Rizzi (to appear).

49 Cf. Kayne (1980; 1981).

50 Cf. (the text to) note 42. Another candidate for prepositional specifier is the de found in French partitives such as Jean a de la viande ('J has of the meat (=some meat)'), and similarly for Italian di.

Our present proposal that de is not a C⁰ has something in common with Manzini's (1982) that Italian di is adjoined to IP, which would have some of the same advantages as ours but not all.

Taking de/di to be in Spec,CP does not imply that their effect on extraction be identical to that of Wh-phrases - cf. Frampton (1987) and Rizzi (to appear).

51 Cf. Frampton (1987).

52 Cf. Kayne (1989a, 246).

53 The contrast between (56) and (57) is repeated with certain prepositions that introduce adjuncts, e.g. French pour que tu partes ('for that you leave') vs. pour (*de) partir (similarly for sans ('without'), après ('after')), suggesting that these are also in Spec,CP. (The more nominal afin ('in order'), avant ('before') and others will not be.) Similarly for certain Italian adjunct-introducing prepositions.

Dutch om appears to have the same status as French de, to judge by Bennis and Hoekstra's (1984, 51) data and partially similar analysis, and Dutch zonder and na the same status as sans and après. Why English does not allow the infinitive with these two is unclear (but cf. the difference between English and Dutch/German with respect to ECM).

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54 With a potential effect on the extraction facts Cinque discusses.

55 English does allow John got up as if to leave. This might involve a reduction of some sort from ...as if he were to leave. There is in addition evidence that as if is a constituent: '...as if, in my opinion, to leave' vs. '*...as, in my opinion, if to leave', so that if here is arguably not a C⁰ (essential, if this is really a control structure).

Similarly, French bien que sachant... ('although knowing...') must have bien que a constituent not equal to C⁰ - cf. Kayne (1976, (text to) note 42).

Rigau (1984) notes that the Catalan equivalent of si/if creates a series of island effects not created by (the Catalan equivalent of) que/that, and suggests that it be considered a modality operator. We can adopt her proposal in the following form: si/if, etc. are necessarily accompanied by an abstract operator in Spec,CP. This will fit with the fact that no overt element occurs there, neither a Wh-phrase nor a preposition.

56 Scepticism about the null subject correlation had been expressed by Borer (1989, note 5) for a different reason.

57 Cf. the example in Rigau (1984, 251) cited in Kayne (1989a, 252).

58 We are grateful for the Occitan data to Patrick Sauzet, and for the Sardinian data to Michael Jones.

59 This holds of the dialects of Sardinia other than those in the northern areas of Gallura and Sassari (cf. Jones (1988, 314) and Loi Corvetto (1982, 136)), which, like much of Gascon, show infinitive-clitic order. Our analysis makes the prediction that these infinitive-clitic languages should allow control with their equivalent of if, i.e. should differ minimally in this respect from their clitic-infinitive neighbors.

A complicating consideration is that some of these resemble Galician and European Portuguese in allowing both embedded clitic-infinitive and embedded infinitive-clitic order, depending on various factors. The prediction made with respect to such mixed languages is probably (since in all likelihood they have the type of leftward infinitive movement that will turn out to license control with if in Italian, Catalan and Spanish) that they should allow it, too. According to Juan Uriagereka (p.c.), this is correct for Galician. In European Portuguese, control with se seems to be marginally acceptable, at least in contexts like Não sei se ir o não ir ('neg. I-know if to-go or neg. to-go'). (Brazilian Portuguese has the order clitic-infinitive (cf. Parkinson (1988, 159)) and appears not to accept control with if, as expected.)

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- 60 Cf. Renzi and Vanelli (1983).
- 61 The status of these subject clitics is not entirely clear. They are taken to be an instance of AGR by Brandi and Cordin (1989) and by Rizzi (1986b). They differ from AGR, however, in being obligatorily absent from imperatives, much as French subject clitics are; one approach to French vs. northern Italian subject clitics that distinguishes them less sharply than the AGR approach is given in Kayne (1983b).
- 62 Data from Luigi Burzio (p.c.), Nicoli (1983, 150), Paola Benincà (p.c.).
- 63 Judgment of Heidi Runggaldier, via Paola Benincà (p.c.).
- 64 And perhaps always - cf. note 59. Implicit, as usual, is the assumption (which should be checked to as great an extent as feasible) that the dozen or so Romance languages that we have information about (concerning control with *if*) are representative of the entire set. (A conservative estimate of the number of syntactically distinguishable Romance languages/dialects would, we think, be in the hundreds; note the proportional implication for the number of syntactically distinguishable languages in the world.)
- 65 Alternatively, it might be that a lexical C^0 can L-mark IP only if IP has not been adjoined to. Thus if IP is an intrinsic barrier, *se* might fail to govern PRO in (72) because adjunction of the infinitive to IP has prevented IP from losing its barrier status via L-marking from *se* (cf. Chomsky's (p.6) suggestion to exclude adjunction to arguments; i.e. L-marking of IP might have the effect of assimilating IP to an argument). The implication that adjunction of NP or PP to an infinitival IP in a clitic-infinitive language might lead to PRO being acceptable with lexical C^0 doesn't seem correct, but is actually not easy to test, at least for French and English.
- 66 It is for this reason that it is advantageous to work with a set of closely related languages, much as in any experiment one tries to keep the number of variables as low as possible. In the future it should become possible to do the same with sets of (closely related) sets of closely related languages.
- 67 Based on work by Huang (1983).
- 68 This point was made very clearly by Battistella (1985) in his discussion of Chinese finite clauses, to which our proposal for Italian infinitives is quite close. He takes the position, as we have so far, that although some PRO are internally governed, in the sense at issue, many remain ungoverned. We will abandon this position below, when we propose that no PRO is ungoverned at all levels of representation.

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69 Assuming that for every object position there is an associated subject position within the minimal CFC to serve an potential antecedent. Otherwise '*John likes pictures of PRO' would incorrectly be permitted. Similarly, there must be no possibility of preposing v^1 .

70 As extended to PRO in the way we have proposed; such an extension was not actually considered in KoL (cf. p. 183 there), as far as we can tell.

71 It does not, however, provide an account of the contrast, within Italian, between se ('if') and che ('that'): Unlike se, che is normally incompatible with control - Gianni vuole (*che) andare... ('G wants (that) to-go...'). Perhaps the generalization is that che requires that its sister IP be tensed (che does not occur with non-control infinitives either), for reasons unclear.

The que of Spanish Lo tengo que hacer, Hay que hacerlo ('it I-have QUE to-do', 'there-is QUE to-do it') is probably not the complementizer (C^0) que, but rather an instance of que in Spec,CP (like the Wh-phrase que, in that respect), given the possibility of clitic climbing seen in the first example. (The impossibility of such in the second is due to independent factors - cf. Kayne (1989a, 249).)

The að of Icelandic control infinitivals (cf. Sigurðsson (1989) and references therein) might be in Spec,CP or even, if Icelandic leftward infinitive movement were adjunction to IP, C^0 . On the other hand, the att of Swedish control infinitivals, must, since there is no infinitive movement there, be in Spec,CP - this is compatible with Platzack (1986), parallel to our discussion of French de in section 2.2.

72 More exactly, it assigns PRO qua anaphor a governing category that avoids a contradiction with that assigned to PRO qua pronoun. This point was also made by Battistella (1985).

73 As did Bouchard (1984) for certain PRO, and similarly Koster (1987), both of whom take PRO to be able to be governed in a range of contexts completely different from those permitted in the text approach (which is much closer to that of LGB). Neither of their approaches, nor those of Williams (1987), McCloskey and Sells (1988), Borer (1989) or Huang (1989), yields, as far as we can see, an account of the Italian-French contrast under study. (On the other hand, we have yet to clarify the degree to which similarities between antecedents of PRO and those of pro are significant.)

The text approach to control maintains the LGB account of

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'*It seems (to me) to have understood' as a PRO theorem violation (since the governor seems is outside of the infinitival IP). The grammaticality of the corresponding French and Italian sentences should be related to that of '*I believe to have understood' in French and Italian, in terms of the ability of a certain class of verbs to take an opaque CP complement. For French and Italian seem, this must be in addition to the IP possibility suggested by the existence of subject raising.

One might wonder if leftward adjunction of the infinitive to IP in Italian might not interfere with raising; it is perhaps of note that raising in Italian seems literary, and is completely absent (with infinitives (as opposed to small clauses) - observation due to Luigi Burzio (p.c.)) in Piedmontese (similarly, it appears, in Paduan); we leave this question open, along with that of possible effects on the causative construction with lasciare ('let').

The question also arises as to whether the binding theory approach to PRO tells us anything directly about the difference between subject and object control. Manzini (1983, 423) suggests that it should not, on the basis of cases where the choice between the two types of control is open. Although such cases are numerous, they are not typical (cf. the detailed study of Rooryck (1987)). It may be that obligatory object control involves a controller that is the subject of a small clause in the sense of Kayne (1981', sect. 4.2) (cf. also Larson (1988)), with that small clause the governing category of PRO.

74 In French, the S-structure infinitive does not govern PRO if only because it does not even m-command it, if our proposals in (9) and (12) are accurate. Sardinian is more interesting, given (68), if (13) is correct, since the infinitive is there in the head position whose maximal projection PRO is Spec of, yet must not govern PRO; perhaps head-to-Spec government is possible only via agreement, if then.

75 Thinking of Huang's (1982) proposal that Chinese has Wh-movement at LF.

76 And similarly for English, although in English it might alternatively be to that at LF adjoins to IP and governs PRO.

It is conceivable that French actually does have some leftward infinitive adjunction to IP in the syntax (even though not in control structures), namely in causatives (cf. Kayne (1975, sect. 4.9), Rouveret and Vergnaud (1980, 130)), at least in cases (perhaps=all) where the infinitive moves without any NP moving along with it. If so, the French-Italian contrast would be properly located in the licensing conditions for

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infinitives left-adjoined to IP. This bears on (the text to) note 29.

If there is PRO in derived nominals (cf. Stowell (1989) for recent discussion) then there must be LF adjunction of N to NP.

Recalling that the infinitive licensing PRO in Italian skips over the I whose maximal projection it adjoins to, we might conjecture that a finite verb, which must move through each I position, could not so license PRO even in LF (e.g. it may be that the trace of the adjoined verb must be head-governed (by I) in Rizzi's (to appear) sense - cf. also Frampton (1987); or there might be a link to note 40). This would account for the lack of PRO with finite verbs in languages like English.

77 Cf. note 73.

78 Cf. also Manzini (1979).

79 As suggested by Petrovitz (1990).

80 Rather than the embedded CP, which is not a CFC in Chomsky's KoL (p.169) sense.

81 Note that in John wants to be elected, we can allow Principle B to apply to PRO at D-structure since John will not be in the governing category then assigned.

82 This asymmetry, and our analysis in general, is predicated on the assumption that there exists a Principle B distinct from Principle A. It is not compatible with the attempt, pursued most recently and in most detailed fashion by Burzio (1989a; 1989b; to appear), to fully reduce Principle B to a kind of elsewhere case of Principle A. The at least partial independence of Principle B, in addition to being strongly supported by the way in which the (revised) PRO theorem accounts for the facts of control with if, etc., is suggested by the phenomenon of non-intersecting reference (cf. Chomsky (1981, 286)) and by assorted cases of non-complementarity between anaphors and pronouns, as in Huang's (1983) original discussion of English and Chinese. The fact that Scandinavian (similarly, Russian) does show complementarity with possessives may be related to the fact that the anaphor is adjectival and/or to Hestvik's (this volume) idea that Norwegian and English pronouns differ in X-bar status; his paper also bears on the question, left open here, of the relation to all this of long-distance reflexives.

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