demonstrates that they can be argued to display a number of functional categories which partially parallel those of sentences. In English, for example, noun phrases can be analysed as D(eterminer)Ps when they contain a Det element acting as the head of the whole constituent or as AGRPs when they contain an AGR element that normally surfaces as genitive subject. Taking into account the role played by these elements, many idiosyncratic behaviours of substan-tives (mainly, of the head noun and its subject) receive a principled explanation.

The final part of this last chapter is devoted to motivate the idea that Comp elements are nominalisers in the sense that their projection on the top of sentential clauses allows for the latter to function as arguments.

As has been noted in the previous paragraphs, Ouhalla's work draws on mainstream research in current syntactic studies and makes a very important contribution to the development of some of the ideas put forward in the literature. The theory of parameters and language variation is one of the central issues at stake in the present stage of linguistic theory and as such Ouhalla's book should become a point of reference in the debate.

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MARGARET SPEAS, *Phrase Structure in Natural Language*. Dordrecht: Kluwer, 1990. 306 pages.

Transformational grammar (Chomsky 1965), the *Government and Binding* (GB) model in particular (Chomsky 1981), is a theory of Universal Grammar (UG), the set of principles and parameters that are claimed to be an innate part of the human language faculty. Central to GB theory is phrase structure (PS), the hierarchical representation of the structure of the sentence; it is to elements in this structure that the transformation move alpha is claimed to apply deriving from one PS representation a new PS representation constrained by universal structural and licensing requirements. A central question, intuitively stated, is how does PS *start*, or where does it come from? A second question regards the universality of the hierarchical representations which have been successful in describing configurational (Con) languages like English: do nonconfigurational (NCon) languages like e.g. Warlpiri, which have been argued not to have a hierarchical PS (Hale 1983), differ in some fundamental way in their syntax? NCon languages pose a serious challenge to GB theory since in general the evidence in favor of a hierarchical PS is weak and further, the evidence against such structure is strong. It is this challenge that Margaret Speas' (1990) *Phrase Structure in Natural Language* addresses. The claim Speas (S) defends is that PS is projected from lexical items

themselves in a highly restricted manner and that the variation found is associated to variation in these lexical items from language to language; there is no fundamental difference between Con and NCon languages.

In what follows I briefly summarize each chapter of S's book, highlighting its conclusions and particularly interesting discussion; also, as appropriate I discuss its weak points. Overall though, we will see that her conclusions are quite well-justified.

Ch. 1 introduces some of the basic notions which become important later in the book; I will simply introduce such notions as necessary and say nothing further about Ch. 1. In Ch. 2, *S* motivates a view of PS which is different in a fundamental way from preceding versions: no "rules" or schemata are required. PS is *projected* freely from lexical items themselves as long as every element can be licensed in a certain way. Thus, the structure is licensed only if the elements in the structure are licensed. Licensing involves three particular "theta" (generalized thematic[1]) relations which are realized under sisterhood: (1) discharge, one lexical item "needs" another as in the case of a verb needing an object; (2) merger, two items with the same type of requirement "merge" into one category which retains this requirement; and (3) binding, two items with the same requirement satisfy each other (Higginbotham 1985).

An interesting result of this restricted set of licensing requirements is that D-structure (DS), which is the level of PS associated with the lexical items themselves, can contain only elements which are thematically related; an element which is not associated with the PS tree by any of the above three mechanisms is not licensed at DS. This yields a quite restricted view of DS: everything must be licensed thematically. There will be no "extra" elements allowed at that level. *S* argues that this is correct by pointing out that certain types of adjuncts (typically thematically unrelated elements) behave syntactically as if they are not present at DS. Specifically she argues, following Lebeaux (1988), that such phrases are adjoined to the PS later in the derivation by a "generalized" transformation (an operation which combines PSs).

S's view of PS does not rely on the notion of maximal projection (XP) or minimal projection (X^0); and she specifically argues against the notion of a defined "intermediate" projection (X') by showing that no rule of grammar ever refers to such a level. XP and X^0 are simply the two "ends" of the PS projection, what she refers to as a Projection Chain, analogously to chains of other syntactic elements which have a "head" and a "foot" (in this case XP and X^0, respectively). By showing that PS can be built based on independently motivated lexical requirements, S removes PS "rules" or schemata from UG, eliminating redundancy and greatly reducing the power of the PS component.

Having spent Ch. 2 arguing for a universal theory of the mapping from lexical items to DS, S faces the formidable challenge posed by the so-called NCon languages, which appear to differ fundamentally in their PS from Con languages like English. Her main claim in Ch. 3 and Ch. 4 is that there is no variation in the principles of projection defended in Ch. 2, which include those mentioned above as well as several other GB principles: UTAH, that thematic roles (like agent and theme) are hierarchically arranged and project into the syntax in a specific universal order; the Theta Criterion, which roughly states that every theta position must be dis- charged once; and the Projection Principle (PP), which in S's simplification just states that UTAH and the Theta Criterion must hold at every level of representation. The result of the PP is that if move alpha applies to an element, some "trace" of the element must be left so that its original thematic relations can

1. Theta/thematic relations are the inherent relations held between a lexical item and the elements associated with it; e.g. the relation between a predicate and its arguments.

be recovered; this trace is then subject to other syntactic requirements.

The specific claim S argues against is that of Hale's (1983) Dual Representation Hypothesis (DRH). The DRH states that universally, every language has two separate syntactic "structures": a lexical structure (LS), where hierarchical lexical and thematic information is represented, and a phrase structure (PS), a "flat" (not hierarchical) representation of the items in a sentence. LS and PS are related by "rules of construal". The DRH further states that in NCon languages the Projection Principle holds only of LS, not PS. Thus, move alpha can apply to PS (vacuously) with-out having to leave traces.

First, S shows that the supposed diagnostics of nonconfigurationality do not, in fact, pick out two lists of fundamentally different languages. Many languages show characteristics of both types.

Second, she shows that the DRH allows a great amount of redundancy since in NCon languages the mapping from DS to PS, via move alpha, is redundant as it is vacuous, and in Con languages the mapping between LS and PS, via rules of construal, is also redundant. If the redundancy is removed, however, we are left with one type of language with LS and PS (NCon) and a second type with DS and PS (Con); S argues that this model must be rejected because such a fundamental difference between the two types of languages cannot account for the fact (point 1 above) that languages do not divide cleanly into one type or the other.

Third, she examines each of the supposed NCon languages in detail and shows three things: (1) each language does in fact display certain asymmetries which could support a hierarchical PS. Although it should be noted that many of these asymmetries involve binding (the theory of the distribution of reflexives, pronouns and "names"); and if binding is not syntactic, as has been argued by a number of researchers (e.g. Williams 1987), these arguments are weakened but her main point remains valid; (2) the arguments in favor of a "flat" structure can be reinterpreted in her framework to be consistent with a hierarchical PS; and (3) in Ch. 4, *S* shows in a detailed study that even Navajo, which appears to show independent evidence for the DRH, falls into the framework she has developed throughout the book. Especially interesting in all of these cases is the fact that the parameters required to account for the variation observed are all consistent with the "Lexical Parameter Hypothesis", first articulated in Borer (1984), that language variation is to be associated with variation in particular lexical items. Thus, the learning of parameters is reduced to the learning of lexical items; the principles of projection and other universal (and presumably, innate) syntactic principles are not subject to parametrization.

The conclusions that this work clearly supports are the following: (1) PS is projected from lexical items and is constrained by universal principles of projection, not PS schemata; (2) variation among languages can be traced back to variation among particular lexical items; and (3) universal principles of grammar, in particular principles of projection, are not subject to parametrization. *S*'s contribution, then, nicely advances us towards the goal of understanding Universal Grammar, by showing that fundamental principles of grammar need not be parametrized to account for what appear on the surface to be fundamental differences among the world's languages.

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