The Formal Symmetry of Selection and Feature Checking

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Abstract: This paper defends three interconnected claims: (1) selection is the only licensing procedure available to UG; specifically, checking is an instance of selection, (2) selection obtains in the mutual c-command relation, and (3) though a head does not mutually c-command its own specifier, it mutually c-commands the specifier of its complement. A head may therefore license the specifier of its complement (as well as its complement), but not its own specifier (it is not local enough). This effectively eliminates the spec-head relation from the repertoire of syntactic relations. This analysis has empirical application in solving a conflict between the promotion analysis of relative clauses, the predicate internal subject hypothesis, and certain argument/adjunct asymmetries. An analysis of relative clause formation is proposed where the head of the relative undergoes across-the-board promotion from both the relative clause and the matrix predicate simultaneously.

1. Introduction

This paper proposes that there is no fundamental difference between feature checking and categorial selection, and therefore that a theory that assigns distinct roles or configurations to the (putatively) two kinds of relations is not parsimonious. The goal of this paper is to demonstrate that no empirical considerations indicate that checking is anything other than a particular instance of selection, whose structural correlate is the mutual c-command configuration. Since syntactic structure is projected from the combinatoric (i.e. selectional) properties of the heads that comprise the lexical array, the basic selectors are heads. I propose that this minimal requirement is the only necessary one, that is, a selectional relation always obtains between a head (the selector) and a phrase (the selectee), never between two phrases. This proposal has consequences for the role of the spec-head relation in selection/checking, since mutual c-command does not obtain between a head and its specifier. Selection/checking is analyzed as a relation between a head and multiple complements. This analysis is then shown to reconcile conflicting predictions about the distribution of relative clauses made by the promotion analysis of relative clauses and the predicate internal subject hypothesis, in light of certain argument/adjunct asymmetries. The analysis presented here is both theoretically reductive (minimalist) and empirically discriminating.

2. Framing the issue

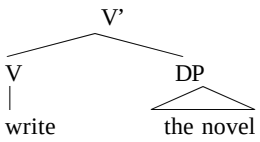
A lexical item selects a specified category in a specified syntactic configuration defined with respect to the selecting head, e.g. ‘complement-of’ or ‘specifier-of’. Let ‘selection’ be a three-place

relation (notated *Select*) between a lexical item (the selecting head), a category and a syntactic position with respect to the lexical item.

(1) *Select* = LEX x CAT x {comp-of, spec-of}

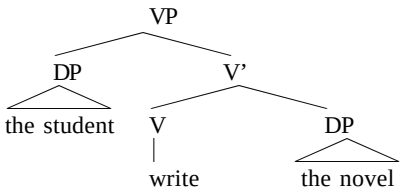
Then the selection relation includes, for example, the triple <*write*, DP, complement-of>, and some reference to this triple is part of the lexical entry for the word *write*, which in turn guides a derivation containing the verb *write* to the form below, where the selector projects.

(2)



Write also selects a subject in the spec-of relation. So the selection relation *Select* also contains the triple <*write*, DP, specifier-of>, guiding the derivation further to the form:

(3)



The selection relation contains two triples each of which contains the lexical item *write*. Each time one of these triples is structurally 'instantiated', the selector projects (Chomsky (1995)).

The checking relation has a superficially similar format. A functional head checks a feature of another category in a particular syntactic configuration defined with respect to the checking head. Let 'checking' then be a three-place relation (notated *Check*) between a lexical item (the checking head), a feature and a syntactic position with respect to the lexical item.

(4) *Check* = LEX x FEATURE x {comp-of, spec-of}

This definition of the domain of the checking relation does not make a distinction in which class of lexical items are checking categories as opposed to selectors. The rationale for conflating these is as follows. Checking is thought of as the business of functional elements, where a functional element is one with no lexical content (whose primary business is to check the features of other categories). Selection is thought of as the business of elements that denote the relations that the various participants in the predication are in[1]. The focus of the present study concerns how these lexical items behave, that is, what similarities or differences there are in what elements they check or select and in what configurations. If the only thing that distinguishes a checking category from a selector is some measure of its semantic contentfulness, but checking and selection are otherwise the same operation, then checking and selection are not two kinds of dependencies, and the contentfulness of the lexical item is not a factor which warrants distinguishing them.

The 'behavior' of a lexical item is evidenced in how it affects its environment, i.e., what kind of thing it checks or selects and in what configuration. As defined, the checking relation relates features while selection relates categories. The set of possible checking configurations as defined

[1] This distinction is ill-defined at the outset, since what constitutes enough semantic contentfulness to qualify a word as a lexical word is a difficult empirical judgment call to make. Is what past tense denotes (functional) less contentful that what the predicate 'temporally precedes' denotes (lexical)?

above is the same as the possible selection configurations, though it is not obvious, as the reader may have already objected, that feature checking ever obtains between a head and its complement. I have defined checking so as to leave the option open for now, and will pursue this matter further.

In what follows, I will argue that features are categories, and whatever extent features can be thought of as different from syntactic categories does not warrant treating the dependency between a head and what one might think of as a feature differently from that between a head and a category. I will also argue that the only configuration relevant for selection (now meant to include checking) is the mutual c-command, or complement-of, relation. I claim that both checking and selection reduce to the two-place relation that I will call 'selection':

(5) *Select* = LEX x CAT

I.e., selection (and checking) is a relation between a lexical item and a category. It is a separate principle of grammar that such relations are instantiated structurally in the most local syntactic relation possible, and the most local syntactic relation possible is mutual c-command.

I assume in what follows the basic phrase structure proposed by Chomsky (1995) for simple transitive predications:

(6) [CP [TP [vP [VP]]]]

2.1 Similarities between checking and selection.

Assume that checking and selection are distinct. They nonetheless display certain similarities.

First, both dependencies require two elements to occur syntactically locally (both complement-of and specifier-of are local in the sense of within the same minimal maximal projection as the head).

Second, in both cases the relation is asymmetric. The effect of a selection or checking dependency is induced by one element and affects the syntactic distribution of the other. A selector introduces new elements (typically its arguments) within its maximal projection. A checking category attracts elements (bearing the relevant features) into its maximal projection. In both cases one element affects the distribution of another, but the selected or checked elements do not influence the syntactic position of the selector or checking category. The position of the selector or checking category is fixed independently, while the position of the selected or checked elements is fixed relative to the selector or checking category.

2.2 Differences between selection and checking

The two general similarities between selection and checking mentioned above seem to be subsidiary to a number of specific differences enumerated below.

First, selection relates a lexical item and a category, while checking relates a lexical item and a feature of another category.

Second, checking typically induces movement, while selection (apparently) never does.

Third, in the case of selection, the introduction of one element into a derivation (the selector) in turn requires the introduction of others (the elements the selector selects), whereas in the case of checking, the introduction of a checking category does not in turn require the introduction of any new elements. On the contrary, the introduction of the checking category is meant ultimately to satisfy requirements of the thing to be checked, which enters the derivation independently of the checking category. One may say that the elements introduced by a selector are there because the selector is, but the elements checked by a checking category are not there because the checking category is, but because they were introduced separately by some selector.

Fourth, categorial selectional requirements often correspond to semantic selectional requirements; checking requirements do not. When a head selects another category, the latter category is typically an argument of the former, and receives a theta-role from it. But when a checking category checks a formal feature of another category, the relation does not typically correspond to the predicate-argument relation (compare a verb selecting its object with tense checking a case feature).

3. Differences between selection and checking are only apparent

In the following sections, I treat each of the differences discussed above and show that it is an epiphenomenon of independent considerations and does not derive from an axiomatic difference between selection and checking, and therefore that no empirical considerations warrant any theoretical distinction between selection and checking.

3.1 Selection relates categories, while checking relates features

In this section, I claim that features and categories are not distinct syntactic entities. Tests for category membership are distributional. The category of a constituent is a 'label' of its syntactic distribution. For example, any element that can grammatically fill the blank in (7) belongs to the category '(transitive) verb' (V), e.g. *admires, fears, kicks, calls up, avoids, adores, admonishes, supports, annoys,* etc.[2]

(7) Sue ____ Sandra

In (7), the category V is flanked by the proper names *Sue* and *Sandra*. *Sue* and *Sandra* can replace each other, so they belong to the same category. Let this category be called 'DP', and assume, again by the distributional criterion for category membership, that any phrase that can replace *Sue* or *Sandra* above is also a DP. Slightly more generally, let any phrase that can grammatically fill either the first or second blank in (8) belong to the category DP.

(8) _____ admires _____

There are some terms that can fill one of the blanks but not the other, such as *she* and *her*.

(9) a. She/*her admires Sandra
b. Sue admires *she/her

[2] S-selectional criteria aside, a matter I will return to in section 3.4.

Their distribution overlaps with but is distinct from the distribution of the DPs[3]. So let *she* and the class of terms that distribute identically have the designation 'nominative', and let the term *her* and the other terms which distribute identically be designated 'accusative'.

The label 'DP' designates a distributional class, the class of items that can fill either blank in (8). The label 'nominative' also affects what 'blanks' a phrase can fill, and is therefore also a distributional class. The distributional effect of the label 'nominative' makes 'nominative' a syntactic category[4], since the distribution of a phrase is the very criterion of category membership.

The considerations brought to bear above on the status of case features also apply to agreement features and wh-features. Take as an example of agreement subject-verb agreement in grammatical gender, as in, for example, Lebanese Arabic.

(10) a. Til9-it sh-shams
rose-f the-sun 'The sun rose.'

b. Tili9 l-'amar
rose the-moon 'The moon rose.'

Sun is feminine and triggers the feminine suffix *-it* on the verb. *Moon* is masculine and does not trigger the *-it* ending (masculine is unmarked). There does not appear to be a gross distributional difference between *sun* and *moon*. Both are subjects in (10). But a closer look at the contexts in (10) reveal a difference. The distribution of a phrase is the set of contexts, or syntactic frames, it can grammatically occur in. The syntactic frame is not the same in (10a-b). *Moon* cannot occur in the frame that *sun* occurs in nor vice versa.

(11) a. *Til9-it l-'amar
b. *Tili9 sh-shams

To claim that *sun* and *moon* in (10) have the same distribution is to make the mistake of ignoring the obligatory presence of *-it* in (10a). *Sun* occurs in the environment of *-it* and *moon* does not. Somewhat more theory-specifically, the masculine agreement phrase associated with *Tili9* (*rose*) checks *moon* but not *sun*, meaning that *sun* and *moon* do not have the same distribution. *Sun* occurs in the environment of a feminine agreement phrase and *moon* occurs in the environment of a masculine agreement phrase.

The fact that the designation 'feminine' affects the distribution of a phrase makes 'feminine' a syntactic category, again by the argument that the distribution of a phrase is the criterion of category membership.

The set of contexts where designations like 'feminine' and 'nominative' are licit is a subset of the set of contexts where designations like 'DP' are licit. Features like [+wh] (interrogative features or focus features) often induce displacement of the constituent bearing the feature, highlighting a distributional disjunction between the wh-feature and other designations of the constituent. In fact, the features 'nominative', 'accusative', 'feminine', etc. are usually also posited to trigger

[3] In fact it's a subset of the distribution of the DPs, but this is not true of all features of DP (see the discussion of the wh-feature in section 3.3).

[4] Under the assumption that syntactic structure is projected from the lexicon, the claim that 'nominative' is a syntactic category might be construed as entailing that there is a lexical item that projects this category. The notion of a syntactically independent 'case head' ('K[ase]') is in fact proposed by Guerssel (1992), Sigurdsson (1993), Bosque and Picallo (1996), Mallen (1997) and others. These authors have effectively already made the claim I am making here. The same can be said for syntactic projections of individual agreement features (Ouhalla (1988), Ritter (1992), Coopmans (1994), Mallen (1997) and others).

movement, indicating there is some generality to the displacement property of features. Designations like '[+wh]' do not occur in the same syntactic frames as designations like 'DP'. The fact that they trigger movement indicates that, whenever several distributional designations (like 'DP' and '[+wh]') group together as designations for a single constituent, that constituent must satisfy the distributional requirements of all of the designations (i.e. categories) that comprise it, albeit not at the same time. Syntax is derivational and transformational, meaning a constituent may have a different distribution at different levels of representation, satisfying the different distributional requirements of the categories that comprise it at different levels. The next two sections flesh this point out in greater detail. In summary, all of the designations discussed above are distributional classes and have equal claim to syntactic categoryhood, meaning there is no distinction between features and categories. For clarity in the sections that follow, which discuss other differences between selection and checking, I will continue to refer to the designations '[+wh]', 'feminine', 'nominative', etc. as 'features' and 'DP', 'VP', etc. as 'categories'.

3.2 Checking induces movement, while selection does not

It is never the case that an element raises into a selection relation with its selector, though it is typically the case that a checked element raises into a checking relation with its checking category. This section argues that this difference is an epiphenomenon of the theta criterion.

When a selector is a lexical predicate and its selectees are its arguments, selection is a vehicle for theta role assignment[5]. Theta role assignment is a reflex of the 'argument-of' relation between a theta-role assigning predicate and an argument. The argument-of relation is a building block of syntax. It seems, if contemporary syntactic theories are on the right track and if structures are built from the bottom up, that:

(12) Lexical relations are established prior to functional relations.

A particular concretization of this fact that is commonly assumed to drive structure building is:

(13) a. A constituent must receive a theta role before it can be affected in any other way.
b. A constituent may not receive more than one theta role (the 'theta criterion' of Freidin (1978) and Chomsky (1981)[6])

Given these two assumptions, it follows that selection does not induce movement because selection is a vehicle for theta role assignment, and therefore cannot attract anything, since whatever is there to attract already has a theta role, because of (13a)[7].

These considerations assume that (12) is a deeper generalization than the checking/selection distinction itself, and so (12) is not derivable from an axiomatic difference between checking and selection. The (putative) difference between checking and selection is a formal configurational

[5] Selection differs from checking in this respect. I will take up this difference in section 3.4.
[6] One half of the theta criterion to be exact--what Freidin refers to as the Functional Uniqueness condition. The other half (Functional Relatedness) requires an NP to have a theta role.
[7] Thematic relationships are a kind of interpretable relationship. Taking selection to be a vehicle for interpretable relations in general, and assuming that an analog of the theta criterion holds for all interpretable relationships, then the argument here extends to cases of selection between e.g. T and vP, where the latter contributes the event that tense orders temporally, and between C and TP, where the latter contributes the predication that the complementizer gives illocutionary force to. I assume here that the theta criterion applies to all interpretable relations, but not to uninterpretable relations such as case assignment and agreement.

one. A proposition is a description of the way the world is, but does not itself affect the way the world is (though the act of uttering it might). It appears that the way the world is determines the form of a syntactic structure and not vice versa. It is therefore unlikely that syntactic relations like *Select* and *Check* determine what is a lexical and what is a functional relation, but rather vice versa. Section 6 returns to this issue. Raising to a selector is blocked by the theta criterion, but raising to a checking category is not. Hence, the fact that checking induces movement but selection does not is attributable to the theta criterion.

3.3 The 'depends-on' asymmetry

The third difference between selection and checking is that while a selector introduces a category to the derivation, a checking category does not introduce a category to the derivation (selection draws from the lexical array while checking usually draws from the subtree already built). In this section I claim that this difference is an epiphenomenon of the fact that selection does not induce movement while checking may (which in turn is an epiphenomenon of the theta criterion, as discussed in section 3.2).

Both checking and selection are instances of a licensor licensing a dependent. By the argument in section 3.1, the dependent in both cases is a syntactic category. Checking typically induces displacement of its dependent, as in wh-constructions:

(14) a. Which flowers did Stan buy?
b. Stan bought the flowers by the window.

In the declarative answer in (14b), the object follows the verb, whereas in the question in (14a), the object occurs sentence initially. Wh-phrases may be displaced from the 'canonical' distribution of DPs. The distribution of wh-phrases therefore overlaps with, but is not a subset of, the distribution of non-wh-DPs[8]. The distribution of wh-DPs differs from the distribution of non-wh-DPs in a systematic way, formalized by Chomsky (1973) as a transformation that adjoins a wh-element to a [+wh] complementizer, shifting it into clause-initial position.

Hence, a given feature may have the affect of altering the distribution of the constituent it is a feature of, and not necessarily by restricting it to a subset of the distribution of another category. In the case of wh-DPs, the designation 'DP' determines where the phrase that has this designation occurs at D-structure. The designation '[+wh]' determines where the phrase that has this designation occurs at LF. So selection determines the form of D-structures, whereas checking determines the form of logical forms (and potentially, to some extent, surface structures).

In describing this asymmetry in section 2.2, I pointed out that in any given structure, every element that is there is there because its selector is there (except for the highest node, which is an unselected derivational 'start' symbol). But features are not there because their checking categories are there, but rather because they come parceled with a selected category. But the fact that the process of checking a feature displaces it means that checking is actually *like* selection. Though a feature is not in the structure because its checking category is there, it is *where it is* because its checking category is where it is. This is true of selection also. A selected category occurs in the position it occurs in (at D-structure) because that position is local to the selector. Given this parallelism, the asymmetry described previously falls out from (12), the generalization that lexical relations obtain prior to functional relations. Assuming that checking and selection are the same, we predict that selection introduces elements from the lexical array because selection instantiates the lexical

[8] Furthermore, the feature [+wh] may occur in non-DPs (e.g. adverbs *when*, *how*, etc.).

relational base of the sentence, and cannot induce movement because of the theta criterion. Checking in turn induces movement because checking categories are merged later in the derivation than lexical categories. The locality that checking requires necessarily alters the base structure. Both selection and checking require the locality of the selected/checked element, suggesting that selection and checking are derivationally the same procedure.

Every syntactic category has a unique distribution. Yet some syntactic categories are parceled together with others (e.g. 'DP', 'nominative' and '[+wh]). Such a parcel must satisfy the requirements of all the categories that comprise it. That means that such a parcel must occur in the distribution of all the categories that comprise it. Since structure building is procedural, the contexts for each of these categories are generated one at a time. Each time such a context is generated, the parcel will move into that context to satisfy the distributional requirement of the relevant category. Which distributional requirement will such a parcel satisfy first? The one whose context is generated first. Since lexical relations obtain prior to functional relations, the context for the category 'DP' is generated before the context for the categories 'nominative' and '[+wh]'. Hence, lexical selectors introduce new elements to a derivation, since they are the first contexts generated, by virtue of (12). Checking relations in general do not introduce new material to a derivation, since the relevant categories are already in the tree when the checking categories for them are introduced[9]. The checking category need only displace them.

The real and unexplained asymmetry that derives the epiphenomenal 'depends on' asymmetry described above is that categories enter a derivation parceled together as multiple properties of a single syntactic constituent, and such a parcel must therefore display the distribution of all of the categories that comprise it. While building a tree, each time a syntactic context is generated for one of the categories of a constituent, the constituent moves as a syntactic unit into that context. The context that the constituent originates in is the first context generated that some category of that constituent must occur in. These are in general configurations that underlie lexical (theta role assigning) relations, since lexical relations obtain prior to functional relations. Hence, (what is usually called) selection introduces new elements to a derivation, while (what is usually called) checking usually does not (but see footnote 9). This conclusion does not speak to whether theta assignment itself distinguishes checking and selection, though I have assumed so far it does. The next section addresses this issue.

3.4 Selection goes hand in hand with theta role assignment, while checking does not

Whether a term assigns a theta role or not is a lexical property of the term. Therefore, when an element licenses another element, whether or not the licensor assigns a theta role to the licensee is related directly to a lexical property of the licensor. If the licensor has a theta role to assign, it assigns a theta role to the licensee. If it has a feature to 'match', it matches a feature of the licensee. In both cases, the presence of one element (the licensee) depends on the presence of another (the licensor). Since the licensor is different from case to case, we expect the particular requirements of that licensor to differ lexically with the lexical type of the licensor. We do not (necessarily) expect the syntactic configuration in which licensing obtains to differ from licensor-type to licensor-type. If selection and checking are the same syntactic relation, it does not follow

[9] It is nonetheless possible for a checking category to act like a selector and introduce an element to a derivation, which is predicted in case the checked element is not in a lexical relation prior to being checked, as is claimed for the wh-word *why* in Rizzi (1990). Rizzi argues that *why* is base generated in CP, the [+wh] licensing site. It does not bind an IP-internal variable.

that lexical items may not differ in how their licensee is affected. That is predicted to follow from the lexical requirements of the licensor

Selection is a relation that requires an element of a certain type to occur in a syntactic position specified with respect to the selector. As discussed previously, this is no different from checking, which also requires an element of a certain type to occur in a syntactic position specified with respect to the checking category. There is a heterogeneous variety of reasons why an element may require the syntactic locality of another element. But this does not warrant treating different reasons for requiring the syntactic locality of another element syntactically differently. If the taxonomy of kinds of lexical requirements is entirely lexical, then it is not perspicuous to postulate different syntactic configurations underlying them, unless there is syntactic evidence for such. I have claimed that when we factor out the generalization that lexical relations obtain prior to non-lexical relations, no such evidence reveals itself.

3.5 Summary

I have argued that the differences between checking and selection described in section 2.2 are only apparent, and that no such differences persevere when we control for the interference of independent grammatical forces such as (12). The conclusion is that selection and checking are the same dependency. Whether in a particular instance a theta role is assigned or a feature matched depends on the lexical requirements of the licensor in that particular instance.

If we assume checking and selection are the same kind of dependency, certain apparent differences fall out from the fact that particular licensors may differ in how they affect their dependent. For example, if some assign a theta role and others do not, and there is an independent principle to the effect that a constituent may only bear one theta role, then those licensors that assign theta roles will never induce movement in doing so. Nowhere are we led to distinguishing the kind of dependency that checking is from the kind of dependency that selection is. In lieu of evidence that distinguishes them, I assume they are the same. That is, both checking and selection are the relation that I will now refer to as 'selection':

(15) *Select* = LEX x CAT

Select is a relation between a licensor (member of LEX) and a syntactic category (member of CAT, which includes e.g. 'DP', '[+wh]', 'nominative', 'plural', etc). In the following section I discuss what syntactic configuration the selection relation is instantiated in.

4. Head-phrase dependencies and sisterhood: eliminating the spec-head relation

In this section I will assume that the conclusion of the previous section is correct and discuss some ramifications of this conclusion for structure-building. The definition of selection given in section 3.5 makes selection a relation between a lexical item and a category, and does not contain a specification about what configuration this relation is instantiated in. The premise in not including the relevant configuration is that this configuration is determined by grammatical rules that are not part and parcel of the relation itself. I assume that it is a general principle of grammatical form that whenever two or more elements are related by a relation such as selection, the elements related must be syntactically local. I will assume what I consider to be the minimal hypothesis that there is

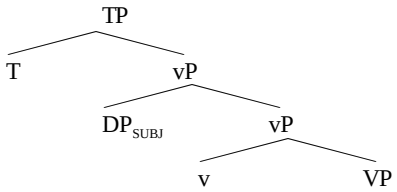
only one kind of syntactic locality. A local configuration is that described in (16) (after Williams (1980), who proposes a slightly weaker version for the configuration underlying the 'predication' relation).

(16) Two elements are local if and only if they stand in the mutual c-command relation.

This premise runs counter to the assumption that both selection and checking may obtain in the spec-head relation. A head is not in the mutual c-command relation with its specifier. Consider little-*v* licensing its subject. I assume here the X-bar theory of Kayne (1994) and his definition of c-command, repeated in (17).

(17) a. X c-commands Y iff X and Y are categories and X excludes Y and every category that dominates X dominates Y (pg. 16).
b. A category X excludes a category Y if no segment of X dominates Y (footnote 1, pg. 133).
c. A category X dominates a category Y if every segment of X dominates Y.

(18)



Little-v does not c-command DP (though DP c-commands little-v), because the first category that dominates little-v, vP, does not dominate DP (since not every segment of vP dominates DP). So little-v and DP are not in the mutual c-command relation. Thus, the DP in (18) is not local enough to little-v (by (16)) to be its argument.

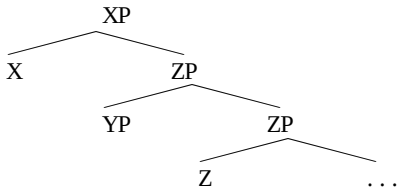
However, the fact that vP does not dominate DP means that DP c-commands out of vP. In particular, DP c-commands T. DP excludes T and the first category that dominates DP also dominates T, namely TP (again, vP does not dominate DP because not every segment of vP dominates DP). T also c-commands DP. So T and DP stand in the mutual c-command relation to one another in (18), given the definitions in (17). T and vP also stand in the mutual c-command relation. In general, then, a head is in the mutual c-command relation with its sister and its sister's specifier[10].

A problem ordering these nodes linearly might be expected to result in this situation, but does not. The relevant head's sister and its sister's specifier are asymmetrically ordered by the c-command relation, since, again in the example above, DP c-commands vP but not vice versa. DP c-commands vP because it excludes vP and the first category that dominates DP dominates vP (namely TP). But vP does not exclude DP (because one segment of vP dominates DP), so vP does not c-command DP. Therefore, while DP and vP both stand in the mutual c-command relation with T, DP asymmetrically c-commands vP. So, by Kayne's Linear Correspondence Axiom, according to which asymmetric c-command maps onto linear precedence, DP precedes vP. And since T c-commands *into* both DP and vP, but material inside DP and vP does not c-command T, the head T precedes both DP and vP (see Kayne (1994)).

[10] Chomsky (1993) assumes that a category dominates its specifier, which is then not part of minimal complement domain of the superjacent head. However, Chomsky (2001) assumes that the specifier of a category does not belong to that category's phase, but rather belongs to the next highest phase, effectively allowing 'downward' checking as proposed here, but not respecting the mutual c-command requirement imposed here, nor deriving the indistinguishability of checking and selection that I have attempted to establish.

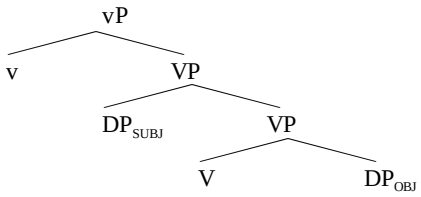
These considerations indicate that in the configuration schematized in (19), the head X mutually c-commands both YP and ZP, yet these categories are linearized in the order they occur in there: [X YP ZP].

(19)



Thus, though little-v cannot select its subject DP in the configuration in (18), it can select it in the configuration in (20), where little-v is in the mutual c-command relation with both DP and VP (it's two arguments).

(20)



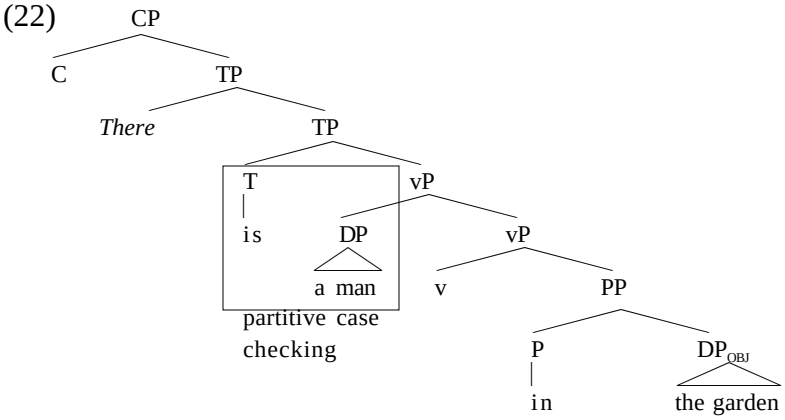
Suppose (20) is the D-structure for transitive predications. There are two surface positions available for the subject DP, one following T and the other preceding it:

(21) a. There is [$_{\text{Pred (=vP)}}$ a man in the garden].
b. A man is [$_{\text{Pred (=vP)}}$ in the garden].

Belletti (1988) claims that these two surface positions are distinct case positions. The subject bears partitive case in (21a) and nominative case in (21b), accounting for the definiteness effect associated with predicate-internal subjects.

Assuming, after Belletti, that *be* assigns partitive case, the word order in (21a) is the one predicted by the analysis presented here, where case checking obtains in the mutual c-command (i.e. complement-of) configuration, as diagrammed in (22)[11].

(22)



[11] If objective case in transitive predications (possibly including the prepositional predicate here) is assigned outside of the predicate, as Koopman (1987) and Chomsky (1991) claim, then the subject is not in [spec,vP] in (22) but higher (but still below T), and the object has its own external case assigner, e.g. Agr$_O$P as Chomsky proposes, situated between TP and vP. See also Kayne (1989).

If nominative case is checked in [spec,TP], then, from the perspective of the analysis presented here, it is not T that assigns nominative case (its own specifier is not local enough), but rather the next highest head, C. The traditional view that it is tense that assigns nominative case is based on the co-variation between finiteness and nominativity observed in English and many other languages (Chomsky (1980)).

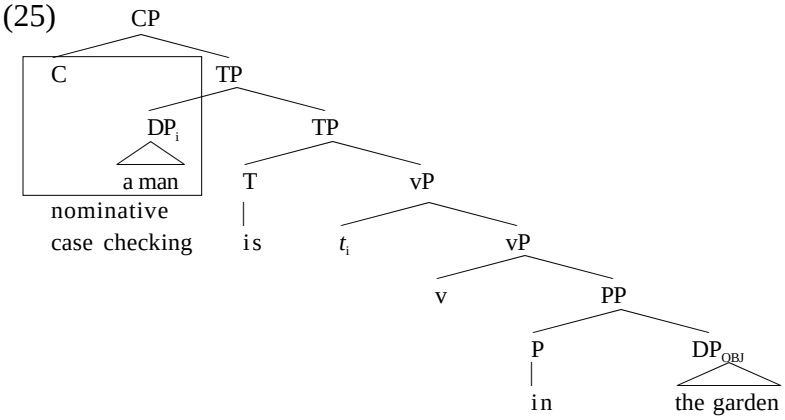
(23) a. For John to say that was inconsiderate.
b. *John to say that was inconsiderate.
c. That John said that was inconsiderate.

A nominative subject is only allowed in tensed clauses (23c). In non-tensed clauses, a subject is allowed only if it receives case from an outside governor (cf. (23a) and (23b)). *For* is the case assigner in (23a), analyzed as a complementizer in Bresnan (1970), Kayne (1981) and elsewhere. I am suggesting that, just as the complementizer *for* is the subject case assigner in (23a), the complementizer *that* is the subject case assigner in (23c). In fact, not only do tense and nominativity co-vary, but tense and the complementizer co-vary as well. *That* is ungrammatical in non-finite clauses.

(24) *That (John) to say that was inconsiderate.

It is therefore not clear that it is (finite) T that assigns nominative and not (finite) C, since finite C is excluded just when T is non-finite. The facts are compatible with the premise that nominative case is assigned by (potentially null) finite C, and (21b) has the structure in (25).

(25)



Since wh-elements precede C[12], they cannot be selected by C in view of this analysis, but must be selected by a higher wh-head independent of C, as postulated by Culicover (1991), Hoekstra (1993), Zwart (1993), Müller and Sternefeld (1993), and others. In (26), wh-checking obtains between the null wh-head *Ø* and the wh-DP *which man*, again in the head-complement relation.

(26) $[_{WhP}$ Ø $[_{CP}$ which man$_i$ $[_{CP}$ Ø $[_{TP}$ t_i $[_{TP}$ is $[_{vP}$ v $[_{PP}$ t_i $[_{PP}$ in the garden]]]]]]]]

These considerations indicate that the analysis presented here is compatible with the word order facts of English and with the conventional view of what elements are involved in the relevant dependencies. This makes it possible to dispense with the spec-head relation as a syntactic

[12] As evidenced in languages where wh-elements co-occur with overt C, as in Belfast English, as reported by Henry (1995).
i. I wonder which plate that he bought?

primitive within a theory which remains compatible with the word order facts of English and the general case theoretic take on these facts.

5. An application

I describe below a case where the analysis proposed here has some clear empirical benefit, in order to outline what affect the considerations discussed heretofore have on the form of syntax in general. The conclusions drawn above show some usefulness in resolving a puzzling conflict that arises between the promotion analysis of relative clauses proposed by Schachter (1973)[13], the Predicate Internal Subject Hypothesis (PISH) proposed by Koopman and Sportiche (1991)[14], and Lebeaux's (1991) proposal that relative clauses are adjoined at S-structure. The conflict is that if a relative clause is adjoined to its head in the surface position of the head, and therefore is not part of what is promoted from VP, then it cannot both be the case that the head is promoted from inside the relative clause (per promotion) *and* from the matrix VP (per the PISH).

5.1 The ingredients of the conflict

5.1.1 The promotion analysis

Schachter notices that the data in (27)-(30) indicate that the head of the relative clause in (29)-(30) has been displaced. (27) and (28) show expected Principle C and Principle A effects; the name *John* must be free in (27a-b) and the anaphor *each other* must be locally bound in (28a-b).

(27) a. John_i thinks that Mary has an unfavorable opinion of him_i.
b. *He_i thinks that Mary has an unfavorable opinion of John_i.

(28) a. John and Mary_i showed a fleeting interest in each other_i.
b. *Each other_i showed a fleeting interest in John and Mary_i.

(29) a. The opinion of him_i that John_i thinks that Mary has is unfavorable.
b. *The opinion of John_i that he_i thinks that Mary has is unfavorable.

(30) a. The interest in each other_i that John and Mary_i showed was fleeting.
b. *The interest in John and Mary_i that each other_i showed was fleeting.

(29) and (30) run counter to this generalization. *John* is preceded by the co-indexed pronoun in (29a) and *each other* fails to be preceded by the coindexed phrase *John and Mary* in (30a). The precedence relations that are ungrammatical in (27) and (28) are grammatical in (29) and (30). In each case though, identifying the gap in the relative clause with the head of the relative yields the same precedence relations as in (27) and (28), explaining the parallels in grammaticality. He concludes that the head of the relative is promoted to its surface position from the position marked by the gap in the relative clause (after *has* and *showed* in (29) and (30) respectively), and Binding Theory[15] applies at D-structure, before promotion.

---

[13] See also Vergnaud (1974), Kayne (1994) and Afarli (1994).

[14] See also Contreras (1987), Kitagawa (1986), Kuroda (1988), Speas (1986) and Zagona (1982).

[15] Pronominalization rules, for Schachter.

Schachter also claims that the determiner that quantifies the head of the relative is not part of what is promoted from inside the relative clause, since a determiner may occur in the context of a relative clause that is otherwise ungrammatical. A determiner licensed by the relative is an 'external' determiner[16].

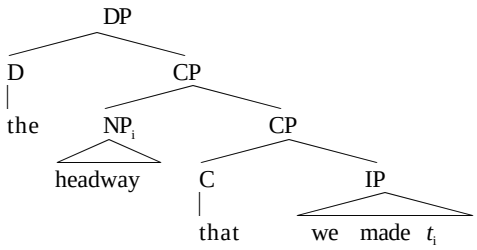
(31) a. We made headway.
b. *(The) headway was satisfactory.
c. The headway that we made was satisfactory.

Schematically, (31c) is derived as follows, where the bare noun *headway* raises to its surface position from the position marked by the trace.

(32) The $[\text{headway}]_i$ [that we made t_i] was satisfactory.

Kayne (1994) proposes a specific syntactic implementation of this analysis in which the external determiner embeds a CP, into the specifier of which an NP raises[17].

(33)



5.1.2 The PISH

Koopman and Sportiche (1991) point out that properties of the raising verb *seem* are common to modals and auxiliaries occurring in INFL like *will*. *Seem* is not a thematic D-structure associate of its surface subject because *seem* does not impose selectional restrictions on its surface subject, but rather allows as subject an NP licensed by the predicate of the small clause it embeds, such as weather *it* (34a), idiom chunks (34b), and an argument s-selected by the embedded predicate (34c).

(34) a. It seems to rain.
b. The cat seems to be out of the bag.
c. John seems to sleep.

The auxiliary *will* has these properties also, as do other elements associated with INFL.

(35) a. It will rain.
b. The cat will be out of the bag.
c. John will sleep.

---

[16] Schachter attributes this data to an undated manuscript by Michael Brame called *A new analysis of the relative clause: evidence for an interpretive theory.*

[17] Kayne does not construe promotion as selection-induced movement, though his proposal allows it and makes such structures structurally identical to 'normal' DPs of the form [D [NP]], where NP is selected by D, as I have described in section 4.

Koopman and Sportiche conclude that INFL is a raising category, and in all the cases in (34) and (35), the surface subject is base generated within the maximal projection of the lexical predicate, not in INFL. The subject then raises to INFL at S-structure. This proposal has become known as the Predicate Internal Subject Hypothesis (PISH).

A derivation conforming to the PISH and the promotion hypothesis is illustrated below. The subject DP *the headway that we made* is base generated internal to the predicate *admired*, the head *headway* being promoted from inside the relative clause. The DP as a whole raises to subject position.

(36) a. ____ was [$_{Pred}$ [$_{DP}$ the ____ [$_{CP}$ that we made headway]] satisfactory]
b. ____ was [$_{Pred}$ [$_{DP}$ the headway$_i$ [$_{CP}$ that we made t_i]] satisfactory]
c. [$_{DP}$ the headway$_i$ [$_{CP}$ that we made t_i]]$_j$ was [$_{Pred}$ t_j satisfactory]

This analysis is in conflict with an observation made by Lebeaux (1991), that relative clauses do *not* originate predicate-internally, as described below.

5.1.3 Relative clauses are inserted into the derivation at S-structure

Lebeaux (1991) points out an argument/adjunct asymmetry that sometimes blocks reconstruction effects.

(37) a. *He$_i$ denied the claim that John$_i$ made.
b. *He$_i$ denied the claim that John$_i$ likes Mary
c. [Which claim that John$_i$ made] did he$_i$ later deny *t*
d. *[Whose claim that John$_i$ likes Mary] did he$_i$ deny *t*

(37a-b) show again that a name cannot be c-commanded by a co-indexed element. (37c-d) show an asymmetry. The coindexation between *John* and the co-indexed pronoun is licit in (37c) but not in (37d). This indicates that at the relevant level (which (27)-(30) indicate is D-structure), *John* is free in (37c) but not in (37d). Lebeaux observes that the complement clause *that John likes Mary* is an argument of *claim* in (37d) but the relative clause *that John made* is an adjunct of *claim* in (37c). Lebeaux concludes that adjuncts are inserted into the derivation at S-structure, in the surface position of the modifyee. Therefore, derivationally, the adjunct was never in the matrix VP, and we do not expect it to take scope there, predicting the grammaticality of (37c). In (37d), however, the phrase *that John likes Mary* is an argument of *claim*, and is therefore base generated in the D-structure position of *claim*. In this position, it is in the scope of the c-commanding pronoun *he*, blocking co-indexation of *John* and the c-commanding pronoun. Relative clauses appear to not be present in VP at D-structure.

5.2 The conflict

It seems that:

(38) I. The head of a relative clause is promoted from inside the relative clause.
II. Subjects originate in VP.
III. Relative clauses are inserted at S-structure.

Taken together, I and II are incompatible with III. If the head of a relative clause originates in the relative clause, and subjects originate in VP, then a relative clause modifying a subject must originate in VP, and it cannot be the case that the relative clause is inserted VP-externally (otherwise the promoted head would fail to be generated VP-internally, as II requires).

II and III taken together are incompatible with I. If the lexical head of a relative clause (the subject) originates in VP, and the relative clause is adjoined later, then it cannot be the case the head of the relative originates inside the relative clause, the latter not being in VP, as II requires.

I and III taken together are incompatible with II. If the head of a relative clause originates in the relative clause, and relative clauses are inserted at S-structure, then it cannot be the case that a subject modified by a relative clause originates in VP, since it originates in the relative clause, by I, which is not in VP, by III.

Below, I claim that the incompatibility of I, II and III arises because of a perceived asymmetry in promotion vs. subject raising. An NP head of a relative is promoted to its determiner, while subjects raise as DPs (not *to* their determiners, but *with* them). However, Sportiche (1996)[18] takes issue with this asymmetry and presents a revised understanding of the PISH which, in concert with the syntactic mechanism for selection/checking proposed in section 4, offers a solution to the conflict described above.

5.3 The syntactic locus of determiners

Sportiche (1996) observes that strong DPs in subject position do not scope under DPs in their c-command domain, i.e., they do not reconstruct under the scope of subordinate determiners. Weak DPs, however, do reconstruct. If the PISH is correct, the failure of low scope readings for strong quantifiers is an anti-reconstruction effect. Strong DPs raise from a predicate internal position, but they do not reconstruct to a predicate internal position, contradicting an otherwise well attested generalization that movement chains display reconstruction effects (again assuming, by the PISH, that the surface position of subjects is derived).

(39) a. Most stars were proven to be close to every planet.
most > prove > every
*prove > every >most

b. A star was proven to be close to every planet
a > prove > every
prove > every > a

Sportiche's analysis of these facts is that strong determiners (but not their nominal restrictions) are base generated outside VP. Not having a predicate internal base position, the *determiners* do not reconstruct into the predicate (the small clause in (39a)). (39a) has the structure in (40), where the bare NP *stars* has raised to its external determiner *most* from a position internal to the small clause (note the similarity to the analysis of relative clauses discussed in section 5.1.1).

(40) Most $[\text{stars}]_i$ were proven $[_{SC}$ to be t_i close to every planet]

Weak DPs, however, are generated predicate internally as a syntactic constituent, and raise as DPs to subject position.

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[18] And Sportiche (1997), Sportiche (1998) and Sportiche (1999).

(41) [a star]$_i$ was proven [$_{SC}$ to be t_i close to every planet]

In (40), the bare NP *stars* raises out of the small clause to its surface determiner *most*. It may reconstruct into its base position. *Every* may undergo QR within its (small) clause, scoping over the trace (and hence the reconstructed NP, if reconstruction obtains). But wide scope of *every* over the reconstructed NP does not suffice to 'quantify' the reconstructed NP *stars* in (40), since *stars* is a bare predicate with no quantificational force. The determiner *most* is never in the c-command domain of *every*, since it is never in the small clause, hence, *every* can never scope over *most*. In (41), though, the indefinite *a star*, together with the determiner *a*, is base generated in the small clause, and may, as usual, reconstruct there at LF, in which case it falls under the derived scope of *every*. The indefinite *a star*, unlike the bare predicate *stars*, has quantificational force[19], and therefore wide scope of *every* over it is not vacuous, but results in the scopal order *prove* > *every* > *a*, attested in (39b) but not (39a). Sportiche's proposal reconciles the facts in (39) with the generalization that movement chains (always) display reconstruction effects.

Sportiche is non-committal about the syntactic implementation of his proposal (p.c.). Below, I adopt Sportiche's proposal and describe a syntactic implementation of it which is selection-driven, where selection is 'downward' as described in section 4. This implementation offers a solution to the conflict described in section.

5.4 An analysis of the conflict

The crux of the conflict between (37) and (34)-(35) is that the bare noun *headway*, in (36), seems to be an argument of both *made* (the predicate in the relative clause) and *satisfactory* (the matrix predicate). The PISH would require the noun internal to both predicates at D-structure.

Schachter himself puzzles about a variant of this problem not exacerbated by Lebeaux's conclusions. He points out that since the head of a relative clause is promoted from inside the relative, we do not expect the matrix verb to impose selectional criteria on it. But it does (Schachter's data):

(42) a. The earl that gave a pearl to a girl is virile.
b. *The girl that an earl gave a pearl to is virile.

(43) a. *The earl that gave a pearl to a girl is buxom.
b. The girl that an earl gave a pearl to is buxom.

Earl and *girl* seem to act not only as subject and object of *give*, respectively, but also as subject of *virile* and *buxom* in (42) and (43) respectively, with expected results. This fact indicates that the relativized head is in a thematic relation to the matrix predicate as well as the relative-clause-internal predicate[20].

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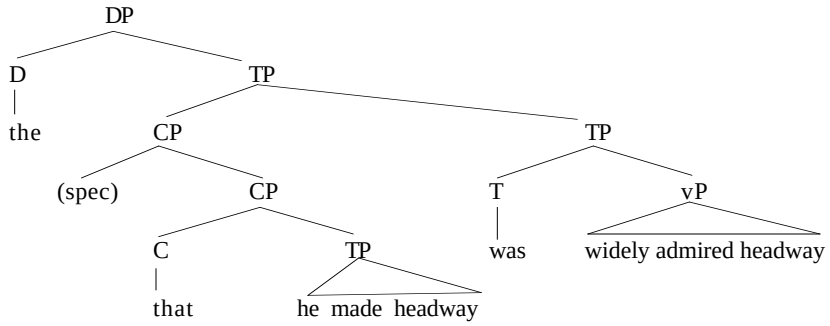
[19] Heim (1982) notwithstanding, there is a difference between existential quantification over bare predicates and over other indefinites. The former but not the latter may have a 'kind-level' or 'mass' reading (compare *washing dishes* with *washing three dishes*) and the latter but not the former display syntactic mobility as quantifiers, and enter into a greater range of scope interactions with other quantifiers, as Carlson (1977) discusses (and as evidenced in (39)).

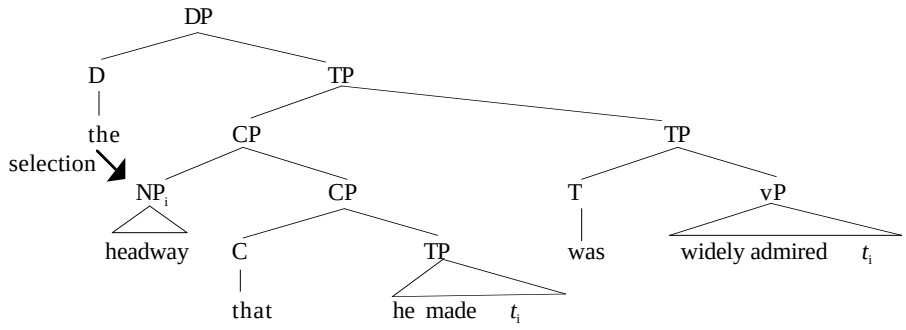
[20] Schachter admits that thematic relations are not sensitive to S-structure word order, but (42) and (43) have the same D-structure, with the head inside the relative. He concludes: "If the promotion analysis of relativization is correct, it is apparently necessary to assign a role--in this case, the role of characterizing selectional normality and

In connection with Sportiche's proposal, the analysis put forth in section 4 in fact makes this claim tenable. Lebeaux's observations indicate that the relative clause is base generated external to the matrix VP. Schachter's observations indicate that the determiner that introduces the complex is a syntactic associate of the relative clause, not the nominal head, and is not base generated VP-internally (as it is ungrammatical there, as (31b) shows), but VP-externally, just as the relative clause is (and just as Sportiche claims for all strong determiners). Let us cash out Schachter's observation as the proposal that the determiner selects the relative clause[21], and both are generated VP-externally. And let us cash out Lebeaux's claim as the proposal that the relative clause (a CP) is base generated in [spec,TP], the surface subject position, prior to promotion of the subject NP to that position. The determiner then, which selects the relative clause in subject position, must symmetrically c-command the subject position [spec,TP]. The syntactic configuration that follows from these premises, shown in (44), gives license to an across-the-board (ATB) movement analysis of head-promotion from both the matrix VP and the relative clause simultaneously. I propose that the bare NP *headway* (in this example) is base generated both in the VP inside the relative clause and also in the matrix VP, as shown in (44), and the two NPs undergo ATB movement, merging in the complement position of the determiner *the*, as shown in (45). The landing site is the specifier of the relative clause (CP).

(44) Base structure:



(45) Derived structure:



anomaly--to a level somewhere between deep structure and surface structure" (pg. 40). My analysis makes this move unnecessary.

[21] The evidence shows that they are syntactic associates, and so base generated together. My proposal that the determiner selects the relative clause is informed by the conclusion in section 4 that selection ('D-structure syntactic association') is a relation between a head and a phrase, where the former selects the latter.

The promoted NP is selected by the determiner in [spec,CP] (a determiner always selects an NP). This CP is in [spec,TP], the canonical subject position. So, in accordance with Lebeaux's observations, the relative clause associates with the subject in its S-structure position. Promotion of NP to [spec,CP] represents movement to a c-commanding position for both base sites. Since neither CP nor TP dominate the NP *headway* in the derived structure (only one segment of each dominates the NP, not both as required for dominance), the NP c-commands both CP and TP (see section 4), and therefore its traces inside those categories. This analysis accommodates Lebeaux's facts while preserving the PISH.

6. The distribution of functional structure and the checking-selection distinction

In (44), since TP (the matrix clause) and CP (the relative clause) are also complements of D, they are also selected by it, assuming the Minimalist hypothesis that selection drives structure building (there is no phrase structure component in a Minimalist grammar). The relative clause is a dependent of the determiner, as discussed above. But why should TP be selected by D? Generalized Quantifier Theory provides an answer, and sheds light on the issue discussed in sections 3.2 and 3.3 regarding why checking induces movement.

Determiners denote second order relations, relations between predicates (Barwise and Cooper (1981), Keenan and Stavi (1986)). Example determiner denotations from Keenan (1996) include the following, where *A* and *B* are metavariables for predicates, where *A* is the subject property (an NP) and *B* is the matrix predicate (the tensed verb phrase, or TP).

(46) a. $\forall A,B$ $[\![every(A,B)]\!] = 1$ iff $A \subseteq B$
b. $\forall A,B$ $[\![most(A,B)]\!] = 1$ iff $|A \cap B| > |A - B|$
c. $\forall A,B$ $[\![three(A,B)]\!] = 1$ iff $|A \cap B| \geq 3$

(47) Example: $[\![every(Student)(Passed\ the\ course)]\!]$
$= 1$ iff $[\![Student]\!] \subseteq [\![Passed\ the\ course]\!]$
Which reads: "the sentence 'every student passed the course' is true if and only if the students are a subset of the entities who passed the course"

So determiners can be construed as functions from pairs of predicates to truth values, making a saturated determiner a truth-value denoting expression (I ignore intensionality here). Assuming that a determiner, like other predicates, selects its arguments, and that selection is always local and 'downward' as discussed in section 4, we expect to find TP in the c-command domain of the determiner. Specifically, TP is predicted to be the complement of the determiner (derivationally its first argument[22]), and the NP that the determiner quantifies (so to speak) is the specifier of TP, the 'secondary' complement of D (derivationally its second argument). The proposition as a whole is a (truth value denoting) DP, as expected given the definitions in (46).

(48) $[_{DP}$ every $[_{TP}$ $[_{NP}$ student$]$ $[_{TP}$ passed the course $]]]$

This proposal 'inserts' DP between TP and the complementizer, contra the picture in (25), where C selects TP directly. Recall though that C was analyzed as a case assigner there, and DPs bear case. The fact that case assignment is a relation between a case assigning head and a DP makes DP a syntactic dependent of the case assigning head, in this case C. Again, assuming that syntactic relations are always local and downward, DP is expected to be a complement of C.

[22] It is in general the case that predicates combine with their logical object, or internal argument, first.

There is also a semantic logic to this new situation which sheds light on the connection between checking and movement. Relations between entities, like *admire*, are first order (their arguments are semantically atomic elements[23]). Relations between predicates, like *every*, *most* or *three*, are second order (their arguments are first order elements). Keenan (1987) proposes that case markers denote relations between determiner denotations, mapping basic determiner denotations to 'case extensions' of those determiner denotations, in order to resolve a famous problem for interpreting quantifiers in object position, an issue which I will not address here[24]. His proposal makes case markers third order relations, relations between second order relations[25].

The derivation of a syntactic structure appears to involve the instantiation of higher and higher order relations, starting with the VP (first order), moving up to the level at which nouns associate with determiners (second order; 'low' inflectional syntax) moving up to the level of case assignment (third order; 'high' inflectional syntax). Complementizers typically morphologically express mood, and, as mentioned in section 4, the interrogative/focus phrase WhP selects an interrogative category[26], inducing movement of the same. Though it is not possible to determine the order of these categories independently of a specific semantic analysis of their denotations, which I will not undertake here, one has the impression that these elements denote properties of or relations between more complex semantic types than those that case markers, determiners, and verbs relate. The picture that emerges is the one below.

(49) $[_{++\circ}$ force $[_{+\circ}$ mood $[_{3\circ}$ case $[_{2\circ}$ quantification $[_{1\circ}$ predication]]]]][27]

This picture underlies the epiphenomenal nature of the difference between checking and selection discussed in section 3. Selection in theta configurations does not involve movement because these configurations are first order, and first order relations are the first to be instantiated in a structure-building procedure that builds trees from lowest-order to highest-order. Checking does typically involve movement because what are typically termed 'checking' relations are semantically higher than first order, e.g. case assignment to a determiner, a second order element.

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[23] The order of a functor category is basically 1 plus the order of the domain subtype, beginning with 0 for entities. See Moortgat (1988) for a formal definition, one which makes reference to several other concepts defined there, for which reason I do not quote its entirety here.

[24] But see Heim and Kratzer (1998), chapter 7 for a nice overview of the problem.

[25] Note also that case is typically morphologically expressed on the determiner, as in German (*der Mond / den Mond / dem Mond = the-NOM moon / the-ACC moon / the-DAT moon*), representing morphological evidence that case markers are properties of determiners. The conclusion that it is determiners that bear case fortuitously means that no case mismatch will result in configurations such as (45) in case the two ATB-promoted NPs bear different grammatical functions.

[26] I.e., checks a wh-feature.

[27] This schema does not situate tense explicitly, nor the partitive case position discussed in section 4. I have proposed that the determiner and nominative case are situated above T. Belletti's analysis implicates a case position below T also. Further, this case position is a licit position for only a subset of the determiners (the weak ones), indicating that below T, there is a dedicated syntactic position for 'weak' case and weak determiners. Suppose tense denotes a temporal relation between events, which are semantic atoms, i.e., entity-denoting expressions (Davidson (1967)). Tense is then a first order predicate, albeit ranging over a distinct class of entities than the lexical verbs. The significance of this view is that it suggests that the schema in (49) reiterates inside itself partially, as follows (NomP='nominative case phrase', PartP='partitive case phrase', s-='strong', w-='weak', quant.='quantification', pred.='predication'). This schema suggests that reiteration of structure is itself a building block of syntax.

[	WhP	[	CP	[	NomP	[	DP	[	TP	[	PartP	[	DP	[vP]]]]]]]
$[_{++\circ}$	force	$[_{+\circ}$	mood	$[_{3\circ}$	s-case	$[_{2\circ}$	s-quant.	$[_{1\circ}$	pred.	$[_{3\circ}$	w-case	$[_{2\circ}$	w-quant.	$[_{1\circ}$ pred.]]]]]]]

Above, I suggested that the schema in (49) is the semantic logic behind the fact that the instantiation of theta-relations does not involve movement but checking does. But the schema in (49) has a combinatorial logic of its own. Assuming the proposal of Epstein et al. (1998), Epstein (1999) and Epstein and Seely (2002) that syntactic relations are instantiated *as* a structure is built (i.e. derivationally) and not *after* a structure is built (i.e. representationally), then a natural explanation presents itself for why structure building proceeds from lower-order to higher-order. Higher order properties take lower-order properties as arguments. If we build the tree from the bottom up, we are building the arguments first of the predicates that will be added to the structure later. We must therefore start with the lowest-order substructure (VP) and build higher-order structures from it.

7. Conclusion

This paper proposes that selection and checking are both instances of a head satisfying a lexical requirement by requiring the locality of another category ('licensing' that category in the relevant position), and it proposes that this unitary relation, called 'selection', is always instantiated under mutual c-command between the selecting head and the selected phrase, where mutual c-command obtains not only between a head and its sister but also between a head and the specifier(s) of its sister. Occam's Razor supports this reduction, effectively eliminating the spec-head relation from the repertoire of syntactic relations. No evidence supports the putative distinction between selection and checking, since no differences between selection and checking can be isolated that are not attributable to independent factors.

Beyond its reductive character, this analysis has some application in resolving an apparent conflict between Lebeaux's proposal that relative clauses are inserted at S-structure, Schachter and others' promotion analysis of relative clauses, and Koopman and Sportiche's proposal that all arguments of a verb are generated within its maximal projection. The analysis proposed here reconciles these conflicting proposals within an ATB movement analysis of promotion from inside the relative clause and the matrix predicate simultaneously, where ATB promotion is a particular instance of the general NP-promotion-to-D reanalysis of the PISH proposed by Sportiche (1996).

The conclusions reached here on the form of selection (a head may select multiple complements) also means that the logical form of 'Sportichean' configurations like (45) can be read off their syntax: the arguments of D are its (ordered) complements. This in turn provides a semantic impetus for NP-to-D raising. NP raises to D because it is selected in the complement position of D. It is selected there because it is an argument of D, D denoting a dyadic relation between predicates. Therefore, the very considerations that motivate the analysis in section 5.4 also bring some semantic coherence to it, suggesting that compositionality is more routinely involved in structure building than generally thought.

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