

Working 1s and Inversion in Italian, Japanese, and Quechua

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## Working ls and Inversion in Italian, Japanese, and Quechua\*

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1. Goals1.1 Empirical Evidence for Inversion

The first goal of this paper is to provide empirical evidence for the Inversion construction, thereby adding to the evidence for this construction in various languages.<sup>1</sup> The Inversion construction is motivated in some detail for Italian, and then it is shown how the same type of argument can be used for Japanese and Quechua.

The predicates that occur in the Inversion construction in Italian include the following:

- (1) piacere 'like'  
dispiacere 'dislike, sorry'  
rincrescere 'regret, sorry'  
seccare 'bother'  
bastare '(be) sufficient'  
mancare 'lack'  
capitare 'happen'  
riuscire 'succeed, manage'  
sembrare 'seem'  
parere 'appear'  
chiaro 'clear'  
evidente 'evident'  
possibile 'possible'  
impossibile 'impossible'  
facile 'easy'  
difficile 'difficult'

Consider a typical Inversion construction:

- (2) Gli piacciono le sinfonie di Beethoven.  
 him/DAT like the symphonies of  
 'He likes Beethoven's symphonies.'

In the Inversion construction in Italian, a nominal that is (in most cases) semantically an Experiencer or Cognizer appears in the Dative form (gli in (2)). I call this nominal the 'Inversion nominal.' It does not control verb agreement. In (2), piacciono is third person plural in agreement with le sinfonie di Beethoven.

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The first goal of this paper - motivating the Inversion construction - involves showing that the RNs associated with sentences like (2) involve subnetworks of the form<sup>2</sup>



In the case of (2), I argue that gli heads both an initial 1-arc and a final 3-arc in the clause. To show this, I give five arguments for the final 3hood of Inversion nominals and four arguments for their lhood.

Showing that Inversion nominals are initial 1s but final 3s has several important theoretical consequences. First, it shows that linguistic theory must countenance demotions - that is, constructions in which a nominal heads a  $GR_x$  arc in the  $c_k$  stratum and a  $GR_y$  arc in the  $c_{k+1}$  stratum, where  $GR_x$  outranks  $GR_y$  on the hierarchy of R-signs:  $1 > 2 > 3 > \text{Nonterm R-signs}$ . Second, it removes what would otherwise be a class of counterexamples to the claim that initial-stratum grammatical relations in a clause are universally predictable from nominals' semantic roles in clauses. For example, compare (2) with its English equivalent:

(4) He likes Beethoven's symphonies.

It is (presently) uncontroversial that he is both the initial and final 1 of (4). If gli were initial 3 of (2) as well as final 3, (2) and (4), taken together, would show that initial grammatical relations cannot be predicted from semantic roles, since both he and gli in these examples represent Experiencers, yet their initial grammatical relations in their respective clauses would be different. If, on the other hand, gli represents an initial 1 in (2), as is argued here, then both of these Experiencers are initial 1s, and (2) - (4) do not counterexemplify the claim that initial grammatical relations are universally predictable from semantic roles. Both of these points are discussed at greater length in Perlmutter (to appear a), so I will not discuss them further here.

There are predicates in Italian that can appear in two different grammatical configurations - one involving Inversion and the other not. This is the case with mancare 'lack' and riuscire 'succeed, manage.'

(5) a. I bambini non mancano di energia.  
 the children NEG lack of energy  
 'The children don't lack energy.'

- b. Ai bambini non manca energia.  
to-the children NEG lacks energy  
'The children don't lack energy.'
- (6) a. Riuscirò a farlo.  
succeed/1SgFUT to do-it.  
'I will succeed in doing it; I will manage to do it.'
- b. Mi riuscirà di farlo.  
'me/DAT succeed/3SgFUT of do-it  
'I will succeed in doing it; I will manage to do it.'

In (5 a), i bambini is the final 1 and controls plural agreement on mancano. In (5 b), on the other hand, it is the final 3, appearing with the dative preposition a and not controlling verb agreement; manca is third person singular in agreement with energia. Similarly, in (6 a) the first person singular nominal is final 1, controlling verb agreement on riuscirò. In (6 b), on the other hand, it is the final 3, appearing in the dative form mi and not controlling verb agreement. If i bambini were initial 1 in (5 a) and initial 3 in (5 b), and if the first person singular nominal were initial 1 in (6 a) and initial 3 in (6 b), these examples would counter-exemplify the claim that initial grammatical relations can be predicted from semantic roles, since the semantic roles in the (b)-sentences are the same as those in the corresponding (a)-sentences. Under the Inversion analysis proposed here, however, i bambini is the initial 1 of both (5 a) and (5 b), and the first person singular nominal is the initial 1 of both (6 a) and (6 b). The difference is that the (b)-sentences involve Inversion, while the (a)-sentences do not.

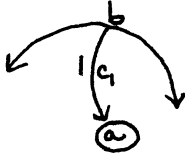
## 1.2 Motivating the Notion 'Working 1' in Linguistic Theory

The second goal of this paper is to motivate the notion of 'working 1' in linguistic theory.

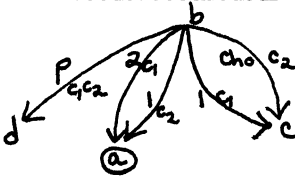
### (7) Working 1 (Definition)

- A nominal is a working 1 of clause b if and only if:  
i) it heads a l-arc with tail b  
and ii) it heads a final-stratum Term arc with tail b.

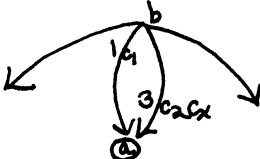
Since Term arcs are arcs with R-signs '1,' '2,' or '3,' any nominal that heads a l-arc and a final-stratum l-arc, 2-arc, or 3-arc with tail b is a working 1 of clause b. A nominal that heads a final-stratum l-arc qualifies as a working 1 by this definition, which covers the following cases. First, in monostratal clauses, the nominal that is both initial and final 1 is a working 1, as in (8).

(8) Monostratal clauses

Second, in Passive clauses, the nominal heading a final-stratum l-arc is a working l, but the nominal heading a final-stratum Cho arc is not, since it does not satisfy (7-ii).<sup>3</sup> Thus, in (9), a is a working l, but c is not:

(9) Passive clauses

Finally, in Inversion clauses, the Inversion nominal is a working l, since it satisfies both conditions in (7):

(10) Inversion clauses

§3 of this paper is devoted to showing that four phenomena in Italian syntax must be stated in terms of the notion 'working l,' and that Inversion nominals behave like working ls with respect to the phenomena in question. This provides evidence both for incorporating the notion 'working l' in linguistic theory and for the lhood of Inversion nominals, since if they were initial 3s as well as final 3s they would not qualify as 'working ls' with respect to the phenomena in question. In §7-8 it is shown that the notion 'working l' is also needed in the grammars of Japanese and Quechua, and that the phenomena that must be stated in terms of this notion likewise provide evidence for the Inversion construction in those languages.

## 2. Arguments for the Final 3hood of Inversion Nominals in Italian

### 2.1 Argument One: Case

The rule stated informally below must be included in the grammar of Italian:<sup>4</sup>

(11) Dative Marking

The nominal heading a final-stratum 3-arc in a clause must have dative marking.

The grammar must specify that dative-marked nominals are marked with the preposition a, as in (12 a), while clitic pronouns have special dative forms like gli in (12 b).

- (12) a. Darò questi libri ai bambini.  
'I will give these books to the children.'
- b. Gli darò questi libri.  
'I will give him these books.'

If Inversion nominals are final 3s, the fact that they appear in dative forms (e.g. gli in (2) and ai bambini in (5 b)) will be automatically accounted for by the same rule(s) that account for the appearance of these forms in examples like (12 a-b).

2.2 Argument Two: Verb Agreement

The grammar of Italian must include the verb agreement rule stated informally below:

- (13) Verb Agreement  
The nominal heading a final-stratum 1-arc in a finite clause controls agreement on the verb of that clause.

If Inversion nominals are final 3s, the fact that they do not control verb agreement will be a consequence of (13) and their final 3hood.

2.3 Argument Three: Equi

In Italian, the complements of certain verbs are in the subjunctive and are introduced by the complementizer che if the final 1 of the complement is distinct from the controlling nominal in the matrix clause:

- (14) Non voglio che i bambini rimangano qui.  
'I don't want the children to remain here.'  
(Lit: 'I don't want that the children remain here.')
- (15) Non voglio che i bambini siano arrestati dalla polizia.  
'I don't want the children to be arrested by the police.'  
(Lit: 'I don't want that the children be arrested by the police.')

However, if the final 1 of the complement is also the controlling nominal,<sup>2</sup> a subjunctive complement with che is impossible.

Instead we find an infinitive complement.

- (16) a. \*Non voglio che io rimanga qui.  
'I don't want that I remain here.'
- b. Non voglio rimanere qui.  
'I don't want to remain here.'
- (17) a. \*Non voglio che io sia arrestato dalla polizia.  
'I don't want that I be arrested by the police.'
- b. Non voglio essere arrestato dalla polizia.  
'I don't want to be arrested by the police.'

It is impossible for sentences like (16 b) and (17 b) to contain a surface realization of the final *l* of the complement. I will refer to the construction exemplified by (16 b) and (17 b) as 'Equi,' using the terminology that gained wide acceptance in transformational grammar, and to the nominal that can have no surface realization in the Equi construction as the 'Equi victim.'<sup>6</sup> The condition on Equi victims in this class of constructions in Italian can be stated informally as follows:

- (18) Only the final *l* of the clause can be an Equi victim in this class of constructions.

(18) accounts for the possibility of Equi in both active and passive examples like (16 b) and (17 b). It also accounts for the fact that final *3s* cannot be Equi victims here. Consider, for example, sentences like

- (19) a. Telefoniamo a Giorgio dopo le otto.  
'We telephone (to) Giorgio after eight.'
- b. Gli telefoniamo dopo le otto.  
'We call him after eight.'

If such a sentence is embedded beneath Giorgio preferisce 'Giorgio prefers' (preferire is a verb that governs Equi), the final *3* cannot be an Equi victim. We get a subjunctive complement with che:

- (20) Giorgio preferisce che gli telefoniamo dopo le otto.  
'Giorgio prefers that we call him after eight.'

An infinitival complement with Equi is impossible.

Evidence for the final *3*hood of Inversion nominals comes from the fact that they cannot be Equi victims. Thus, if a clause with piacere 'like' is embedded beneath an Equi trigger

like volere 'want' or preferire 'prefer,' the Inversion nominal cannot be an Equi victim:

- (21) \*Giorgio preferirebbe piacere le sinfonie di Beethoven.  
'Giorgio would prefer to like Beethoven's symphonies.'

The structure in question must be realized with a subjunctive complement with che:

- (22) Giorgio preferirebbe che gli piacessero le sinfonie di Beethoven.  
'Giorgio would prefer to like Beethoven's symphonies.'

The inability of Inversion nominals to be Equi victims shows up clearly in examples with mancare 'lack' and riuscire 'succeed,' which are possible either with or without Inversion. Without Inversion, the initial l is also the final l, and so it can be an Equi victim:

- (23) a. Le mogli mancano di soldi.  
'The wives lack money.'
- b. Le mogli non vogliono mancare di soldi.  
'The wives don't want to lack money.'
- (24) a. Riesco a farlo.  
'I succeed in doing it.'
- b. Voglio riuscire a farlo.  
'I want to succeed in doing it.'

In the Inversion construction, however, the initial l is a final 3, and so it cannot be an Equi victim. Thus, the (b)-sentences below are ungrammatical:

- (25) a. Alle mogli mancano soldi.  
'The wives lack money.'  
(Lit: 'To the wives lacks money.')
- b. \*Le mogli non vogliono mancare soldi.  
'The wives don't want to lack money.'
- (26) a. Mi riesce di farlo.  
'I succeed in doing it.'  
(Lit: 'To me succeeds in doing it.')
- b. \*Voglio riuscire di farlo.  
'I want to succeed in doing it.'

The structures in question must be realized with subjunctive complements with che:

- (27) Le mogli non vogliono che a loro manchino soldi.  
'The wives don't want to lack money.'  
(Lit: 'The wives don't want that to them lack money.')
- (28) Voglio che mi riesca di farlo.  
'I want to succeed in doing it.'  
(Lit: 'I want that to me succeed in doing it.')

In sum, the fact that Inversion nominals cannot be Equi victims provides an argument that they are not final 1s.

#### 2.4 Argument Four: Omission of Subject Pronouns

In Italian, nonemphatic pronominal final 1s are freely omitted. Thus, sentences such as the following are perfectly normal:

- (29) Siamo stati criticati da tutti.  
'We were criticized by everyone.'

The subject pronoun noi 'we' does not appear in (29); if it were present, there would be emphasis on noi, or noi would be contrasted with some other nominal.

Nonemphatic final 3s, however, are not omissible. Thus, (30) is not synonymous with (31):

- (30) Giorgio mi ha dato i soldi.  
'Giorgio gave me the money.'
- (31) Giorgio ha dato i soldi.  
'Giorgio gave the money.'

If the final-3 pronoun mi were omissible, these sentences would be synonymous.

Like other final 3s, pronominal Inversion nominals are not freely omissible. Thus, (32) is not synonymous with (33).

- (32) Mi piacciono le sinfonie di Beethoven.  
'I like Beethoven's symphonies.'
- (33) ??Piaccono le sinfonie di Beethoven.  
'Unspecified likes Beethoven's symphonies.'

The question of whether or not ??(33) is acceptable is not at issue here; the point is that it is not synonymous with (32), which it would be if the pronoun mi in (32) were freely omissible.

The contrast in pronominal omissibility between final 1s and Inversion nominals can be seen clearly with mancare and riuscire, which can occur either with or without Inversion. Without Inversion, the initial 1 is also the final 1, and if pronominal it is omissible:<sup>7</sup>

- (34) a. Mia moglie manca di energia.  
'My wife lacks energy.'
- b. Mia moglie lavora troppo e manca di energia.  
'My wife works too much and lacks energy.'
- (35) a. I miei figli riusciranno a farlo.  
'My sons will succeed in doing it.'
- b. I miei figli lavorano molto e riusciranno a farlo.  
'My sons work a lot and will succeed in doing it.'

With Inversion, however, the initial 1 is final 3, and so it is not omissible:

- (36) a. A mia moglie manca energia.  
'My wife lacks energy.'
- b. \*Mia moglie lavora troppo e manca energia.  
'My wife works a lot and lacks energy.'
- (37) a. Ai miei figli riuscirà di farlo.  
'My sons will succeed in doing it.'
- b. \*I miei figli lavorano molto e riuscirà di farlo.  
'My sons work a lot and will succeed in doing it.'

In sum, the fact that pronominal Inversion nominals cannot be omitted (as pronominal final 1s can) provides an argument that they are not final 1s.

## 2.5 Argument Five: Floating Quantifiers

The quantifiers tutti 'all' and ciascuno 'each' in Italian can, under certain conditions, appear outside the nominal they modify. This phenomenon, generally known as 'floating quantifiers,' provides arguments both that Inversion nominals are not final 1s, and that they are final 3s.

One condition on floating quantifiers in Italian must be stated in terms of the notion 'final 1.' I give it here very informally.<sup>8</sup>

- (38) Quantifier Float from Non-Pronominal Nominals  
A quantifier can float from a non-pronominal nominal only if it heads a final-stratum 1-arc.

Quantifier float from non-pronominal final ls can be seen in the following examples:

- (39) a. Tutti i professori sono arrivati in ritardo.  
'All the professors arrived late.'
- b. I professori sono tutti arrivati in ritardo.
- c. I professori sono arrivati tutti in ritardo.  
'The professors all arrived late.'
- (40) a. Tutti i candidati sono stati criticati dalla stampa.  
'All the candidates have been criticized by the press.'
- b. I candidati sono tutti stati criticati dalla stampa.
- c. I candidati sono stati tutti criticati dalla stampa.  
'The candidates have all been criticized by the press.'

It follows from (38) that quantifiers cannot float off non-pronominal final 3s:

- (41) a. Ho dato delle caramelle a tutti i bambini.  
'I gave candy to all the children.'
- b. \*Ho dato delle caramelle ai bambini tutti.

Evidence that Inversion nominals are not final ls comes from the fact that quantifiers cannot float off non-pronominal Inversion nominals:

- (42) a. A tutte le donne piacciono i concerti di Mozart.  
'All the ladies like Mozart's concertos.'
- b. \*Alle donne piacciono tutte i concerti di Mozart.

This can be seen clearly with mancare and riuscire. Without Inversion, the initial l is also the final l, and quantifier float is possible:

- (43) a. Tutti i giovani mancano di esperienza pratica.  
'All the young people lack practical experience.'

- b. I giovani mancano tutti di esperienza pratica.  
'The young people all lack practical experience.'
- (44) a. Tutti i miei figli riusciranno a farlo.  
'All my sons will succeed in doing it.'
- b. I miei figli riusciranno tutti a farlo.  
'My sons will all succeed in doing it.'

With Inversion, however, the initial 1 is final 3, and so quantifier float is impossible:

- (45) a. A tutti i giovani manca esperienza pratica.  
'All the young people lack practical experience.'
- b. \*Ai giovani manca tutti esperienza pratica.
- (46) a. A tutti i miei figli riuscirà di farlo.  
'All my sons will succeed in doing it.'
- b. \*Ai miei figli riuscirà tutti di farlo.

Thus, the fact that quantifiers cannot float off non-pronominal Inversion nominals provides an argument that they are not final 1s.

The evidence that Inversion nominals are final 3s comes from consideration of quantifier float from objects. Very roughly and informally stated, the relevant condition is that quantifiers can float from final objects (final 2s and 3s) only if they appear as clitic pronouns. The following examples involve quantifier float from final objects:<sup>9</sup>

- (47) Giorgio ci ha visti tutti.  
'Giorgio saw us all.'
- (48) Giorgio ci ha dato dei soldi a tutti.  
'Giorgio gave us all money.'
- (49) Giorgio ci ha telefonato a tutti.  
'Giorgio telephoned us all.'

Ci is the first person plural clitic used for final 2s and 3s. In each of these examples, we have a floated quantifier modifying the nominal that appears as the clitic pronoun ci. If the quantifier floats from a final 3, it appears with the preposition a that marks final 3s in Italian. This is the case in (48) and (49). These examples would be ungrammatical without a, and a is impossible in (47), where the quantifier floats from a final 2:

- (50) a. \*Giorgio ci ha visti a tutti.  
 b. \*Giorgio ci ha dato dei soldi tutti.  
 c. \*Giorgio ci ha telefonato tutti.

Quantifier float from final Obliques is impossible in Italian. For example, consider:

- (51) a. Giorgio ha pensato a tutte quelle cose.  
 'Giorgio thought about all those things.'  
 b. Giorgio ha pensato a tutte le donne.  
 'Giorgio thought about all the ladies.'

In (51), tutte quelle cose and tutte le donne bear an Oblique relation whose nature is presently obscure. The crucial point, however, is that it is not one of the three Term relations. Since these nominals are non-pronominal but are not final 1s, quantifier float is impossible here:

- (52) a. \*Giorgio ha pensato a quelle cose tutte.  
 b. \*Giorgio ha pensato alle donne tutte.

Interestingly, the pronominal clitic used for this Oblique relation is ci - i.e. it has the same phonological shape as the first person plural clitic:

- (53) Giorgio ci ha pensato.  
 'Giorgio thought about them.'

But quantifier float is impossible:

- (54) \*Giorgio ci ha pensato (a) tutte.

\*(54) thus contrasts with (47 - 49), showing that quantifiers can float from clitics that represent final 2s and 3s, but not from final Obliques.<sup>10</sup>

Evidence for the final 3hood of Inversion nominals comes from the fact that they allow quantifier float if they appear as clitics:

- (55) Ci manca energia a tutti.  
 'We all lack energy.'  
 (56) Cose di quel genere ci dispiacciono a tutti.  
 'We all dislike things of that kind.'

The contrast between (55 - 56) and \*(54) is evidence that Inversion nominals are final objects rather than final Obliques. Further, quantifiers floated from Inversion nominals must be accompanied by the preposition a:

- (57) a. \*Ci manca energia tutti.  
 b. \*Cose di quel genere ci dispiacciono tutti.

This is evidence that Inversion nominals are not final 2s but final 3s.

Thus, floating quantifiers provide evidence that Inversion nominals are not final 1s, final 2s, or final Obliques, and that they are final 3s.

## 2.6 Conclusions

The fact that Inversion nominals do not behave like final 1s with respect to verb agreement, Equi, the omission of subject pronouns, and floating quantifiers provides arguments that they are not final 1s. The fact that they appear in dative forms and allow quantifier float under the same conditions as final objects, and the fact that the floated quantifier must appear with the preposition a, provide arguments that they are final 3s. If they are final 3s, their behavior with respect to all these phenomena will be accounted for by the independently motivated formulations of the relevant rules.

## 3. Arguments for the lhood of Inversion Nominals in Italian

In §3 I present four arguments for the lhood of Inversion nominals in Italian. In each case, I argue that the phenomenon in question must be stated in terms of the notion 'working 1.' Since Inversion nominals are shown to behave like working 1s with respect to the phenomena in question, and since it has already been concluded that they are final 3s, it follows that they must be 1s in an earlier stratum. I therefore conclude that Inversion nominals are initial 1s and final 3s.

### 3.1 Argument One: Consecutive DA + Infinitive

The first argument for the lhood of Inversion nominals in Italian was pointed out to me by Carol Rosen. It is based on the so-called "consecutive da + infinitive" construction. This construction occurs with forms such as tanto 'so much, so many,' talmente 'so,' abbastanza 'enough,' and several others:

- (58) Giorgio non ha abbastanza soldi da poter pagare il riscatto.  
 'Giorgio doesn't have enough money to be able to pay the ransom.'

- (59) a. Giorgio mi ha rimproverato tante volte che mi  
ha fatto paura.  
'Giorgio rebuked me so many times that he  
scared me.'
- b. Giorgio mi ha rimproverato tante volte da farmi  
paura.  
'Giorgio rebuked me so many times that he  
scared me.'

The crucial point about the consecutive da + infinitive construction is that a nominal in the matrix clause is understood as the subject of the infinitive occurring with consecutive da. I will refer to this nominal as the controller. In (58) and (59 b), the controller is Giorgio.

The condition on controllers of this construction can be given informally as follows:

- (60) Condition on controllers of the consecutive  
DA + infinitive construction  
The controller must be a working 1 of the matrix  
clause.

Since Giorgio is both initial and final 1 of the matrix clause in (58) and (59), it qualifies as a working 1 and therefore satisfies (60). The 2 in (61) is not a working 1, and so \*(61 b) is ungrammatical:

- (61) a. Le difficoltà finanziarie preoccupavano tanto  
Mario che si è ammalato.  
'Financial difficulties preoccupied Mario so  
much that he got sick.'
- b. \*Le difficoltà finanziarie preoccupavano tanto  
Mario da ammalarsi.

Similarly, note the contrast between (62 b) and \*(63 b):<sup>11</sup>

- (62) a. La mamma mi ha rimproverato tante volte che si  
è rotta le scatole.
- b. La mamma mi ha rimproverato tante volte da  
rompersi le scatole.  
'My mother reprimanded me so many times that she  
got fed up.'
- (63) a. La mamma mi ha rimproverato tante volte che mi  
sono rotto le scatole.

'My mother reprimanded me so many times that I got fed up.'

- b. \*La mamma mi ha rimproverato tante volte da rompermi le scatole.

La mamma, the 1 of the matrix clause, can control the consecutive da + infinitive construction, but mi, the matrix 2 cannot.

Crucial to the present argument is the fact that a nominal that is both initial and final 3 of the matrix clause cannot control the consecutive da + infinitive construction:

- (64) a. Ho telefonato a Giorgio tante volte che si è arrabbiato.  
'I telephoned Giorgio so many times that he got angry.'
- b. \*Ho telefonato a Giorgio tante volte da arrabbiarsi.
- (65) a. Gliel'ho detto tante volte che si è arrabbiato.  
'I said it to him so many times that he got angry.'
- b. \*Gliel'ho detto tante volte da arrabbiarsi.

Note also that a 3 cannot control the consecutive da + infinitive construction even if it is in initial position and there is no other possible controller:

- (66) a. A Giorgio è stata detta la stessa cosa tante volte che è diventato matto.  
'The same thing was said to Giorgio so many times that he went crazy.'
- b. \*A Giorgio è stata detta la stessa cosa tante volte da diventare matto.

This eliminates the possibility that the condition on possible controllers might be one of the following:

- (67) a. The highest-ranking nominal in the clause (with respect to its grammatical relation on the hierarchy of grammatical relations) that would be semantically possible as controller is the controller.
- b. The nominal in initial position is the controller.

A condition along the lines of (67 b) is also ruled out by examples such as the following:

- (68) a. A queste donne Giorgio ha dato tanti fiori che sono diventate matte.  
'To these ladies Giorgio gave so many flowers that they went crazy.'
- b. \*A queste donne Giorgio ha dato tanti fiori da diventare matte.

The ungrammaticality of \*(68 b) shows that queste donne cannot control the consecutive da + infinitive construction, although it is in initial position.<sup>12</sup> This follows from the condition in (60).

Final l's in the Passive construction are working l's by the definition in (60) and therefore qualify as controllers of the consecutive da + infinitive construction:

- (69) a. Sono stato rimproverato dalla mamma tante volte che mi sono rotto le scatole.
- b. Sono stato rimproverato dalla mamma tante volte da rompermi le scatole.  
'I was rebuked by my mother so many times that I got fed up.'

Crucially, Passive chômeurs do not head final Term arcs. They therefore do not satisfy condition (ii) in (7). Thus they are not working l's and cannot control the consecutive da + infinitive construction:

- (70) a. Sono stato rimproverato dalla mamma tante volte che si è rotta le scatole.  
'I was rebuked by my mother so many times that she got fed up.'
- b. \*Sono stato rimproverato dalla mamma tante volte da rompersi le scatole.

The condition on controllers of the consecutive da + infinitive construction, formulated in terms of grammatical relations in (60), cannot be stated in terms of semantic roles. This can be seen in active-passive pairs. In (62 - 63), la mamma can control consecutive da + infinitive while the first person nominal cannot, but in (69 - 70) the situation is reversed. The semantic roles of these nominals are the same in both cases, but the grammatical relations they bear are

different. Their differential ability to control consecutive da + infinitive in actives and passives is accounted for by the formulation of the condition in terms of grammatical relations in (60), but would not be accounted for by a formulation in terms of semantic roles.

The contrast between (58), (59 b), (62 b), and (69 b), on the one hand, and \*(61 b), \*(63 b), \*(64 b), \*(65 b), \*(66 b), and \*(68 b), on the other, shows that a nominal must head a l-arc in order to control the consecutive da + infinitive construction. However, the ungrammaticality of \*(70 b) shows that heading a l-arc is not sufficient. The data adduced so far could be accounted for by a formulation either in terms of the notion 'final l,' or in terms of the notion 'working l,' as in (60). The crucial evidence to decide between these two formulations comes from consideration of Inversion nominals. Since Inversion nominals are final 3s, if they can control the consecutive da + infinitive construction the condition cannot be formulated in terms of the notion 'final l.' If Inversion nominals, though final 3s, are initial 1s, they qualify as 'working 1s' by the definition in (7). Thus, if Inversion nominals can control the consecutive da + infinitive construction, that fact will simultaneously provide evidence for the lhood of Inversion nominals and for the formulation in terms of the notion 'working l,' as in (60).

A crucial example showing that Inversion nominals can control the consecutive da + infinitive construction (a letter to the astrological column of an Italian magazine) was brought to my attention by Carol Rosen:

- (71) Sono nata nella Vergine e ho sposato, per amore, un uomo del Toro (proprio il 21 aprile, è venuto al mondo: Toro del primo giorno). Abbiamo avuto due bellissimi figli, di sette e due anni, oggi. All' improvviso, a mio marito è talmente piaciuta una compagna d'ufficio da lasciarci tutti quanti e andare a vivere con lei, dimenticando tutte le sue responsabilità di uomo e di padre. Che cosa accadrà adesso? (Una delle tante disperate)

'I am a Virgo, and I married (for love) a Taurus (he was born on April 21, the first day of Taurus). We have had two beautiful children, who are now seven and two years old. Unexpectedly, my husband took such a liking to a co-worker at the office that he left us all and went to live with her, forgetting his responsibilities as a man and a father. What will happen now? (One of so many desperate women)'

The crucial part of the example is underlined. Mio marito 'my husband' is an Inversion nominal, marked with the dative preposition a and occurring with piacere 'like.' Crucially, it controls the consecutive da + infinitive construction (da lasciarci tutti quanti. . . 'that he left us all . . . ') The formulation of the condition on controllers of this construction in terms of the notion 'working 1,' together with the Inversion analysis of piacere clauses, predicts the grammaticality of examples like (71). The grammaticality of such examples thus provides evidence both for the formulation of condition (60) in terms of the notion 'working 1,' and for the lhood of Inversion nominals in Italian.

The ability of Inversion nominals to control consecutive da + infinitive can also be seen with mancare and riuscire:

- (72) Gli sono mancate vitamine tanto da ammalarsi.  
'He lacked vitamins to such an extent that he  
got sick.'
- (73) Gli è riuscito tante volte da averne abbastanza.  
'He succeeded (at it) so many times that he had  
enough of it.'

Similar examples could be provided for Inversion nominals with other predicates.

### 3.2 Argument Two: Equi in the Gerund Construction

Italian has a gerund construction illustrated by:

- (74) Avendo la polizia accettato di aiutarci, potremo  
risolvere il problema.  
'The police having agreed to help us, we'll be able  
to solve the problem.'

In this example, the 1 of the gerund clause (la polizia) is distinct from the (first person plural) 1 of the main clause. If the two 1s are not distinct, the 1 of the gerund clause does not appear overtly:

- (75) Avendo accettato di aiutarci, la polizia non ha  
risparmiato sforzi per risolvere il problema.  
  
'Having agreed to help us, the police spared no  
efforts to solve the problem.'

I will refer to this phenomenon as 'Equi in the gerund construction.' The nature of Equi is not at issue here; what is relevant to the present argument is the condition determining which nominal can act as controller.

The condition can be given informally as follows:

- (76) Condition on controllers of Equi in the gerund construction  
 Only a working 1 of the matrix clause can control Equi in the gerund construction.

The following example illustrates the fact that a 1 can control Equi in the gerund construction but a 2 cannot:

- (77) Avendo criticato la politica estera del governo,  
 i membri dell'opposizione hanno attaccato il loro leader.  
 'Having criticized the government's foreign policy,  
 the members of the opposition attacked their leader.'

(77) means only that the members of the opposition criticized the government's foreign policy; it does not mean that their leader criticized the government's foreign policy. This follows from (76).

The fact that a final 3 that is also initial 3 cannot control Equi in the gerund construction can be seen in the following examples:

- (78) a. Essendo appena tornata in città, Maria ha telefonato a Giorgio.  
 'Having just returned to town, Maria called Giorgio.'  
 b. \*Essendo appena tornato in città, Maria ha telefonato a Giorgio.
- (79) a. Essendo appena tornata in città, Maria ha dato i soldi a Giorgio.  
 'Having just returned to town, Maria gave the money to Giorgio.'  
 b. \*Essendo appena tornato in città, Maria ha dato i soldi a Giorgio.

(78 a) and (79 a) indicate that Maria is the one who has just returned to town. This is reflected in the fact that the past participle tornata is feminine singular in agreement with the subject of the gerund clause. Giorgio, the 3 of the main clause, cannot control Equi in the gerund construction. This is reflected in the ungrammaticality of the \*(b)-sentences, in which the participle tornato is masculine.

The fact that a nominal need not be an initial 1 to

control Equi in the gerund construction can be seen in the following examples, where an initial 2 that is final 1 in the Passive construction controls it:

- (80) Avendo derubato la Banca Nazionale dell'Agricoltura, l'autore del delitto è stato festeggiato dagli amici brigatisti.  
'Having robbed the Banca Nazionale dell'Agricoltura, the culprit was feted by his friends in the brigade.'
- (81) Avendo criticato la politica estera del governo, il leader dell'opposizione è stato attaccato dai membri del suo partito.  
'Having criticized the government's foreign policy, the leader of the opposition was attacked by the members of his party.'

(80) means that the culprit (l'autore del delitto) robbed the bank, and (81) means that the leader of the opposition criticized the government's foreign policy. Crucially, (81) does not mean that the members of his party criticized the government's foreign policy. This illustrates the fact that a Passive chomeur cannot control Equi in the gerund construction. Since Passive chomeurs do not head final-stratum Term arcs, this fact follows from the formulation of the condition in (76).

The contrast between (77) and (81) illustrates the fact that the condition on controllers of Equi in the gerund construction, formulated in terms of grammatical relations in (76), cannot be stated in terms of semantic roles. In such active-passive pairs, the semantic roles are the same but the grammatical relations are different. The fact that relationally different nominals control Equi in the gerund construction in (77) and (81) follows from the formulation in (76), but would not be accounted for by a formulation in terms of semantic roles.

Now consider Inversion nominals. If they can control Equi in the gerund construction, that will simultaneously provide evidence for their lhood and for the formulation of the condition on controllers in terms of the notion 'working 1,' as in (76). And Inversion nominals can control Equi in the gerund construction.<sup>13</sup>

- (82) Avendo lavorato tutta la giornata, gli manca energia.  
'Having worked all day, he lacks energy.'
- (83) Essendo appena tornato a casa, gli dispiaceva non trovare nessuno.

'Having just returned home, he disliked not finding anyone there.'

In these examples, the dative Inversion nominal gli controls Equi in the gerund construction. Their grammaticality provides evidence both for the formulation of the condition on controllers in terms of the notion 'working l,' as in (76), and for the lhood of Inversion nominals in Italian.

### 3.3 Argument Three: Equi in the Participial Absolute

The participial absolute construction in Italian is exemplified by:

- (84) *Uscite le donne, gli uomini hanno cominciato a discuterle.*  
 'The ladies having left, the men began to discuss them.'

Here the final l of the participial absolute clause (le donne) is distinct from the final l of the matrix clause (gli uomini). If the ls of the two clauses are not distinct, the l of the participial absolute clause does not appear overtly:

- (85) *Uscite alle due, le donne hanno passato il pomeriggio in spiaggia.*  
 'Having left at two o'clock, the ladies spent the afternoon at the beach.'

Note that the participle uscite in this example is feminine Plural in agreement with the Equi victim. Again, I refer to this phenomenon as 'Equi,' but nothing of substance hinges on this term. At issue is not the nature of Equi, but rather the condition that determines which nominal can act as controller. The argument for the lhood of Inversion nominals based on Equi in the participial absolute has the same form as that based on Equi in the gerund construction. First I show that the condition on Equi controllers must be stated in terms of the notion 'working l,' and then I show that Inversion nominals behave like working ls with respect to this condition.

Before proceeding to the argument, however, it is first necessary to dispose of an alternative analysis. It might be thought that the participial absolute is only a variant of the gerund construction with the auxiliary verb (avendo or essendo) absent from the surface string. Under this hypothesis, (84) and (85) would be variants of (86) and (87) without essendo:

- (86) Essendo le donne uscite, gli uomini hanno cominciato a discuterle.  
'The ladies having left, the men began to discuss them.'
- (87) Essendo uscite alle due, le donne hanno passato il pomeriggio in spiaggia.  
'Having left at two o'clock, the ladies spent the afternoon at the beach.'

If this hypothesis were correct, and (84) and (85) were mere variants of (86) and (87), then the argument for Inversion based on Equi in the participial absolute would not be an argument distinct from that based on Equi in the gerund construction. However, it can be shown that the participial absolute is not a simple variant of the gerund construction without the auxiliary verb.<sup>14</sup>

First, the class of verbs that can appear in the participial absolute is more restricted than the class that can appear in the gerund construction.<sup>15</sup> The following examples illustrate this:

- (88) a. Avendo lavorato tutta la mattinata, sono andato in spiaggia.  
'Having worked all morning, I went to the beach.'
- b. \*Lavorato tutta la mattinata, sono andato in spiaggia.

Second, a past participle in the gerund construction cannot agree with its 2, while the past participle in the participial absolute must agree:

- (89) Avendo derubato (\*derubata) la Banca Nazionale dell'Agricoltura, l'autore del delitto è stato festeggiato dagli amici brigatisti.  
'Having robbed the Banca Nazionale dell'Agricoltura, the culprit was feted by his friends in the brigade.'
- (90) Derubata (\*derubato) la Banca Nazionale dell'Agricoltura, l'autore del delitto è stato festeggiato dagli amici brigatisti.  
'Having robbed the Banca Nazionale dell'Agricoltura, the culprit was feted by his friends in the brigade.'

Third, the gerund construction may manifest both a final 1 and a final 2 in the surface string, while the participial absolute does not allow this:

- (91) Avendo la stampa criticato il governo, nuove elezioni cominciano a parere più probabili.  
'The press having criticized the government, new elections are beginning to seem more probable.'
- (92) a. \*Criticato/criticata la stampa il governo, nuove elezioni cominciano a parere più probabili.
- b. \*La stampa criticato/criticata il governo, nuove elezioni cominciano a parere più probabili.

Fourth, the gerund construction may be passive, but the participial absolute cannot be:

- (93) a. Il governo essendo continuamente criticato dalla stampa, nuove elezioni cominciano a parere più probabili.  
'The government being continually criticized by the press, new elections are beginning to seem more likely.'
- b. \*Il governo continuamente criticato dalla stampa, nuove elezioni cominciano a parere più probabili.

In sum, the participial absolute cannot be dismissed as a mere variant of the gerund construction without the auxiliary.

The condition on controllers of Equi in the participial absolute can be given informally as follows:

- (94) Condition on controllers of Equi in the participial absolute  
Only a working 1 of the matrix clause can control Equi in the participial absolute.

The fact that a 1 can control Equi in the participial absolute while a 2 cannot is illustrated by the following examples:

- (95) Criticata la politica estera del governo, i membri dell'opposizione hanno attaccato il loro leader.  
'Having criticized the government's foreign policy; the members of the opposition attacked their leader.'

(95) means that the members of the opposition criticized the government's foreign policy, not that their leader did.

The fact that a nominal that is both initial and final 3 cannot control Equi in the participial absolute is illustrated

by the following examples:

- (96) a. Appena tornata in città, Maria ha telefonato a Giorgio.  
'Just returned to town, Maria called Giorgio.'
- b. \*Appena tornato in città, Maria ha telefonato a Giorgio.
- (97) a. Appena tornata in città, Maria ha dato i soldi a Giorgio.  
'Just returned to town, Maria gave the money to Giorgio.'
- b. \*Appena tornato in città, Maria ha dato i soldi a Giorgio.

In the grammatical (a)-sentences, the participle tornata is feminine singular in agreement with its final 1, the Equi victim. This shows that Maria is the controller. The fact that Giorgio, the 3 of the main clause, cannot control Equi in the participial absolute is reflected in the fact that the participle cannot be masculine singular, as in the \*(b)-examples.

Passive 1s, which are working 1s, qualify as controllers:

- (98) Criticata la politica estera del governo, il leader dell'opposizione è stato attaccato dai membri del suo partito.  
'Having criticized the government's foreign policy, the leader of the opposition was attacked by the members of his party.'

(98) means that the leader of the opposition criticized the government's foreign policy. Crucially, it does not mean that the members of his party did. This example thus illustrates the fact that Passive chomeurs cannot control Equi in the participial absolute. This follows from the formulation in (94), which limits controllers to nominals heading a final-stratum Term arc. The contrast between (95) and (98) also illustrates the impossibility of stating the condition on possible controllers in terms of semantic roles, since the controllers in (95) and (98) are different, while the semantic roles are the same.

The data cited so far would justify a formulation of the condition on controllers of Equi in the participial absolute either in terms of the notion 'final 1' or in terms of the notion 'working 1.' Inversion nominals provide the data deciding

between these two alternatives. And Inversion nominals can control Equi in the participial absolute:

- (99) Appena congedato, mi è rincresciuto dover tornare a lavorare.  
'Just discharged, I regretted having to go back to work.'
- (100) Appena congedato, gli è riuscito di trovare un buon posto.  
'Just discharged, he managed to find a good position.'
- (101) Appena tornato in città, gli è capitata una cosa stranissima.  
'Just returned to town, something very strange happened to him.'

Note the contrast between \*(96 b-97 b), and (99 - 100). The Inversion nominals in (99 - 100), though final 3s, are initial 1s and therefore working 1s. Given the formulation in (94), they qualify as controllers of Equi in the participial absolute. The 3s in \*(96 b-97 b), on the other hand, do not head l-arcs in any stratum and therefore cannot control Equi in the participial absolute. The fact that examples like (99 - 101) are grammatical provides evidence both for the formulation of the condition on possible controllers in terms of the notion 'working 1,' as in (94), and for the lhood of Inversion.

#### 3.4 Argument Four: Adverbial Infinitival Clauses

The fourth argument for the lhood of Inversion nominals is based on adverbial infinitival clauses introduced by a preposition, as in:

- (102) Giorgio ha telefonato a Gilda giusto prima di tornare in città.  
'Giorgio called Gilda just before returning to town.'

As in the case of gerund constructions and the participial absolute, these adverbial infinitival clauses involve control by a nominal in the main clause. In (102), the adverbial clause is controlled by Giorgio, the 1 of the main clause. It cannot be controlled by Gilda, the 3 of the main clause. Thus, (102) means that Giorgio called Gilda before he returned to town, not that he called her before she returned to town. The latter meaning would have to be expressed by means of a subjunctive complement introduced by che:

- (103) Giorgio ha telefonato a Gilda giusto prima che (lei) tornasse in città.

Similarly, in (104) only the 1 and not the 3 can control the adverbial infinitival clause:

- (104) Ho dato i soldi a Gilda giusto prima di partire per l'estero.  
'I gave the money to Gilda just before leaving for abroad.'

(104) means that I gave the money to Gilda before I left for abroad, not that I gave it to her before she left for abroad.

The fact that a 2 cannot control adverbial infinitival clauses is illustrated by:

- (105) La mamma ha rimproverato Mario giusto prima di andare a dormire.  
'(His) mother scolded Mario just before going to bed.'

(105) means that his mother scolded Mario before she went to bed, not that she scolded him before he went to bed.

In the corresponding passive, however, the control facts are different:

- (106) Mario è stato rimproverato dalla mamma giusto prima di andare a dormire.  
'Mario was scolded by his mother just before going to bed.'

(106) means that Mario was scolded by his mother before he went to bed, not that she scolded him before she went to bed. Thus, a Passive 1 can control adverbial infinitival clauses, but a Passive chomeur cannot. This precludes the possibility of stating the condition on possible controllers in terms of semantic roles, since the semantic roles in (105) and (106) are the same, but the possibilities of control are different. The grammatical relations, however, are different in the two examples.

The condition on possible controllers can be given informally as follows:

- (107) Condition on controllers of adverbial infinitival clauses in Italian  
Only a working 1 of the matrix clause can control adverbial infinitival clauses.

(107) correctly accounts for the control data presented so far, but so would a formulation in terms of the notion 'final l.' As before, the crucial evidence deciding between these two formulations comes from Inversion nominals, which can control adverbial infinitival clauses:

- (108) A Giorgio non è riuscito di finire tutto il lavoro prima di partire per l'estero.  
'Giorgio didn't manage to finish all the work before leaving for abroad.'
- (109) Mi bastavano pochi soldi prima di trasferirmi a Parigi.  
'Little money was sufficient for me before moving to Paris.'
- (110) Gli capita sempre la stessa cosa dopo aver dato le dimissioni.  
'The same thing always happens to him after resigning.'
- (111) Gli riescono poche cose senza farsi aiutare da nessuno.  
'He succeeds at few things without getting someone to help him.'
- (112) Cose di quel genere gli seccavano prima di riacquistare fiducia in se stesso.  
'Things like that bothered him before he regained confidence in himself.'

The Inversion 3s in (108 - 112) contrast with the 3 in (102), which does not head a l-arc in any stratum. Their contrasting behavior with respect to adverbial infinitival clauses follows directly from (107) and the Inversion analysis. The data cited here thus provides further support both for the Inversion analysis and for the formulation of the condition on controllers of adverbial infinitival clauses in terms of the notion 'working l.'

### 3. Conclusions

In §3 it has been argued that four conditions in Italian grammar must be stated in terms of the notion 'working l:': the conditions on control of the consecutive da + infinitive construction, of Equi in the gerund construction and the participial absolute, and of adverbial infinitival clauses. In each case, the fact that Inversion nominals can control the phenomenon in question provides evidence both for thehood of Inversion nominals and for the formulation of the condition in question in terms of the notion 'working l.'

An obvious alternative would be to deny the lhood of Inversion nominals and to formulate each of the four conditions in terms of a disjunction of the following form:

- (113) Only a final l or an Inversion nominal can control Phenomenon X.

While conditions of this form would account for the data, they must mention two classes of nominals in each case - final ls and Inversion nominals. Such conditions implicitly claim that these two classes of nominals have nothing in common, and that it is therefore accidental that they behave alike with respect to the phenomena in question. The formulations in terms of the notion 'working l,' as proposed here, claim that final ls and Inversion nominals have something in common - namely lhood (reflected formally in terms of heading l-arcs in RNs). The statement of the relevant condition in terms of the notion 'working l' thus provides a means of capturing the generalization that unites what would otherwise be two distinct classes of nominals.

#### 4. On the Class of Inversion Triggers

(1) lists a subset of the predicates that manifest the Inversion construction in Italian. While I have made no effort to compile a complete list of such predicates, in §4 I point out that this class includes a number of predicates whose final 3s otherwise might not be thought to be initial ls. Relevant evidence is given, showing the final 3s of the predicates in question to behave like working ls with respect to the four phenomena discussed in §3. I conclude that in each case, the final 3 is indeed an initial l. In most cases, the nominal in question has the semantic role of Experiencer or Cognizer.

The first subclass of Inversion predicates not discussed above includes sembrare 'seem' and parere 'appear.'

- (114) Consecutive da + infinitive:  
 Mi sembrava talmente strano da non crederci.  
 'It seemed so strange to me that I didn't believe it.'
- (115) Equi in the gerund construction:  
 Essendo tornato dopo cinque anni, mi sembrava che tutto fosse cambiato.  
 'Having returned after five years, it seemed to me that everything had changed.'

(116) Equi in the participial absolute:  
Tornato dopo cinque anni, mi sembrava che tutto fosse cambiato.  
'Having returned after five years, it seemed to me that everything had changed.'

(117) Adverbial infinitival clauses:  
Prima di andare all'estero, l'Italia mi sembrava una nazione ricca.  
'Before going abroad, Italy seemed a rich country to me.'

Predicates taking semantic Cognizers such as chiaro 'clear' and evidente 'evident' also manifest the Inversion construction:

(118) Consecutive da + infinitive:  
Gli era così evidente da non comprendere come non lo fosse a tutti.  
'It was so evident to him that he couldn't understand how it wasn't to everyone.'

(119) Equi in the gerund construction:  
Essendo tornato in città, gli era chiaro che preferiva la campagna.  
'Having returned to the city, it was clear to him that he preferred the country.'

(120) Equi in the participial absolute:  
Tornato in città, gli era chiaro che preferiva la campagna.  
'Having returned to the city, it was clear to him that he preferred the country.'

(121) Adverbial infinitival clauses:  
Senza neppur pensarci, mi era evidente che i problemi si sarebbero risolti.  
'Without even thinking about it, it was evident to me that the problems would be resolved.'

Finally, the class of predicates that includes possibile 'possible,' impossibile 'impossible,' facile 'easy,' and difficile 'difficult,' can be shown to manifest the Inversion construction.

(122) Consecutive da + infinitive:  
Mi era così difficile da voler rinunciare.  
'It was so difficult for me that I wanted to give up.'

- (123) Equi in the gerund construction:  
Essendo appena tornato in città, gli era difficile/impossibile ricominciare a lavorare.  
'Having just returned to town, it was difficult/impossible for him to get back to work.'
- (124) Equi in the participial absolute:  
Appena tornato in città, gli era difficile/impossibile ricominciare a lavorare.  
'Having just returned to town, it was difficult/impossible for him to get back to work.'
- (125) Adverbial infinitival clauses:  
Prima di vivere negli Stati Uniti, mi era difficile capire l'inglese.  
'Before living in the United States, it was difficult for me to understand English.'

The fact that the final 3s of predicates in these classes can be shown to be initial 1s has several interesting consequences for linguistic theory.

First, as already pointed out in §1.1, it bears on the question of whether the grammatical relations nominals bear in the initial stratum of their clauses is universally predictable as a function of semantic roles. If these Inversion final 3s were initial 3s, they would constitute an important counterexample to any such claim. While it cannot establish the predictability of initial grammatical relations from semantic roles,<sup>16</sup> the demonstration that Inversion 3s are initial 1s eliminates a significant class of counterexamples.

Second, this matter has consequences for another problem of linguistic theory - that of characterizing the class of possible raising constructions in natural languages. This is due to the fact that sembrare and parere are Subject Raising triggers, while impossibile, difficile, and facile are Object Raising triggers:

- (126) Giorgio mi pareva un po' nervoso. [Subject Raising]  
'Giorgio seemed a bit nervous to me.'
- (127) Questi libri sono difficili da leggere [Object Raising]  
'These books are difficult to read.'

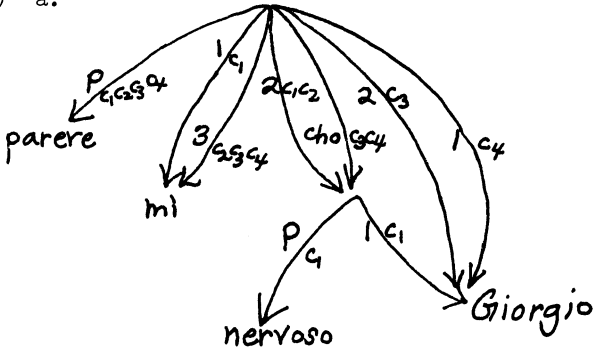
The basic question at issue is this:

- (128) What is the initial-stratum grammatical relation of the complement out of which the ascendeo ascends?

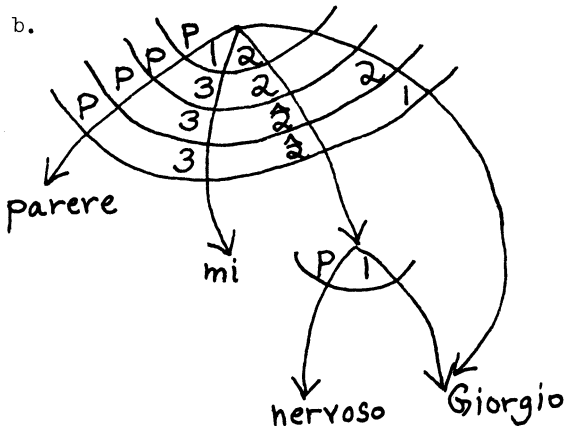
Under one analysis of these constructions, the complement is the initial 1 of the clause whose predicate is the raising trigger.<sup>17</sup> Under another analysis, the complement is the initial 2. The demonstration that the final 3 of sembrare, difficile, etc. is the initial 1, taken together with the Stratal Uniqueness Law. [Perlmutter and Postal (1977, to appear b)] forces an answer to (128). This law claims that it is impossible for a well-formed clause to have two (or more) distinct 1-arcs in the same stratum. Since the Inversion nominal heads a 1-arc in the initial stratum, the complement that serves as host of the ascension cannot do so. Thus the evidence for the hood of the final 3 of raising triggers is indirectly evidence for the initial 2hood of the complement.

The structure I propose for (126) (in two equivalent notations) is:<sup>18</sup>

(129) a.



b.



In (129), the initial stratum of the matrix clause contains a 1-arc and a 2-arc, and the second stratum, in which the initial 1 heads a 3-arc, is an unaccusative stratum in the sense of Perlmutter and Postal (to appear c) and Perlmutter (1978). The ascende, ascending out of a 2-complement, is a 2 in the matrix clause; this is predicted by the Relational Succession Law [Perlmutter and Postal (to appear a)]. It advances to 1 by Unaccusative Advancement. The crucial point about this analysis is that it does not involve raising out of a 1. This is of interest in view of the claim in Perlmutter and Postal (to appear d) and the Editor's Afterword to Perlmutter and Postal (to appear a) that all raising<sup>19</sup> is out of 2s. Thus, the evidence for the hood of Inversion nominals with raising triggers such as sembrare, difficile, etc. indirectly provides evidence for the claim<sup>20</sup> that raising is universally out of 2s and never out of 1s.

##### 5. Some Clauses with Two Working 1s

As the RN in (129) makes clear, there are clauses in Italian that have two working 1s - the final 1 and the Inversion nominal. If the formulation of the four conditions in §3 in terms of the notion 'working 1' is correct, there should be sentences in which both working 1s can control the phenomena in question. And this is the case.

First, both working 1s can control adverbial infinitive constructions. Thus, (130) is ambiguous:

(130) *Prima di partire per l'estero, Giorgio mi sembrava un po'nervoso.*

'Before leaving for abroad, Giorgio seemed a bit nervous to me.'

(130) can mean either 'before Giorgio left for abroad' or 'before I left for abroad.'

Second, both working 1s can control Equi in the gerund construction:

(131) a. *Essendo appena tornato in città, Claudia mi pareva più bella del solito.*

b. *Essendo appena tornata in città, Claudia mi pareva più bella del solito.*

'Having just returned to town, Claudia seemed more beautiful to me than usual.'

The masculine singular participle tornato in (131 a) shows that the controller is mi, while the feminine singular form tornata in (131b) shows that the controller is Claudia. In each case, the participle

agrees with the final 1 of the gerund clause. (131 a) means that I have just returned to town, while (131 b) means that Claudia has.

Third, both working 1s can control Equi in the participial absolute:

- (132) a. Appena tornato in città, Claudia mi pareva più bella del solito.
- b. Appena tornata in città, Claudia mi pareva più bella del solito.  
'Just returned to town, Claudia seemed more beautiful to me than usual.'

As the agreeing participles make clear, mi is the controller in (132 a), while Claudia is the controller in (132 b).

Fourth, both working 1s can control the consecutive da + infinitive construction:

- (133) Alla mamma Giorgio pareva talmente nervoso da non poter dormire.  
'To his mother Giorgio seemed so nervous as not to be able to sleep.'
- (134) Alla mamma Giorgio pareva talmente nervoso da volerlo far visitare da un specialista.  
'To his mother Giorgio seemed so nervous that she wanted to have him examined/visited by a specialist.'

In (133) the controller is Giorgio, while in (134) it is la mamma.<sup>21</sup>

The fact that in clauses with two working 1s, both can control the phenomena in question is of interest for two reasons.

First, this fact follows directly from the formulation of the relevant condition in terms of the notion 'working 1.' These examples thus provide additional support for that formulation.

Second, these examples provide a different kind of indirect support for the arguments for the lhood of Inversion nominals developed in §3. The basis of those arguments is the contrast between the behavior of Inversion nominals with respect to the four control phenomena discussed there and the behavior of nominals that are both initial and final 3s. The fact that the latter can not control the phenomena in question was generally shown by means of sentences with both a 1 and a 3, where only the 1 could act as controller. Now, an alternative formulation of the conditions on control of the phenomena in question might be proposed along the following lines:

(135) The only nominal that can control Phenomenon X is the nominal whose final-stratum grammatical relation ranks highest on the hierarchy of grammatical relations.

(135) would account for most (but not all) of the data in §3. If (135) were adopted for each of the phenomena discussed there, most of the arguments in §3 for the hood of Inversion nominals would no longer go through. That is the second reason why examples like (130-134) are significant. (135) is based on the assumption that in a given clause, no more than one nominal can control the phenomenon in question. (130-134) show that this is not true. Thus, the conditions formulated in terms of the notion 'working 1' in §3 cannot be replaced by a condition such as (135). This indirectly supports the arguments for the hood of Inversion nominals, which are based on the formulation of the relevant conditions in §3 in terms of the notion 'working 1.'

## 6. Working 1s and Inversion in Japanese

### 6.1 The Problem

In §6 I argue that the notion 'working 1' is needed in the grammar of Japanese, and that the phenomena for which it is needed provide evidence for Inversion in Japanese.

In Japanese, final 1s are marked with the particle ga, final 2s with o, and final 3s with ni, as in the following example:

(136) *Dono hito ga musuko ni sono hon o kuremasita ka?*  
 which person NOM son DAT that book ACC gave ?  
 'Which person gave that book to my son?'

However, there are sentences of Japanese that exhibit a different case marking pattern:

(137) *Kimura-san ni sono mondai ga wakaru.*  
 DAT that problem NOM understand  
 'Mr. Kimura understands that problem.'

Here we are concerned with only one aspect of the case marking pattern in (137) - the fact that Kimura-san is marked with ni. I argue here that Kimura-san in (137) is an Inversion nominal, heading a 1-arc in the initial stratum and a 3-arc in the final stratum.

The most obvious evidence for the final 3hood of Kimura-san in (137) is the dative particle ni. If Kimura-san in this example is not a final 3, some otherwise unmotivated device will have to be added to the grammar of Japanese to account for such instances of ni. If these are Inversion nominals, however, the presence of the particle ni in such examples will be accounted for by the same rule that accounts for ni in (136).

A second piece of evidence for the final 3hood of Inversion nominals in Japanese comes from their inability to launch floating quantifiers. Final 1s in Japanese can launch floating quantifiers, as in:<sup>22</sup>

- (138) a. Sannin no kodomotati wa iti do ni nakihazimeta.  
 three GEN children TOP at-once cry+began  
 'Three children began to cry at once.'  
 b. Kodomotati wa sannin iti do ni nakihazimeta.

In (138b), the quantifier sannin has floated from the nominal kodomotati. However, quantifiers cannot float from final 3s:

- (139) a. Kimura-san wa sanbiki no inu ni mizu o yatta.  
 TOP three GEN dog DAT water ACC gave  
 'Mr. Kimura gave water to three dogs.'  
 b. \*Kimura-san wa inu ni sanbiki mizu o yatta.

Quantifiers cannot float from Inversion nominals either:

- (140) a. Korera no sannin no kodomotati ni eigo ga wakaru.  
 'These three children understand English.'  
 b. \*Korera no kodomotati ni sannin eigo ga wakaru.

If Inversion nominals are final 3s, no special device need be added to the grammar to account for the ungrammaticality of sentences like \*(140b); it will follow from the rule that also accounts for the ungrammaticality of sentences like \*(139b).<sup>23</sup>

Thus, Inversion nominals in Japanese behave like final 3s with respect to case marking and floating quantifiers. The question is whether there is evidence in Japanese that they are initial 1s. We now turn to that evidence.

## 6.2 Argument One: Reflexives

In Japanese, only a 1 can serve as antecedent of a reflexive.<sup>24</sup>

- (141) Dono hito<sub>i</sub> ga Ando-san<sub>j</sub> ni zibun<sub>i</sub> no koto ni tuite  
 which person NOM DAT REFL GEN thing about  
 hanasimasita ka?  
 talked ?  
 'Which person<sub>i</sub> talked to Mr. Ando<sub>j</sub> about himself<sub>i</sub>?'  
 (142) Dono hito<sub>i</sub> ga Ando-san<sub>j</sub> ni zibun<sub>i</sub> no syasin<sub>i</sub> o  
 which person NOM DAT REFL GEN picture ACC  
 misemasita ka?  
 showed ?  
 'Which person<sub>i</sub> showed Mr. Ando<sub>j</sub> a picture of himself<sub>i</sub>?'

In (141-142), only the 1 (dono hito) can be the antecedent of the reflexive zibun; the 3 (Ando-san) cannot be. Similarly, a 2 cannot antecede a reflexive in Japanese:

- (143) Yamada-san<sub>i</sub> wa Ando-san<sub>j</sub> o zibun<sub>i</sub> no ie de  
 TOP ACC REFL GEN house LOC  
 korosita.  
 killed



A 3 cannot control the -nagara construction:

- (148) Sono koto o kangaenagara, Tanaka-san ni denwa sita.  
 those things ACC think+while DAT telephoned  
 'While thinking about those things, I phoned Mr. Tanaka.'

(148) means that I was thinking about those things, not that Mr. Tanaka was. Thus, the -nagara construction in (148) is controlled only by the first person subject of the main clause (which does not appear overtly), not by Tanaka-san, the 3 of the main clause.

- (149) \*Sono koto o kangaenagara, Tanaka-san ni denwa ga  
 kakatta. DAT phone NOM  
 connected  
 'While thinking about those things, Mr. Tanaka got a  
 phone call.'

\*(149) uses the intransitive verb kakaru, which can be used with a 3 to mean that someone got a phone call (literally: 'to someone the phone connected'). But since Tanaka-san is a 3 in \*(149) and not a 1, it cannot control the -nagara construction, and \*(149) is ungrammatical.

A 2 cannot control the -nagara construction:

- (150) Hooritu no senmon-ka de arinagara, Katoo-san wa  
 law GEN expert being+while TOP  
 Yamamoto-san o damasita.  
 ACC deceived  
 'Though (he was) an expert on law, Mr. Katoo deceived  
 Mr. Yamamoto.'

(150) means only that Mr. Katoo was an expert on law, not that Mr. Yamamoto was. In the corresponding passive, however, we find the opposite:

- (151) Hooritu no senmon-ka de arinagara, Yamamoto-san wa  
 Katoo-san ni damasareta.  
 'Though (he was) an expert on law, Mr. Yamamoto was  
 deceived by Mr. Katoo.'

(151) means only that Mr. Yamamoto was an expert on law, not that Mr. Katoo was. Thus, the condition on controllers of the -nagara construction cannot be stated in terms of initial grammatical relations or in terms of semantic roles.

To decide between formulations of the condition in terms of the notions 'final 1' and 'working 1,' we turn to Inversion nominals. Though final 3s, they can control the -nagara construction:

- (152) Sutoraiki o yatte inagara, roodoosya ni sono mondai  
 strike ACC doing be+while workers DAT that problem

- ga dandan wakatte kita.  
 NOM gradually understand came  
 'While on strike, the workers gradually came to understand that problem.'
- (153) Sutoraiki o yatte inagara, roodoosya ni subete ga  
 muzukasiku omoete kita. everything NOM  
 difficult seem came  
 'While on strike, everything began to seem difficult to the workers.'

Thus, the condition can be given informally as follows:

- (154) Condition on controllers of the -NAGARA construction  
 Only a working 1 of the matrix clause can control the  
 -nagara construction.

The grammaticality of sentences like (152-153) with Inversion nominals controlling the -nagara construction provides evidence both for the formulation of the condition in terms of the notion 'working 1' and for the lhood of Inversion nominals in Japanese.

#### 6.4 Argument Three: Honorifics

Japanese has a system of honorific verbal forms that are used if the nominal designating a personage to be honored bears the appropriate grammatical relation in the clause.<sup>27</sup> The subject honorific is used if the 1 is a nominal designating a personage to be honored. This can be seen in the contrast between (155) and (156), where (155) has the plain (polite) verbal form and (156) has the subject honorific.

- (155) Dono hito ga Naomi-tyan ni sono mondai ni tuite  
 which person NOM DAT that problem about  
 hanasimasita ka?  
 talked ?  
 'Which person spoke to (little) Naomi about that problem?'
- (156) Dono sensei ga Naomi-tyan ni sono mondai ni tuite  
 which NOM DAT that problem about  
 o-hanasi ni narimasita ka?  
 talked/1-HONORIFIC ?  
 'Which sensei talked to (little) Naomi about that problem?'

Use of the subject honorific in (155) would be inappropriate.

If the 3 is a nominal designating a personage to be honored, an object honorific form can be used:

- (157) Naomi-tyan wa Yamada-sensei ni sono mondai ni tuite  
 TOP DAT that problem about  
 o-hanasi simasita.  
 talked/OBJ-HONORIFIC  
 '(Little) Naomi talked to Yamada-sensei about that problem.'

A subject honorific cannot be used in this case:

- (158) \*Naomi-tyan wa Yamada-sensei ni sono mondai ni tuite  
o-hanasi ni narimasita.  
talked/1-HONORIFIC

Turning to Inversion sentences, we see that an Inversion nominal behaves not like a 3 but rather like a 1 with respect to honorifics:

- (159) Yamada-sensei ni sono mondai ga o-wakari ni naru.  
DAT that problem NOM understand/1-HON.  
'Yamada-sensei understands that problem.'

Since only a 1 can trigger a subject honorific, the fact that Inversion nominals trigger subject honorifics provides a further argument that they are 1s. Since they are final 3s, we have here another argument for Inversion in Japanese.

## 6.6 Conclusions

In §6 it has been shown that the conditions on antecedents of reflexives and controllers of the -nagara construction in Japanese must be stated in terms of the notion 'working 1.' This provides further support for the incorporation of that notion into linguistic theory. At the same time, these phenomena, together with honorifics, case marking, and floating quantifiers, provide evidence for Inversion in Japanese.

## 7. Working 1s and Inversion in Quechua

The notion of 'working 1' proposed in this paper provides a solution to a problem in the grammar of the Imbabura dialect of Quechua noted by Hermon (1978). Basing herself on Cole and Jake (1978), who studied the Inversion construction in Imbabura, Hermon confronts its interaction with Equi, which she states is "otherwise restricted to deleting subjects in Imbabura."<sup>28</sup> Passive 1s can be Equi victims in Imbabura, as in:

- (160) Warmi-ca mana muna-n-llu runa maca-shca ca-na-ta.  
woman-TOP NEG want-3-NEG man hit-PSTPRF be-INF-ACC  
'The woman doesn't want to be hit by the man.'

Passive chomeurs cannot:

- (161) \*Runa mana muna-n-llu warmi-ca maca-shca ca-na-ta.  
'The man doesn't want the woman to be hit by him.'

(160) and \*(161) show that the condition on Equi victims cannot be stated in terms of the notion 'initial 1.' The fact that it can-

not be stated in terms of the notion 'final l' can be seen in the fact that Inversion nominals can be Equi victims. For example, warmi in (162) is an Inversion nominal, appearing in what Hermon calls the "accusative case:"

- (162) Warmi-ta nana-ju.  
 woman-ACC hurt-PROG  
 'The woman is hurting/hurts.'

However, it can be an Equi victim:

- (163) Warmi mana gushta-n-llu nana-ju-na-ta.  
 woman NEG like-3-NEG hurt-PROG-INF-ACC  
 'A woman doesn't like to hurt.'

Hermon considers this a serious problem, and reluctantly concludes that such phenomena "need to be handled by rule ordering." However, the problem is caused only by the unavailability of the notion 'working l.' With that notion in linguistic theory, the condition on Equi victims in Imbabura Quechua can be given informally as follows:

- (164) Condition on Equi victims  
 Only a working l of a clause can be an Equi victim.

(164) accounts for the data, with no problems. Although a researcher in a derivational framework was forced to resort to rule ordering to account for the data, the generalization governing Equi victims in Quechua is exactly the same as is needed to state various phenomena in the grammars of Italian and Japanese. A linguistic theory that provides RNs as syntactic representations and incorporates the notion 'working l' can state the correct generalization. The usefulness of the notion 'working l' for Quechua lends further support for its incorporation in linguistic theory.

#### 8. Possible Generalization of the Notion 'Working l' to 'Working Term<sub>x</sub>'

The question arises as to whether the notion of 'working l' defined in §1.2 and shown to play a role in the grammars of Italian, Japanese, and Quechua should be generalized to a broader notion of 'working Term<sub>x</sub>,' of which the notion 'working l' would be a special case. The most straightforward generalization would be:

- (165) Working Term<sub>x</sub> (Definition)  
 A nominal is a working Term<sub>x</sub> of clause b if and only if:  
 i) it heads a Term<sub>x</sub> arc with tail b  
 and ii) it heads a final-stratum Term arc with tail b

Under this definition of 'working Term<sub>x</sub>,' a 2 that advances to 1 in either the Passive or the Unaccusative Advancement construction would be a working 2, as would a 2 that demotes to 3 in the 2-3 Retreat construction. Similarly, a 3 that advances to 2 in the 3-2 Advancement construction, a 3 that advances to 2 and then to 1, and a 3 that advances directly to 1 would all be working 3s. While it is conceivable that the notion of 'working Term<sub>x</sub>' defined in (165) will be shown to play a role in the grammars of natural languages, I know of no empirical instances motivating the notions 'working 2' or 'working 3' as they are defined in (165).

A more restricted definition of the notion 'working Term<sub>x</sub>' can be given, however, which seems more likely to be needed in the grammars of natural languages:

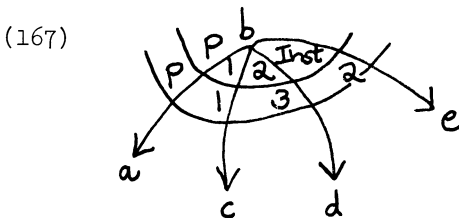
(166) Working Term<sub>x</sub> (Definition)

A nominal is a working Term<sub>x</sub> of a clause b if and only if:

- i) it heads a Term<sub>x</sub> arc with tail b
- ii) it heads a final-stratum Term<sub>x</sub> arc with tail b
- and iii) the Term<sub>x</sub> R-sign does not outrank the Term<sub>x</sub> R-sign on the hierarchy of R-signs (1>2>3>Nonterm R-signs)

Under this definition, a 2 is a working 2 only if its final Term relation is 2 or 3. Further, there is no notion of 'working 3' distinct from 'final 3.' However, the notion of 'working 1' defined and motivated in this paper is a special case of (166).

The question of whether a generalized notion of 'working Term<sub>x</sub>' such as that in (165) or (166) should be incorporated into linguistic theory and, if so, which of these two definitions should be adopted, are empirical issues that can only be decided by future research. I would like to point out here a class of cases where the notion in (166) might be needed. Consider a case where an Oblique advances to 2 and the 2 demotes to 3, as in the following example (given here in a stratal diagram):



An analysis like this is proposed for Kinyarwanda in Perlmutter and Postal (to appear b, §8). If a language exhibiting a construction like that in (167) has rules stated in terms of the notion 'working 2,' the nominal d will behave like a 'working 2' with respect to those rules. To motivate statement of the rules in question in terms of the notion 'working 2' in such a case, it would be necessary to show that d is not a final-stratum chomeur, so that the rules in question cannot be stated in terms of the notion 'act-

ing 2' (Perlmutter and Postal (to appear d)). Similarly, it would have to be shown that the rules in question cannot be stated in terms of the notion 'nominal heading a 2-arc.'<sup>29</sup>

The extension of the notion 'working 1' to that of 'working Term<sub>x</sub>' as defined in (166) seems plausible, but cannot be made unless it is shown that this notion is needed in the grammars of natural languages. To show that the notion of 'working Term<sub>x</sub>' defined in (165) is necessary, much additional evidence above and beyond that needed to motivate (166) would be necessary. While it seems unlikely that evidence needed to motivate the latter notion empirically will be forthcoming, the possibility cannot be ruled out a priori. The question of whether either of these notions should be incorporated into linguistic theory is an empirical one that can only be answered by future research.

## 9. Conclusions

In this paper, the Inversion construction has been motivated in some detail for Italian, with five arguments for the final 3hood of Inversion nominals and four arguments for their lhood. The latter four arguments involve phenomena stated in terms of the notion 'working 1.' It has been shown that this notion is needed not only for Italian, but also for Japanese and Quechua. It is concluded that the notion 'working 1' will be found to play a role in the grammars of additional languages, and that phenomena stated in terms of this notion will provide evidence for the Inversion construction in those languages.

### Postscript

In §3, where it was argued that the conditions governing various control phenomena in Italian must be stated in terms of the notion 'working 1,' only in the case of consecutive da + infinitive was it pointed out explicitly that the condition cannot be stated in terms of the notion 'nominal in initial position.' The examples below show this for the other three phenomena.

(168) Equi in the gerund construction:

- a. Essendo appena tornato dall'estero, ai figli di mia sorella ho dato tutto quello che rimaneva dell'eredità.  
'Having just returned from abroad, to my sister's children I gave all that remained of the inheritance.'
- b. \*Essendo appena tornati dall'estero, ai figli di mia sorella ho dato tutto quello che rimaneva dell'eredità.

(169) Equi in the participial absolute:

- a. Appena tornato dall'estero, ai figli di mia sorella ho dato tutto quello che rimaneva dell'eredità.  
'Just returned from abroad, to my sister's children I gave all that remained of the inheritance.'

b. \*Appena tornati dall'estero, ai figli di mia sorella  
ho dato tutto quello che rimaneva dell'eredità.

(170) Adverbial infinitival clauses:

Prima di partire per l'estero, ai figli di mia sorella  
ho dato tutto quello che rimaneva dell'eredità.

'Before leaving for abroad, to my sister's children I  
gave all that remained of the inheritance.'

In (168-169), the fact that the past participle must have the masculine singular form tornato shows that only the first person singular 1 of the main clause can control Equi in these constructions. Although the 3 of the main clause (i figli di mia sorella) is in initial position, it cannot control Equi here, as indicated by the sentences in which the past participle has the plural form tornati. Similarly, (170) means only 'before I left for abroad,' not 'before my sister's children left for abroad.' Thus, the only possible controller is the 1 of the main clause, not the nominal in initial position.

#### Footnotes

\*I would like to thank the many people who put their native intuitions at my disposal as I developed the arguments presented here, including Rita Baldassare, Alessandro Duranti, Chiara Nappi, Pasquale Tatò, and especially Gianni Lojacono and Luigi Rizzi. Some of the ideas in this paper were born during conversations with Luigi Rizzi, to whom I am especially indebted. Carol Rosen also contributed to this paper, especially in providing one of the arguments for the hood of Inversion nominals in Italian. Tatsuo Otsuka and Olga Yokoyama were of invaluable help with the Japanese examples. I have also benefitted from comments by Judith Aissen, Sandra Chung, S.-Y. Kuroda, Paul Postal, Carol Rosen, Alan Timberlake, and Olga Yokoyama on an earlier version of the portion of this paper dealing with Japanese. All errors and shortcomings, of course, are my own.

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1. For evidence for Inversion in various other languages, see Harris (to appear a, b) and Perlmutter (to appear a).

2. This paper is written in the framework of relational grammar. For explanation of the various concepts employed ('arc,' 'stratum,' 'initial,' 'final,' etc.) and of the notation of relational networks (RNs), see Perlmutter and Postal (1977, to appear b).

3. I assume the characterization of Passive clauses proposed in Perlmutter and Postal (1977).

4. The formulation in (11) is actually an oversimplification in that it ignores situations (such as causatives and other Clause Union constructions) where a nominal heads arcs with different clause nodes as tail. Since this paper is not concerned with those constructions, this formulation is sufficient for present purposes.

5. I use this phraseology because I assume such cases are to be handled by "multiattachment" - cf. Perlmutter and Postal (to appear d, §4) and Perlmutter (in preparation).

6. I ignore here the issue of the nature of Equi and how it is to be represented in RNs, since that issue is not relevant to the present discussion, which concerns only the condition on Equi victims in Italian. Likewise, in §3, where various types of Equi are discussed, only the condition governing possible controllers is relevant, so the issue of the nature of Equi itself is ignored.

7. The present argument assumes that the lack of an overt final *l* in the second conjunct of sentences like (34b) and (35b) is another instance of the omissibility of subject pronouns in Italian that is illustrated by (29). If, on the other hand, this is another phenomenon that is restricted to final *ls* in coordinate structures, it would probably provide an additional argument for the final non-hood of Inversion nominals.

8. I ignore here questions concerning the nature of quantifier float, since only the conditions governing which nominals can "float" quantifiers are relevant to the argument developed here.

9. I ignore here the question of the interaction between cliticization and quantifier float, and that of how these two phenomena are to be represented formally.

10. It is necessary to distinguish between quantifier float, where a quantifier appears detached from its nominal, and cases where a quantifier may have more than one position within its nominal. With pronominal objects of prepositions, the quantifier may either precede or follow the head:

- (i) a. Giorgio ha pensato a tutti noi.  
 b. Giorgio ha pensato a noi tutti.  
 'Giorgio thought about us all.'

In (i-b), however, the quantifier tutti is not floated off its nominal, but is merely following the head within it. One piece of evidence for this is the fact that other elements cannot appear between noi and tutti in (i-b).

11. The expression rompersi le scatole 'get fed up' appears with a reflexive pronoun that necessarily agrees in person and number with the subject. Thus, in the da-clause in (62b), we have the third person reflexive si, in agreement with the subject of the clause (the Equi victim). If the first person singular 2 could control the consecutive da + infinitive construction, we would get rompermi le scatole with the first person singular reflexive mi, as in \*(63b). This mi prevents speakers from interpreting this sentence as having la mamma as the controller. Similarly, the third person reflexive si in \*(64b) and \*(65b) prevents speakers from interpreting these examples as having the first person subject of the matrix clause as controller.
12. The adjective matte in \*(68b) is feminine plural, which is the form it would have if queste donne could be the controller. This feminine plural form prevents speakers from interpreting it as having Giorgio as controller.
13. (71) also illustrates this point. In that example, the Inversion nominal mio marito controls Equi in the gerund construction beginning with dimenticando.
14. I limit myself here to pointing out certain differences between the gerund construction and the participial absolute. A more thorough analysis of these constructions is beyond the scope of this paper.
15. For the basic condition on the participial absolute construction, see Perlmutter (in preparation).
16. There are significant problems that any attempt to predict initial grammatical relations from semantic roles must solve. To cite only one, there are some Experiencers that would appear to be initial 2s:  
 (i) That **surprises me**.  
 An analysis of (i) in which that is not an initial 1 but an advancee to 1 would entail violations of the 1-Advancement Exclusiveness Law (Perlmutter and Postal (to appear c)) in sentences like:  
 (ii) I am **surprised** by that.  
 However, discussion of alternative analyses for such examples is beyond the scope of this paper.
17. This analysis, which shares certain crucial features with some analyses proposed in a transformational framework, is given in Perlmutter and Postal (to appear a), which was actually written in 1972.
18. (129) ignores the question of whether Giorgio is the initial 1 or initial 2 of the complement, assuming the former because the issue has no bearing on the present discussion. At issue is whether

the complement is initially unaccusative or unergative in the sense of Perlmutter and Postal (to appear c) and Perlmutter (1978).

19. The term 'raising' refers to an ascension where the host is clausal (cf. Perlmutter and Postal (to appear a)). Thus, while all raisings are ascensions, not all ascensions are raisings.

20. This has other empirical consequences. For example, as shown in Perlmutter and Postal (to appear d), together with certain proposed universals it predicts the universal ungrammaticality of impersonal passives of intransitive raising triggers.

21. (133) has the possibility of a second reading in which it is the mother that cannot sleep, but the pragmatics of the situation generally make speakers assume initially that it is Giorgio that can't sleep. The possibility of a second reading with Giorgio as controller in (134) is ruled out by the nonreflexive pronoun lo referring to Giorgio. Together, (133) and (134) show that either working 1 of the matrix clause can control the consecutive da + infinitive construction.

22. Example (140) is taken from Shibatani (1977). Shibatani also notes the facts discussed in §6.2 and §6.4.

23. Because an overall account of floating quantifiers in Japanese involves a number of complications that are not relevant to the present paper, I do not attempt to give an explicit statement of the conditions governing quantifier float here.

24. For discussion of the subject condition on antecedents of reflexives in Japanese, see Kuroda (1965), McCawley (1972a, 1972b, 1976), Kuno (1973), Howard and Niyekawa-Howard (1976), and Inoue (1976).

25. The reflexive facts provide evidence for the proposal, which I adopt here, that the so-called "direct passives" of Japanese have RNs that include subnetworks of the form (9). McCawley (1972a, 1972b) and Kuno (1973) made an analogous proposal within a transformational framework, pointing out that this data motivates positing a structural distinction between "direct passives" and "indirect passives." Howard and Niyekawa-Howard (1976) propose an alternative account of the difference between direct and indirect passives with respect to reflexives, but their proposal does not account for the data concerning control of the -nagara construction (discussed in §6.3) in direct and indirect passives. That data provides additional evidence that direct passives involve subnetworks of the form (9), while indirect passives do not. The fact that direct passives involve verbal forms with the suffix -rare- that is also found in indirect passives can be accounted for by positing structures for direct passives in which subnetworks of the

form (9) are embedded as complements of clauses that have -rare- as predicate, while indirect passives involve embedding of non-passive clauses as complements of -rare-. Discussion of this proposal, however, is beyond the scope of this paper.

26. I ignore here cases where a nominal in one clause serves as antecedent of a reflexive in another clause.

27. For a detailed study of honorifics in Japanese, see Harada (1976). The terms 'subject honorific' and 'object honorific' are taken from Harada. Since a precise formulation of the conditions governing honorifics involves many complications that are not relevant to the present argument, I do not attempt such a formulation here. I also ignore what Harada calls 'performative honorifics.'

28. Hermon assumes a derivational theory of grammar and thus speaks of "deletion," "rule ordering," and other concepts rooted in derivational assumptions.

29. The Stratal Uniqueness Law (Perlmutter and Postal, 1977, to appear b, d) would rule out the possibility of the initial 2 also being a final 2.

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