

8 A-Movements

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0 Introduction

This chapter will concentrate on a range of phenomena that have crucially been held to involve (within Government Binding theory and now Minimalism) movement of an element to what is known as an argument position – roughly, a position in which an element can be base generated and bear a crucial semantic role with respect to the main predicate of a clause. It is to be distinguished from movement to an A' (read A-bar, or non-argument) position. The two types of movement have very different properties, most notably with respect to binding and *wanna*-contraction. (1) contains examples of A-movements, and (2) contains examples of A'-movements:

- (1) a. Johnⁱ seems tⁱ to be polite.
b. Johnⁱ was murdered tⁱ.
c. Johnⁱ died tⁱ.
- (2) a. Whoⁱ did he think tⁱ would win?
b. Johnⁱ he thought tⁱ would win.

The trace of an element in an A-position is thought to behave, for the purposes of the binding theory, as an anaphor, while the trace of an element in an A'-position is thought to behave as an R-expression (although Postal 1994 has argued that certain A'-traces behave as pronouns). Hence, the trace in (3), a case of strong crossover (Postal 1971) has been thought to be an R-expression, causing the structure for (3) to violate Condition C of the binding theory, while (4) is acceptable because the trace is an anaphor:

- (3) *Johnⁱ, who heⁱ thought tⁱ would win, . . .
- (4) Theyⁱ seem to each otherⁱ tⁱ to be polite.

Another difference that has been less cited (first noted in Jaeggli 1980, to my knowledge), is that traces of A-movements do not block *wanna*-contraction, while traces of A'-movements, as has been well known since at least 1970 (due to Larry Horn's original unpublished observation), do block *wanna*-contraction. For example, the verb *need* induces A-movements by the diagnostics that I will be discussing shortly, and, in my casual speech, induces a flap which I take to be diagnostic of *wanna*-contraction:

- (5) Does there really *niyDa* be a separate constraint?

The flap pronunciation cannot occur when *need* and *to* are separated by a *wh*-trace, as in (6b), corresponding to (6a):

- (6) a. I need Sally to be there.
b. **Whoi* do you *niyDa* be there?

Of course, the invisibility of raising traces with respect to *wanna*-contraction and binding might in fact indicate that they are just not there, and in fact, given the structure preserving nature of these movements, that raising and, more generally, A-movements do not exist. This line has been taken since at least the 1970s by Bresnan (1978, 1982b), Pollard and Sag (1987, 1994), Foley and Van Valin (1984), Van Valin (1993), and many others. These theories, while disagreeing with each other on many issues, have in common the view that passives and unaccusatives are to be related by a lexical redundancy rule, which states roughly that if a given subcategorization A exists, with a linking L (mapping of semantic roles onto argument positions), then another subcategorization A' exists, with a distinct linking L', so that the arguments in L, while expressing the same semantic roles as the arguments in L', will map them onto distinct argument positions. For the passive construction, the lexical rule will map all of the semantic roles in the active onto a different array of arguments in the passive. With respect to the unaccusative construction, as in (1c), while there may be transitive-unaccusative doublets, as in *freeze*, *melt*, or *break*, such doublets need not exist, and there would in fact be no semantic role corresponding to a transitive subject for an unaccusative. Manzini makes this point with respect to the pair in (7) (Manzini 1983):

- (7) a. *The boat sank to collect the insurance.
b. The boat was sunk to collect the insurance.

(7a)'s main verb is considered to induce unaccusativity, and its unacceptability is thought to be due to the fact that there is no implicit agent in unaccusative *sink*'s lexical entry that would control the unexpressed subject of the purpose clause. In (7b), on the other hand, the passive of *sink* would have an implicit agent, optionally expressed as an adjunct *by*-phrase.

With respect to the raising construction exemplified in (1a), the proponents of the lexical approach have typically analyzed the infinitival complement as a VP, as they have for control constructions, as in (8):

(8) John wants to win.

One desideratum for distinguishing, and giving a special treatment to, the constructions in which A-movement is implicated lies in the statement of linking regularities, the idea behind which is that grammatical relations can be predicted on the basis of the semantic roles of the arguments that bear those grammatical relations (Fillmore 1968, Carter 1976). More specifically, the idea is that a given thematic role can be assigned to a unique syntactic position, so that, e.g., agents are subjects, themes are direct objects, and so on. Passives, unaccusatives, and raised subjects on the face of it complicate the statement of linking regularities, but linking regularities can be preserved, it is thought, if these three constructions are derived, either lexically (so that linking regularities are stated over “unmarked” lexical entries) or syntactically (so that linking regularities are stated over initial syntactic representations).

To be sure, however, linking has never, to my knowledge, been used as an argument for either the lexical or syntactic derivation of passives, unaccusatives, or sentences with subject-to-subject raising predicates. Rather, such derivations have been justified on other grounds, to be discussed below, and the end result has tended to allow a simplification of the theory of linking.

In this chapter, I will focus on these three constructions – unaccusatives, passives, and subject-to-subject raisings – as evidence for A-movements, in order to examine their commonalities, and I will try to focus on the comparison between the lexical approach and the movement approach. The reason for this sort of focus is a desire to hold some significant grammatical phenomenon constant as a way of comparing distinct grammatical theories. I will be opting for the movement approach and arguing against the lexical approach, to be sure, and one problem with my argumentation will be that I will be relying on analyses of other grammatical phenomena, necessarily holding constant, because of space limitations, the analysis of these other phenomena in the theories that I will be contrasting. In this sense, my arguments cannot be taken as definitive, of course, but one has to start somewhere. I will attempt, however, to provide the justification for the claims on which my analyses will rest, rather than relying on parochial, theory-internal assumptions.

Passives, unaccusatives, and subject-to subject raising constructions are considered to be the most widely-held examples of A-movements, and it is for this reason that I will be focussing on these constructions. More recently, Collins and Thráinsson have analyzed object shift in the Germanic languages, specifically Icelandic, as an example of A-movement (Collins and Thráinsson 1996), but because object shift is treated by Thráinsson in this volume, I will largely ignore its treatment here.

Also, within Government Binding theory, two other constructions have been analyzed as relying on A-movement: the double object construction (Larson 1988) and, principally because of backwards binding facts, experiencer verbs with theme subjects and accusative experiencer objects (Belletti and Rizzi 1988). The motivation for implicating A-movements in the analysis of these latter two constructions is quite dubious, however, as I will show at the end of this chapter.

By A-movement, then, I mean movement to a c-commanding position, typically a specifier position, of a projection whose head is lexical in nature.

1 Passives

What is usually referred to as a passive does not always involve A-movement. It does always seem, however, to involve a characteristic morphology on the verb, and some sort of variant realization of the corresponding active verb's arguments (see Perlmutter and Postal 1977 for a useful survey of passive constructions, as well as Jaeggli 1986 and Baker et al. 1989). English passives always seem to correspond to active transitive verbs, but this is not universal, as can be seen by looking at what are called the impersonal passives, found in languages such as Dutch and German (examples below). In these languages, the passive can correspond to an intransitive active verb, so long as the subject of the corresponding active intransitive is agentive:¹

- (9) Es wurde bis spat in die Nacht getrunken. (German)
It was till late in the night drunk.
"Drinking went on till late in the night." (Jaeggli 1986: ex. (22b))

- (10) In de zomer wordt er hier vaak gezwommen. (Dutch)
In the summer it is swum here frequently. (Perlmutter 1978: ex. (68))

Indeed, even in languages in which the corresponding active must be transitive, such as Spanish (Jaeggli 1986), French, and Italian (Belletti 1988) the object can apparently remain in situ:

- (11) Le fué entregado un libro a Maria por Pedro. (Spanish)
To-her was handed a book to Maria by Pedro. (Jaeggli 1986: ex. (13))

- (12) Il a été tué un homme. (French)
There has been killed a man. (Belletti 1988: ex. (10))

- (13) É stato messo un libro sul tavolo. (Italian)
Has been put a book on the table. (Belletti 1988: ex. (18a))

Spanish and Italian allow subjects to be postposed, and French allows stylistic inversion (Kayne and Pollock 1978). Therefore, one might ask whether the

objects are actually *in situ*, or are in the postposed construction. Belletti (1988) shows, on the basis of ordering restrictions *vis-à-vis* subcategorized PPs and extraction facts, that both possibilities exist in Italian. For example, some original objects may precede subcategorized PPs, and some may follow:

- (14) All'improvviso é entrato un uomo dalla finestra.
Suddenly entered a man from the window. (Belletti 1988: ex. (17a))
- (15) All'improvviso é entrato dalla finestra l'uomo.
Suddenly entered from the window the man.

Moreover, there is an interesting restriction on the nominal that may intervene between the verb and the subcategorized PP: it must be indefinite, so that (13) contrasts with (16):

- (16) *É stato messo il libro sul tavolo. (Belletti 1988: ex. (18b))

Belletti takes these distinctions to diagnose two distinct positions for postverbal subjects. The position of postverbal indefinite nominals which precede subcategorized PPs, when the latter occur, is taken to be the complement position to the head, while the position of postverbal definite nominals, which follow subcategorized PPs when they occur, is taken to be a VP-adjoined position. Belletti is assuming the framework of Government and Binding theory presented in *Barriers*, in which the complement position to a head is taken to be L-marked, and hence not an inherent barrier (Chomsky 1986b), while the VP-adjoined position would not be L-marked, and hence would be a barrier. She then assumes Huang's Condition on Extraction Domains (Huang 1982), which claims that extraction can only occur out of properly governed phrases, i.e., non-barriers.

To return to the focus of this chapter, A-movement, the significance of Belletti's distinctions is that the first postverbal position that she diagnoses, the complement position, would correspond to the position of an unmoved nominal in its original position. In other words, she is claiming that A-movement, while normally obligatory, can sometimes be suspended. We will return to the significance of this distinction below, but it is noteworthy to ask how other frameworks capture the distinction, or whether they can.

Government Binding (GB) theory and its direct descendant, Minimalism, assume that all nominals must receive Case (or, in the current parlance, have Case-features that are checked; see Ura in this volume). The affixation of a passive morpheme is thought to destroy an active verb's ability to license Case on its object, and movement to subject position, when subject position is a position in which Case may be assigned or checked, is forced by this need for the nominal's Case feature to be checked. However, Belletti's claim is that indefinite objects may receive a second Case, which she dubs *partitive*, as opposed to the normal accusative Case that the active transitive verb would

participate in checking. When the indefinite object gets this second Case, there is no reason for it to move, and hence it may remain in situ. Definites, however, may not receive partitive Case.

Other frameworks do not assume movement in the formation of passives. For example, Relational Grammar assumes that there is a class of relation changing rules, and that grammatical relations are primitive. The relation changing rules are dubbed "advancement rules," with the numeral 1 representing subjects, 2 representing objects, and 3 representing indirect objects. Passive would then be represented, in the framework of Relational Grammar, as (17):

(17) 2→1

The original 1, when there is one, would become what is known as a chomeur (literally, "unemployed"). In GB, what would correspond to the active subject would be an adjunct. The impersonal passives of Dutch and German are considered to really be personal passives, formed by rule (17), with what is known as a "dummy," or empty nominal, being inserted as a 2, and then advancing to 1.

Lexical-Functional Grammar (Bresnan 1982c), like Relational Grammar, assumes that grammatical relations are primitive, and analyzes passive as a lexical rule that maps the thematic role linked to the object in the active onto the subject in the passive.

Head-Driven Phrase-Structure Grammar (Pollard and Sag 1987) also employs a lexical redundancy rule that expresses a correspondence, or alternative realization of the semantic roles of the arguments of the predicate, between active and passive structures, as does Role and Reference Grammar (Foley and Van Valin 1984, Van Valin 1990, 1993).

It is difficult to see how the theories that do not generate the nominal in complement position, and which tie it to a conversion of the object into a subject, cope with the inertness of these indefinite objects. One can say that they are subjects in complement position, and it is true that at least Relational Grammar and Lexical-Functional Grammar view grammatical relations as primitive, and independent of constituent structure configurations, but one would expect at least some evidence that these nominals in complement position behave as subjects.

Of course, Belletti's analysis is plausible only to the extent that it fits into a general account of the interaction of A-movement and inherent Case. For example, the account allows nominals with inherent Case to remain in situ when the normal structural Case environment is no longer an available environment for Case-licensing. In Icelandic, however, as shown by Andrews (1990), nominals that receive inherent Case (so-called "quirky Case") must still be fronted in Passives.

It is always instructive to contrast verbal passives with a passive construction which is less controversially viewed as a totally lexical passive, namely the adjectival passive, a construction that has been discussed by Siegel (1973),

Wasow (1977, 1980), Bresnan (1982d), and Levin and Rappaport (1986a). As is well known, English verbal passives have somewhat looser restrictions on the correspondence between their subjects and the nominal following the corresponding active verbs than do English adjectival passives, as shown by the following examples (the *un-* prefix before the adjectival examples brings out their adjectival quality, when the *un-* is not interpreted as reversative: Siegel 1973):

- (18) a. The bed was unmade.
 b. *Headway was unmade.
 c. John was unknown.
 d. *John was unknown to be the murderer.

Wasow (1977), in discussing these restrictions, observes that the subject of an adjectival passive must bear a much closer relationship to the corresponding active verb than the subject of a verbal passive must bear, and claims that the subject of an adjectival passive must correspond to the theme of the corresponding active. He takes the difference in the range of the two constructions, adjectival versus verbal passives, to be symptomatic of two different methods of derivation of them; verbal passives would be derived via movement from postverbal position of the nominal into subject position, while the formation of adjectival passives would involve a process dubbed externalization (Levin and Rappaport 1986a's term), in which the thematic role of theme, normally linked to an internal argument position, would instead be linked to the position of the external argument of the adjective.

In short, the lexical process that forms adjectival passives was viewed by Wasow, Bresnan, and others to crucially mention the theme role of the internal argument of the corresponding active verb. Because the subject of the adjectival passive is stipulated to necessarily correspond to the theme of the active verb, the inability of idiom chunks (21b) or nominals that bear no relation to the passivized verb (dubbed Exceptional Case-Marked nominals (Chomsky 1981) or subjects raised to object position (Postal 1974)) is accounted for (18d).

Wasow (1977) argued that the wider domain of application of the process forming verbal passives resulted from its transformational nature, given that transformations are purely structure dependent operations, insensitive to thematic role or grammatical relation of any term involved. Hence, a transformation that actually moved the nominal in the formation of verbal passives would just move any postverbal nominal to preverbal position.²

In a later paper (Wasow 1980), Wasow draws rather different conclusions about the distinction between verbal and adjectival passives in English. He proposes a distinction between major and minor lexical rules, so that minor lexical rules make reference to thematic relations, while major lexical rules refer to grammatical relations. It is assumed that the postverbal nominal in (19) is an object that has been raised from the subject position of the following infinitive, either syntactically (Postal 1974) or lexically (Bresnan 1978, 1982d):

(19) We knew John to be the murderer.

Therefore, the major lexical rule of verbal passivization will refer to grammatical relations. Wasow's distinction between major and minor lexical rules seems to correspond, as far as I can see, to Pinker's distinction (Pinker 1989), in his acquisitional study, of broad range and narrow range lexical rules.

Levin and Rappaport (1986a), however, demonstrated that adjectival passives are not in fact subject to a thematic restriction at all. They give numerous examples of adjectival passives with non-themes that are externalized. For example, the verbs *teach* and *feed* can take goals as their sole complements:

(20) He taught the children.

(21) He fed the children.

And adjectival passive formation is possible for these verbs:

(22) The children were untaught.

(23) The children were unfed.

Levin and Rappaport (1986a) propose that there is no specific thematic restriction on adjectival passives, but rather that the formation makes crucial reference to an argument structure, roughly, a representation of the adicity of the predicate together with a distinction between the external argument and internal arguments. Hence, one might represent the argument structures of *feed* and *teach* as in (24):

(24) $x <y (z)>$

with the argument outside of the angled brackets as the external argument, and the arguments inside as the internal ones. Parentheses, as usual, would indicate optionality. We would then say that major lexical rules refer to grammatical relations, while minor ones would refer to argument structure. As far as I can see, Wasow's distinction could be maintained by replacing a thematic restriction on adjectival passive formation with an argument structure one.

In any event, viewing the distinction between adjectival passives and verbal passives as a distinction between minor lexical rules and major lexical rules commits one to the view that the set of environments for adjectival passive formation is a proper subset of the set of environments for verbal passive formation.

With this in mind, let us turn our attention to a Case-marking phenomenon in Russian that has been discussed in detail by Babby (1980) and later by Pesetsky (1982), known as the genitive of negation.

Basically, negated objects of transitive verbs in Russian, in addition to taking accusative Case, may optionally appear in the genitive. As discussed by Babby (1980), when certain subjects of negated intransitive verbs are being

asserted not to exist, they may also appear in the genitive. Examples are given in (25) and (26):

- (25) V-nasem-lesu-ne-ratet-gribov.
In -our-forest-Neg-grow-3Sg-mushrooms-GenPl
There are no mushrooms growing in our forest. (Babby 1980: ex. (4b))
- (26) Ne-ostalos'-sommenij.
Neg-remained-3NSg-doubts-GenPl
"Nothing remained." (Babby 1980: ex. (6b))

Subjects of negated transitive verbs that are nominative in the affirmative cannot take the genitive:

- (27) ni odna gazeta ne pecataet takuji erundu.
Not one newspaper-Neg prints such nonsense.
FNomSg 3Sg FAccSg (Pesetsky 1982: ex. (15))

Also, agentive subjects of negated intransitive verbs cannot appear in the genitive.

Babby's generalization is that those subjects that can appear in the genitive of negation are in the scope of negation at D-Structure, in fact are D-Structure direct objects. Hence, the class of verbs whose subjects may appear in the genitive of negation is that of the subjects of verbal passives, and the subjects of unaccusative verbs, to be discussed in the next section. Examples are given in (28) and (29):

- (28) Razdalsja-lay, no-ni-odnoj-sobaki-ne-pokazalos'.
Resounded-bark, but-not-single-dog-Gen-Neg-appeared-NSg (Babby 1980: ex. (12a))
- (29) Ne-naslos'-mesta.
Neg-be-found-NSg-seat/place-Gen-NSg
There was not a seat to be found. (Babby 1980: ex. (24a))

As discussed in Pesetsky (1982), however, Russian has adjectival passives, and when an adjectival passive is negated, its subject cannot appear in the genitive of negation. Hence, Pesetsky gives the following contrast:

- (30) *takix maner nikogda ne prinjato v xorosix klubax.
Such manners-FGenPl are never acceptable in good clubs. (Pesetsky 1982: ex. (50b))
- (31) takix studentov nikogda ne prinjato v universitet.
Such students-MGenPl are never accepted in the university. (Pesetsky 1982: ex. (49b))

It would seem that the distinction between major and minor lexical rules would be of no utility in allowing us to capture the differential behavior of adjectival and verbal passive subjects in Russian with respect to the genitive of negation. Because adjectival passive formation is a minor lexical rule in this approach, and verbal passive formation is a major lexical rule, the inputs to the process of adjectival passive formation will be almost, but not quite, a proper subset of the inputs to the process of verbal passive formation.³ On the other hand, a grammar which claims a different source, and a different derivation for adjectival and verbal passives, will be able to account for the differential behavior of the subjects of these two passives with respect to the genitive of negation.

Another argument against a representation of English verbal passives in which the passive subject is not generated postverbally comes from a consideration of the placement of floated quantifiers in infinitives. As noted by Sportiche (1988), and developed in Baltin (1995), floated quantifiers are restricted in their appearance before the infinitive marker *to*. They may appear immediately before *to* when the infinitive takes a lexical subject⁴ but not when the subject is unexpressed (to be neutral about the status of this unexpressed subject). Floated quantifiers can always appear immediately after *to*:

- (32) *They tried all to like John.
- (33) I believed these students all to like John.
- (34) They tried to all like John.
- (35) I believed these students to all like John.

This behavior is mirrored by the behavior of certain adverbs, such as *ever*:

- (36) ?*Did he try ever to talk to the student?
- (37) Did you believe him ever to have made an effort to talk to the student?
- (38) Did he try to ever be attentive to the needs of students?
- (39) Did you believe him to ever have made an effort to talk to the student?

The account of these restrictions in Baltin (1995) runs as follows. Assume that there is a notion of a syntactic predicate (see Reinhart and Reuland 1993, for example, who distinguish syntactic and semantic predicates), and let us define a syntactic predicate as an X' projection that has a D'' in its specifier position. Floating quantifiers and adverbs such as *ever* are dubbed predicate specifiers, meaning that they are restricted to introducing predicates⁵ (with *ever*, of course, also being a polarity item).

Now, if we assume that the unexpressed subject of an infinitive is syntactically represented as PRO, and that it is generated as a specifier to the VP following *to*, the appearance of the floating quantifier and *ever* immediately after *to* is accounted for; because they are predicate specifiers, and predicates are defined as X' projections that take DP specifiers, the V' of the V'' complement of *to* is a predicate, and hence introducible by a predicate specifier. Assuming that all subjects are either generated by (if underlying subjects) or moving through (if derived) this VP-internal position, (34), (35), (38), and (39) are predicted to be acceptable.

We assume, then, that the lexical subject of an infinitive always occurs as the specifier of the VP complement of *to*, and must move to the specifier position of *to*, presumably for Case reasons. It will be noted that movement to the specifier position of *to* will cause the X' projection headed by *to* to become a predicate, by this definition of predicate. The *to* immediate projection will hence be introducible by a predicate specifier, and hence (37) and (33) are acceptable.

On the other hand, the PRO subject of an infinitive is analyzed as not getting Case, at least not in the specifier position of *to*, and therefore there would be no reason for it to move to *to*'s specifier position. Assuming what is known as "Last Resort" (Chomsky 1991), in which movement only occurs if it is necessitated, the fact that PRO does not have to move makes it ineligible for movement to *to*'s specifier position.

Because *to*'s immediate projection does not have a DP in its specifier position (PRO remaining in the specifier position of *to*'s V'' complement) in this instance, it would not meet the syntactic definition of a predicate, and would therefore not be introducible by predicate specifiers. In this way, the unacceptability of (35) and (39) is accounted for.

As noted in Baltin (1995), many other theories of grammar do not represent the understood subject of infinitives syntactically at all, such as variants of Categorical Grammar (Bach 1979), Lexical-Functional Grammar (Bresnan 1982a), Head-Driven Phrase-Structure Grammar (Pollard and Sag 1994), and Generalized Phrase-Structure Grammar (Gazdar et al. 1985). Ladusaw and Dowty (1988) work out an analysis that is typical of this view of understood subjects. The subject is not represented syntactically, but is rather inferred. Control is considered to be a two-place relation between an individual and a property (Chierchia 1984 takes properties to be primitive types), and the understood subject is inferred to simply be the possessor of the relevant property.

I cannot see how this view of understood subjects deals with the facts about predicate specifiers that I have just discussed. To be sure, these analyses take floating quantifiers to be adverbs (Brodie 1985), an analysis with which I agree, given the similar behavior of *ever*,⁶ but I cannot see how they provide an insightful analysis of the positioning of these adverbs.

Let us return to the analysis of A-movement phenomena. We are contrasting theories in which there is either an empty category in a "pre-movement" position, or the moved element actually occurred in that position, on the one

hand, with theories which capture A-movement dependencies via lexical redundancy rules, on the other. It is instructive to consider the distribution of predicate specifiers in infinitival complements of passivized verbs:

(40) They were believed all to be quite diligent.

(41) Was he believed ever to fail students?

Assuming the presence of a predicate specifier as a probe for the presence of a nominal in the higher specifier position at some relevant point in a syntactic derivation, the acceptability of these preverbs before *to* in (40) and (41) indicates that a nominal must have occurred after the matrix passivized verb in these sentences. This seems to be additional evidence against the lexical redundancy rule account, in the absence of a competing story about the placement of preverbs within frameworks that posit lexical redundancy rules to handle A-movement phenomena.

2 Unaccusatives

Unaccusatives differ from passives, as far as I can see, chiefly in two respects: (i) the absence of distinctive verbal morphology as an implicating factor in A-movement, and (ii) the absence of any thematic role other than the one that is assigned to the verbal complement. This point was discussed above in connection with the contrast in (7).⁷

Perlmutter (1978) originally distinguished, principally from evidence in Italian, two types of intransitive verb: those with underlying subjects but no objects (dubbed unergative verbs in Government Binding theory), on the one hand, and those with underlying objects but no subjects (dubbed unaccusative verbs in Government Binding theory). The verb *telefonare* ("to telephone") is an example of a verb in the former class, and the verb *arrivare* ("to arrive") is said to be an example of a verb in the latter class.

The evidence for this distinction will be discussed below, but before proceeding to that discussion, it is important to note that the distinction between these two types of intransitive verb has important implications for theories of grammatical relations and the statement of linking regularities between thematic roles and grammatical relations. For example, categorial grammar defines grammatical relations in terms of the order of combination of arguments with predicates to form sentences. Dowty (1982) defines indirect objects as the third from the last argument to combine with the predicate, the direct object being the penultimate argument to combine with the predicate, and the subject being the last argument to combine. Such a system, of course, would have no way of distinguishing two classes of monadic predicate,⁸ and would predict that all monadic predicates would involve combination of a predicate with a subject.

Similarly, Larson (1988), for example, advocates a theory of linking in which there exists a hierarchy of thematic relations, with elements higher on the thematic hierarchy being projected onto syntactic positions in accordance with the principle that more prominent thematic relations are projected onto syntactically more prominent (i.e., higher in the phrase marker) positions. The theory is a relational, rather than an absolute, theory of linking, in that a given thematic role is not forced to occur in a unique position; its position is always fixed relative to the other thematic relations that are specified by the predicate. Themes, for instance, are more prominent than goals, so that themes will appear in positions superordinate to goals in the phrase markers in which the main predicates select both themes and goals, whereas they will appear in the positions in which goals appear when the relevant predicates do not select goals. For example, *give*'s theme would appear in the specifier position of *give*, while *read*'s theme would appear in *read*'s complement position in the simplified underlying structures⁹ below:

(42) [V'' [D'' John][V' [V e][V'' [D'' a book][V' [V give] [P'' to Sally]]]]]

(43) [V''[D'' John] [V'[V read][D'' a book]]]

Again, a relational theory of linking would have no way to capture the distinction between unaccusatives and unergatives, a distinction which claims that the single argument of a monadic predicate will be realized in one position for one type of predicate and another for another type of predicate.¹⁰

With respect to the evidence for the distinction, Perlmutter's original support for the distinction between the two types of monadic predicate in Italian came from auxiliary selection and the distribution of the clitic *ne*. Specifically, Italian takes two types of perfect auxiliary: *avere* (have) and *essere* (be). *Avere* is the auxiliary that is used with transitive verbs and agentive intransitives, while *essere* is used with all other verbs, specifically non-agentive intransitives, passives, and subject-to-subject raising verbs. It is also used, as noted by Burzio (1986), with reflexive transitives when the reflexive clitic *si* is used (Italian also has a strong reflexive *se stesso*). Hence, we have the following pattern, where (A) = *avere* and (E) = *essere*:

(44) L'artiglieria ha affondato due navi memiche.
The artillery has (A) sunk two enemy ships. (Burzio 1986: ex. (80a))

(45) Giovanni ha telefonato.
John has (A) telephoned. (Burzio 1986: ex. (79b))

(46) Giovanni é arrivato.
John has (E) arrived. (Burzio 1986: ex. (79a))

(47) Maria é stata accusata.
Mary has (E) been accused. (Burzio 1986: ex. (81a))

- (48) Molti studenti erano sembrati superare l'esame.
Many students had (E) seemed to pass the exam. (Burzio 1986: ch. 1, n. i, ex. (ia))
- (49) Ci si era accusati.
Themselves were accused.
"We had accused ourselves/each other." (Burzio 1986: ex. (85b))

The clitic *ne* modifies direct objects and postverbal non-agentive subjects of intransitives. It cannot modify preverbal subjects, postposed subjects of agentive intransitives, or postposed subjects of transitives.

Let us first turn our attention to perfect auxiliary selection in Italian, and ask how to determine the commonalities of the two classes of verb that take the two auxiliaries. With respect to agentive intransitives, we note that agents are practically without exception subjects of transitive verbs in non-ergative languages. We might therefore link the agent role to the subject position. We can also assume that subjects of transitive verbs are generated in subject position. Hence, we might say that *avere* is the perfect auxiliary for those verbs whose superficial subjects are also their underlying subjects.

With respect to *essere*, it is the perfect auxiliary for passive verbs, whose superficial subjects are not their underlying subjects, and subject-to-subject raising verbs (see next section), whose subjects are also not their underlying subjects (assuming movement), in addition to the subjects of (roughly) non-agentive intransitives, and subjects of transitive verbs which take the reflexive clitic *si*. Examples of each of these are given in (50)–(53):

- (50) **Passive:**
Maria é stata accusata.
Mary is been accused-F (Burzio 1986: ex. (1.81a))
- (51) **Subject-to-subject raising:**
Molti studenti erano sembrati superare l'esame.
Many students were ("had") seemed to pass the exam. (Burzio 1986: ch. 1, n. i, ex. (i))
- (52) **Non-agentive intransitives:**
Maria é arrivata.
Mary is arrived-F (Burzio 1986: ex. (1.81c))
- (53) a. **Transitive verbs with clitic *si*:**
Maria si é tagliata.
Mary-Refl is cut.
"Mary cut herself."
- b. **Transitive verbs without clitic *si*:**
Maria ha tagliato se stessa.
Mary has cut [her]self.
"Mary cut herself." (Van Valin 1990)

Burzio claims that *essere* is the auxiliary that is selected when a particular binding relation holds between the subject position and the postverbal nominal. This binding relation would include the antecedent–trace relation and the antecedent–*si* relationship. Crucially, it would not include the binding relationship between the subject and the strong reflexive *se stesso*.

The binding relationship would also have to take into account the relationship between a null subject and a postverbal that is unmoved, as in (54):

- (54) Sono affondate due navi nemiche.
 Are sunk two enemy ships.
 “Two enemy ships sank.”

Burzio and Belletti (1988) analyze the postverbal nominal as remaining in place, with a null expletive in subject position. The above characterization of the distribution of *essere* would necessitate the postulation of binding between the null expletive and the postverbal nominal, analogous to the relationship between the English expletive *there* and the nominal that Chomsky (1991) calls its associate:

- (55) There hangs in the Louvre one of the greatest masterpieces known.

Given the agreement between the verb and the postverbal nominal, Chomsky (1995) distinguishes two types of expletive-associate pair. One type is exemplified by the relationship between English *there* and its associate, and the other type is exemplified by the relationship between English *it* and a clausal argument. Restricting attention to the first type, which subsumes the Italian cases here, the expletive is analyzed as being inserted to satisfy the Extended Projection Principle (called a strong D-feature), while the associate’s person, number, and gender features are analyzed as moving up covertly to be checked by Infl.

Crucially, for our purposes, Chomsky’s (1995b) analysis does not take *there* to be an actual relationship established in the grammar between the *there*-type expletive and its associate directly. If this is right, the naturalness of the class of conditions which trigger *essere* selection is called into question.

Turning our attention to the distribution of the clitic *ne*, it seems that *ne* can basically modify objects of transitive verbs and indefinite postverbal subjects of non-agentive intransitives, and only these:

- (56) a. Giovanni ne inviterà molti.
 John of-them will invite many. (Burzio 1986: ex. (1.7a))
 b. Ne arriveranno molti.
 Of them will arrive many.
 “Many of them will arrive.” (Burzio 1986: ex. (1.5i))
 c. *Ne telefoneranno molti.
 Of-them will telephone many. (Burzio 1986: ex. (1.5ii))

- d. *Ne esamineranno il caso molti.
Of-them will examine the case many. (Burzio 1986: ex. (1.5iii))
- e. *Molti ne arriveranno.
Many of-them arrive. (Burzio 1986: ex. (1.7c))
- f. *Molti ne telefoneranno.
Many of-them will telephone. (Burzio 1986: ex. (1.7d))

The argument for *ne*-cliticization is that the host of *ne* must be, within GB/Minimalism terms, the *c*-command domain of *ne*. The postverbal indefinites are analyzed as simply being the D-structure objects of the verb that remain in their D-structure positions, claimed by Belletti (1988) to receive an inherent partitive Case. The other postverbal subjects are analyzed as being adjoined to VP, a position from which they are not *c*-commanded by *ne*. The requirement that *ne* *c*-command the nominal which it modifies is simply Fiengo's (1974, 1977) proper binding requirement on traces, assuming that *ne* has moved out of the nominal.

By and large, then, one would expect postverbal indefinites of non-agentive intransitives to be able to host *ne*-cliticization, and this ability to correlate directly with *essere* selection by the predicate, a prediction made by Levin and Rappaport Hovav (1995: #104).

Schwartz (1993, cited in Van Valin 1990) notes, however, that this correlation does not hold. Predicate adjectives take *essere* in Italian, and allow final indefinite subjects; but these indefinite subjects do not host *ne*-cliticization. An example that is discussed in Van Valin (1990) is the following:

- (57) a. *Ne sono buon-i molti/sono molti buoni.
Of them are good-Pl many/are many good.
"Many of them are good."
- b. Molti esperti sono stat-i buon-i.
Many experts are be-Past Part-Pl good-Pl. (Van Valin 1990: ex. (19b))

If we adopt Belletti's account, in which the postverbal subjects that can host *ne*-cliticization are really those which were never in fact subjects at all, but simply those nominals which were allowed to remain in their original positions because they received partitive Case there, Schwartz's observation is immediately accounted for. Presumably, adjectives do not assign partitive Case – only verbs do, and the class of verbs that assign partitive Case does not include *essere*.

With respect to the fact that these predicate adjectives take *essere*, as pointed out to me by Tony Kroch (personal communication), one might claim that *essere* is a raising predicate, and hence, would itself take *essere* as its auxiliary, as with (57b).

It seems to me that one can, in a sense, distinguish two types of argument for the unaccusative hypothesis. One type is a class argument, and basically

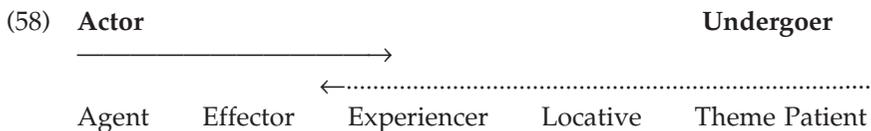
groups a number of different types of predicate together and tries to find a common characteristic. The other is an argument of a somewhat more direct type, for the nominal actually being in the complement position to V at the relevant stage for the application of some grammatical process. So, for example, the *avere/essere* argument claims that passives, subject-to-subject raising, non-agentive transitives, and agentive transitives with *si* have some property in common. The fact that this property correlates with auxiliary selection is obviously language particular. For instance, English does not trigger selection for the cognates of *avere* and *essere*, *have* and *be*, on the basis of the same factors as Italian.

On the other hand, if we adopt the partitive Case mechanism for allowing the relevant nominals to remain in situ, all of the facts about *ne*-cliticization are accounted for rather simply, by appealing to a universal mechanism, the Proper Binding condition on traces. This mechanism also accounts for Baker (1988)'s observation that, in languages that allow noun incorporation, objects incorporate but transitive subjects do not, and nor do agentive intransitive subjects, while non-agentive intransitive subjects do. Again, assuming that incorporated nouns leave traces, the traces are subject to the Proper Binding Requirement, i.e., that traces must be c-commanded by their antecedents.

In short, it seems to me that the *avere/essere* distinction has a much less firm foundation as an argument for unaccusativity than do the *ne*-cliticization circumstances.

In this vein, it is instructive to examine Van Valin's discussion of *avere/essere* selection and *ne*-cliticization.

Van Valin's framework, Role and Reference Grammar (RRG), has only a single level of syntactic representation. Predicates are divided into Vendler (1967)'s classification of states, activities, accomplishments, and achievements. This quadripartite distinction is represented, along the lines of Dowty (1979), in terms of lexical decomposition into a meta-language which contains a small number of operators such as DO (Ross 1972) for agentive activity verbs, CAUSE for accomplishments, and BECOME for achievements. As in Jackendoff (1990b) and Levin and Rappaport (1986b), thematic roles are not primitive, but rather are simply labels for particular argument slots in representations in the meta-language. In addition to these thematic roles, which are read off from the meta-language representations, RRG postulates a notion of, in effect, a "super-thematic role" which certain distinguished arguments may bear, known as a macro-role. There are two macro-roles, *actor* and *undergoer*. These are assigned to arguments bearing particular thematic roles in accordance with (58) (Van Valin 1990: fig. 1):



There are never more than two macro-roles being assigned in a simple sentence, even though there can be more than two arguments bearing thematic roles in a simple sentence (for details, see Van Valin 1990, 1993).

With this all-too-brief introduction to RRG, Van Valin posits the following principles governing *essere* selection and *ne*-cliticization within that framework:

- (59) **Auxiliary selection with intransitive verbs:** Select *essere* if the LS of the verb contains a state predicate. (Van Valin 1990: ex. (17))
- (60) ***Ne*-cliticization:** *Ne* realizes the lowest-ranking argument on the Actor–Undergoer hierarchy in the state predicate in the LF of the predicate in the clause. (Van Valin 1990: ex. (18))

With respect to (59), the claim that *essere* is the auxiliary for those predicates which realize or contain state predicates, we would note that it is the auxiliary for those predicates which are, in GB/Minimalism terms, subject-to-subject raising predicates. Interestingly, English *seem* passes at least one test for statehood, in that it does not progressivize. However, there is at least one English subject-to-subject raising predicate that does progressivize, and therefore seems to be activity-like: the verb *tend*:

- (61) There is tending to be more and more discussion of these issues.

The question is: does Italian have verbs such as *tend*, which progressivize, and, if so, what is the auxiliary? I leave this question open.

My objection to the RRG analysis of the *ne*-cliticization facts is that it is essentially unrelated to any other grammatical phenomena in which unaccusativity has been claimed to be implicated. For example, the Proper Binding Condition accounts for Baker's observations about the extent of noun incorporation as well as the *ne*-cliticization facts in Italian. The RRG formulation essentially treats *ne*-cliticization as a process that is disconnected from the noun incorporation facts.

Moreover, the RRG framework must deal with the fact that preverbal elements cannot host *ne*-cliticization but postverbal ones can. Van Valin acknowledges this in a footnote, and gives a different formulation of the conditions for *ne*-cliticization in Van Valin (1993):

- (62) ***Ne*-cliticization:** *Ne* realizes the topical head of an NP with a focal quantifier, and this NP must be the lowest ranking argument (in terms of the Actor–Undergoer hierarchy) of the state predicate in the LS of the predicate in the clause. (Van Valin 1990: 85)

A focal quantifier is one that follows the main predicate of the clause. With this in mind, we are now in a position to compare the RRG formulation of *ne*-cliticization with the GB formulation, since Belletti (1988)'s analysis of

postverbal (“focal” in the RRG terms) distinguishes two such positions: one in which a postverbal nominal is simply remaining in place, in complement position, and the other adjoined to the VP. (63a), in which the nominal precedes a subcategorized PP, exemplifies the first postverbal position, and (63b), in which the nominal follows the PP, exemplifies the second (the examples are based on Belletti’s 17b):

- (63) a. Ne all’improvviso sono entrati molti dalla finestra.
 b. *?Ne all’improvviso sono entrati dalla finestra molti.

Belletti’s analysis would predict unacceptability for (63b), which should be parallel to (56c), while Van Valin (1990)’s analysis would predict acceptability for both, since his representations would simply assign postfocal status to the *ne* hosts in both sentences.

In fact, the native speakers of Italian whom I have consulted uniformly find a contrast – a fact which would be difficult, as far as I can see, for a theory that has no VP, and which would attempt to capture the positions in terms of focus. The position following the predicate is too general a characterization; the semantic role of the quantifier is also not a relevant factor, since the semantic role is the same for *molti* in (63) both before and after the subcategorized PP. One would have to characterize the postverbal position preceding subcategorized PPs as a sort of “neutral” or “unmarked” position, but this would just be another way of saying that it is the basic position from which movement does not occur, and I do not then see what claims would be made by a theory that claimed to be monostratal.

3 Subject-to-Subject Raising

Subject-to-subject raising is the term given to the process by which the subject of an infinitival complement is raised to become the subject of the main predicate which selects the infinitival complement. It is distinguished from control, known in some frameworks as *Equi*. Examples of sentences which exhibit subject-to-subject raising are given in (64), and sentences which exhibit control are given in (65):

- (64) a. John seemed to be a great linguist.
 b. John proved to be a great linguist.
 c. There tended to be a lot of discussion.
 d. There promises to be a storm tonight.
- (65) a. John tried to be a good boy.
 b. John strived to be successful.
 c. John wanted to improve his lot in life.
 d. John expected to win.

The basic distinction between subject-to-subject raising and control is that the matrix predicate in subject-to-subject-raising constructions does not bear any relation, other than person, number, and gender features (for finite verbs) to its subject, while the matrix predicate in control constructions does impose restrictions on its subject. Hence, the matrix subjects in (65) must all be animate, while any nominal can be the subject of one of the infinitive-taking predicates in (64), as long as it is a possible subject of the infinitive predicate. For some reason that has always been mysterious to me, the controlling nominal of a control predicate must bear a particular restriction: it must be animate. While this is true of predicates which take infinitival complements that must be controlled, there are other constructions in which control is said to be implicated where this restriction does not hold. In particular, the degree complements of the English degree words *too* and *enough* are infinitival, and can be controlled, but there is no animacy restriction on the subject. An example is given in (66):

(66) This book is too dense to be read in one sitting.

One might then ask whether the antecedent for the understood subject of infinitive relationship in degree complements should be distinguished from raising at all. The answer is clearly in the affirmative, given that expletives cannot be the antecedents for understood subjects in this construction, while they can in the raising construction, a point made by Safir (1985). Hence, we have the contrast between (67a) and (67b):

- (67) a. *There is too likely to be a riot to be a serious discussion of the issues.
 b. There is too likely to be a riot for there to be a serious discussion of the issues.

Many theories of grammar have nevertheless assumed that one might simply view raising as that species of control in which the controller gets no restrictions from its superficial position, but rather from the controlled position. Jacobson (1990) points out a number of distinctions between raising and control, albeit in the framework of categorial grammar. One restriction, for example, shows up in the omissibility of the infinitive.¹¹ The subjectless infinitive can be omitted in the control construction, but not in the raising construction. To be sure, the omissibility of the subjectless infinitive is a matter of lexical variation, depending on the matrix predicate, but there are no raising predicates at all that allow for an optional infinitive complement. Examples of the former are given in (68) (Jacobson's ex. (27)):

- (68) a. John {tried.}
 {forgot.}
 {remembered.}
 {refused.}
 b. John is {eager.}
 {willing.}

its characteristics from the controlled position. Does it follow from anything within Government Binding theory or Minimalism?

Kayne (1981b) characterized the restriction on raising out of clauses introduced by overt complementizers in terms of the Empty Category Principle (ECP: Chomsky 1981), which required that traces be properly governed, with the idea that Infl and Comp are not proper governors. Hence, raising out of a clause introduced by an overt complementizer would be parallel to a *that*-trace violation. However, it is well known that it is possible to superficially violate the *that*-trace filter (Chomsky 1981, Perlmutter 1971, Maling and Zaenen 1978, Rizzi 1982, 1990), but it does not seem to be possible to violate the restriction on raising out of clauses introduced by complementizers. Furthermore, the ECP is not viewed to be a primitive in the theory of grammar in the Minimalist view.

It might be worthwhile to consider the disparity between *that*-trace violations and complementizer raising violations. Rizzi (1990) argues that at least one strategy that a language might employ for allowing *that*-trace violations is to permit the complementizer to become a proper head governor if it takes on agreement features with an element in its specifier position. Hence, if a *wh*-phrase in such a language were to pass through the Spec of a CP, it could “activate” the Comp as a head governor, which would then legitimate a trace in subject position.

This option would be unavailable for raising out a clause introduced by an overt complementizer, however. Such movement would necessitate the raised subject first moving into the specifier position of CP, and then ultimately into the matrix subject position – in other words, first moving into an *A'*-position, with subsequent movement into an *A*-position – and such movement is ruled out in a variety of approaches within Government Binding theory/Minimalism (see May 1981 for one early example).

Jacobson (1990) has an interesting approach to raising within the framework of categorial grammar. She adduces a number of arguments to show that the lexical entailment approach to control cannot be extended to raising cases, noting that such an approach to raising would be difficult to prevent within a framework that maintained that control was simply inferred. Her approach to raising employs crucially the notion of function composition, in which two functions combine to form a composite function. For example, adverbs are usually assigned the grammatical category IV/IV, and transitive verbs are assigned the category IV/t, and so functional application for both categories yields a “composed function,” as in *John [[ate [the steak]]quickly]*. Raising verbs are specifically stated so as to have to compose, and so *seem*, for example, is designated as S/⁰S, and when it composes with S/NP, the new composed function is just S/NP.

Hence, the subject of the composed function has all of the characteristics of the subject of the clause with which the raising predicate composes. However, as noted in Baltin (1995), there is a contrast between (32), repeated here as (72), and (73):

(72) *They tried all to like John.

(73) They seemed all to like John.

Specifically, the floated quantifier can appear before *to* when *to* heads the complement of a raising predicate, but not a control predicate. This is explicable, assuming Baltin (1995), if *to* had a DP in its specifier in the raising construction, but not in the control construction. However, Jacobson's function composition mechanism does not posit an actual stage at which the subject of the raising predicate is actually in the specifier position of the infinitive, and so I do not see how this contrast is realized within that analysis.¹²

To sum up this section, then, subject-to-subject raising exhibits significant differences from control, suggesting rather different treatments in grammar, and there is some evidence that the raised subject must occupy the specifier position of the infinitive at some point.

A rather interesting raising construction exists in Irish, as shown by McCloskey (1984), and in Modern Greek, as shown by Joseph (1976). In this construction, the subject of the complement clauses raises into the matrix clause to become the object of a preposition. An example is given in (74):

(74) B' eigean do-n-a ainm a bheith I mbeal na ndaoine.
Cop-Past to-his name be-Fin in mouth the people-Gen
"His name must have been in the mouth of the people." (McCloskey 1984: ex. (16a))

As noted by McCloskey (1984), if the raised subject remains in the matrix *V'* in Irish, this poses a number of problems for some central tenets of Government Binding theory (Chomsky (1981), including the Proper Binding condition, discussed above, which holds that a moved element must c-command its trace, and the Projection principle, which holds that selectional properties of lexical items must be observed at D-Structure, S-Structure, and LF. The raised subject, were it to reside within the matrix *V'* as a complement to *V*, would be in a position that is reserved for items theta-marked by the matrix *V*, and yet it obviously would not be theta-marked. Subject-to-object raising, as argued for most notably by Postal (1974), would be incompatible with the Projection principle and the claim that the complement to *V* must be theta-marked by *V* (but see Postal and Pullum 1988 for arguments against the latter claim). We will consider Subject-to-object raising in more detail below.

Stowell (1989a) has reanalyzed the phenomenon of raising to the object position of a preposition by arguing: (i) the preposition is not a true preposition, but rather a Case-marker, so that the projection is really a nominal projection which would c-command a nominal trace; and (ii) the prepositional object is really in subject position.

4 Subject-to-Object Raising

The existence of an A-movement in which the subject of an infinitival complement is raised to become the object of the verb that selects the infinitival complement is somewhat more controversial. The most detailed justification for such an operation is Postal (1974). For example, (75) would have essentially the structure bracketed (abstracting away from particular theories in which traces or empty categories do not occur in the infinitive subject position):

(75) John [VP believes [Sally] [t to be polite]]

Chomsky (1973) has proposed various theoretical tenets that would ban subject-to-object raising, but, as Lasnik and Saito (1991) have noted, many of Postal's original arguments remain. Two arguments in particular that seem quite strong are based on the interaction of the proposed structure with binding principles and the placement of matrix adverbials. For example, the contrast between (76) and (77) remains unexplained if the underlined nominal is in the complement clause in both sentences, but a structure for (76) in which the nominal is in the main clause, and hence c-commands material inside of the matrix adverbial, would be correctly ruled out by principle C of the binding theory (Chomsky 1981):

(76) *Joan believes himⁱ to be a genius even more fervently than Bobⁱ does.

(77) Joan believes heⁱ is a genius even more fervently than Bobⁱ does.

Similarly, adverbs which intervene between the nominal and the infinitival complement can modify the matrix sentence, while adverbs that intervene between a nominal and a finite predicate cannot. Hence, (78) is acceptable, while (79) is not:

(78) I believe John with all my heart to be a fine person.

(79) *I believe John with all my heart is a fine person.

There is another class of verbs which occurs with nominal plus infinitive sequences, exemplified by the verbs *want*, *like*, *hate*, and *prefer*. These verbs, interestingly enough, do not allow the immediately following nominals to be passivized:

(80) a. *John is wanted to win.
b. We want John to win.

(81) a. *John would be liked to win.
b. We would like John to win.

- (82) a. *John would be hated to win.
b. We would hate John to win.
- (83) a. *John would be preferred to be the candidate.
b. We would prefer John to be the candidate.

These verbs have yet another interesting characteristic: they can all allow the infinitive to be introduced by the complementizer *for*, in contrast to the verbs that allow the following nominal to be passivized:

- (84) I would want for John to win.
- (85) I would like for John to win.
- (86) I would hate for John to win.
- (87) I would prefer for John to be the candidate.

We might account for the behavior of the two classes of verbs by allowing subject-to-object raising for the verbs that do not take infinitives with overt complementizers (such as *believe* and *prove*), and disallowing it for verbs that do take overt complementizers, such as *want* and *prefer*. The failure of the subjects of the infinitival complements of the verbs of the latter class to be A-moved in the passive construction would then be a consequence of the restriction noted in the last section on subject-to-subject raising occurring across an overt complementizer. The non-occurrence of the complementizers, as in the (b) examples of (80)–(83), would be due to PF deletion.

The problem with this bifurcation into two classes of verbs that take infinitival complements is that when we return to the original evidence, given above, for subject-to-object raising, we predict a disparity in behavior between the two classes that is non-existent. For example, it seems that a nominal intervening between a matrix verb and following infinitive binds into a final matrix adverbial with verbs of the *want*-class, but only when the complementizer *for* is absent:

- (88) *Sally would prefer himⁱ to be the candidate even more fervently than Bobⁱ would.
- (89) Sally would prefer for himⁱ to be the candidate even more fervently than Bobⁱ would.

Similarly, an adverb that intervenes between the matrix postverbal nominal and the infinitive can modify the matrix clause just as easily when the verb is of the *want*-class as it can if the verb is of the *believe*-class. Again, significantly, the presence of the complementizer *for* seems to affect acceptability:

(90) I would love (*for) Sally with all my heart to be the one to get the job.

It is striking that the complementizer's presence, forcing an analysis in which the pre-infinitival nominal is in the complement sentence, prevents a pre-infinitival adverb from taking matrix scope, and correlates with the nominal's failure to bind material in the matrix sentence. Interestingly enough, Zidani-Eroglu (1997) also presents evidence from Turkish, from adverbial modification and negative polarity items, for subject-to-object raising as well.

Of course, the failure of the postverbal nominal to passivize when the verb is of the *want*-class requires an account.

5 Conclusion

In this chapter, I have attempted to analyze the data that have motivated movement to an A-position within a transformational framework from a variety of perspectives, comparing the adequacy of the transformational account with alternatives that have appeared. It is my view that there is a real distinction between A-movement phenomena, and their treatment, and lexical phenomena, and that it is impossible to reduce all of the phenomena to a single treatment.

NOTES

- * I would like to thank many people who were kind enough to help me as I was writing this; Leonard Babby, Polly Jacobson, Tony Kroch, David Pesetsky, Paul Postal, Chris Collins, Mark Steedman, and Robert Van Valin. The usual disclaimers apply.
- 1 The existence of such impersonal passives would seem to be problematic for a "phrasal" theory of passives, found within categorial grammar as advocated by Keenan (1980), in which passives are considered to be derived by a rule which converts transitive verb phrases into intransitive verb phrases. In languages such as German and Dutch, the verb phrases are intransitive to begin with.
 - 2 As Paul Postal (personal communication) has pointed out, there is a wide range of examples of postverbal nominals that cannot appear as the subjects of verbal passives, and the inability of these nominals to undergo A-movement must be explained, such as the nominals following the verbs *resemble* and *write*:
 - (i) *His brother is resembled by John.
 - (ii) *John was written by Fred.
- Nevertheless, Keenan's (1980) observation that passives are identified solely by characteristics of the passive verb phrase will be useful in our discussion of Van Valin (1990) below.

corresponding to (iii):

(iii) Fred wrote John.

Interestingly, as Postal notes, the postverbal nominal in this subcategorization of *write* is also frozen by *wh*-movement:

(iv) *Who did Fred write?

Postal suggests that the frozen nature of the nominal following *write* makes reference to grammatical relations, such that the nominal is actually an indirect object. As has been noted since at least Fillmore (1965), nominals corresponding to the first objects of double-object verbs cannot be passivized when the double-object construction is interpreted as a variant of the for-dative, and first objects generally cannot be *wh*-moved:

(v) John bought Sally a cake.

(vi) John bought a cake for Sally.

(vii) *Sally was bought a cake by John.

(viii) *Who did John buy a cake?

(ix) *Who did John give a book?

The idea would be that English passives would crucially turn English direct objects into subjects, as in the text. The situation seems somewhat more complicated, however, in view of the fact that such verbs as *teach* and *feed*, to be discussed below, have the same privileges of occurrence as *write*, and yet the postverbal nominals passivize and *wh*-move:

(x) John taught Sally (French).

(xi) Sally was taught by John.

(xii) Who did John teach?

(xiii) John fed Sally (steak).

(xiv) Sally was fed by John.

(xv) Who did John feed?

Hence, the situation seems somewhat unclear. As for the verb *resemble* (discussed by Chomsky 1965) I would note that the object is intensional, so that one could be said to resemble a unicorn, and Pustejovsky (1987) has noted that subjects must be extensional. Hence, we have the following contrast:

(xvi) John fears unicorns.

(xvii) *Unicorns are feared by John.

(xviii) *Unicorns frighten John.

Apart from these remarks, to quote Chomsky (1995b), "I leave such examples without useful comment."

- 3 The subset relation will be destroyed by the assumption of a grammatical relation other than direct object to an internal argument. For example, Lexical-Functional Grammar countenances the grammatical function OBJ₂, for second objects in double-object constructions, or INDOBJ, for indirect objects.
- 4 Or when the subject is raised, as discussed in the next section.
- 5 It will be noted that I am analyzing these preverbs as predicate specifiers, and subjects are also predicate specifiers. I am therefore committed to the existence of multiple specifiers, as argued for in Baltin (1995) and independently by (Koizumi 1995) and (Chomsky 1995b).
- 6 Indeed, this is one of the arguments against (Sportiche 1988), which analyzes floated quantifiers as involving movement of the quantified nominal with the quantifier remaining in place. Sportiche's analysis cannot extend to the distribution of *ever*.

7 It is important to note that the distinction between the three types of A-movement discussed here (passives, unaccusatives, and subject-to-subject raising) is actually made by only some of the theories that we are discussing here. For example, in Government Binding theory or Minimalism, the distinction is not actually captured by the theory itself. Chomsky (1995b), for instance, takes movement in general simply to be feature-attraction, with entire categories being moved for phonological reasons when the movement is overt. The distinction between A-movements and A'-movements depends on the characteristics of the "attracting" category. In this connection, the two distinctions between passives and unaccusatives that I have made in the text do not always go together. For example, as noted by Keenan (1980), some languages have morphologically distinguished passives that do not allow the equivalent of oblique active subjects. Indeed, English has at least one passive that has no corresponding active, and certainly no *by*-phrase is permitted here: the passive *be rumored*:

- (i) *The American Spectator
rumored Clinton to be having
an affair.
- (ii) Clinton is rumored (*by the
American Spectator) to be
having an affair.

It is meaningless to ask whether *be rumored* is passive or unaccusative.

8 A theory that defined grammatical relations in terms of order of combination with the predicate would also be forced to claim that an indirect object could only exist in a sentence that also contained a

direct object and a subject. In this connection, one might note that English, for example, has datives with no syntactically expressed direct object, as in (i):

- (i) He gave__to charity.

For these reasons, I am skeptical of the order-of-composition view of grammatical relations.

- 9 Larson argues that empty Vs are generated in sentences and the phonologically contentful V raises to the position of the empty V. For details and arguments, see Larson (1988).
- 10 It is occasionally claimed that unergatives take a "cognate object" (Hale and Keyser 1993), which can typically be realized under the right conditions. Examples are given in (i) and (ii):
 - (i) He dreamed a long and satisfying dream.
 - (ii) He slept a long and satisfying sleep.

Therefore, the argument runs, unergatives are not truly monadic. There are two responses to this argument. First, with respect to the relational theory of linking, unless this cognate object bears a thematic role, it would appear to be irrelevant to the relational theory of linking. Second, the factual basis of Hale and Keyser's observation seems questionable, as noted by Baker (1997b).

- 11 Bresnan (1982a) also makes this observation about missing infinitives, citing Williams (1980), in an unpublished paper that I have not seen.
- 12 Interestingly, Tony Kroch has pointed out to me that, within the framework of Tree-Adjoining Grammars, raising predicates are,

in effect, inserted between subjects and the predicates out of which they raise, and hence the possibility of placing the floating quantifier between the raising predicate and the infinitive marker simply reduces

to the possibility of placing the floating quantifier between a lexical subject of an infinitive and the infinitive marker, as in the ECM case (36) in the text.