13 The Natures of Nonconfigurationality

MARK C. BAKER

0 Introduction

English and French are *configurational* languages, in the sense that the grammatical functions of subject and object consistently appear in particular phrase structure configurations. Thus, virtually every English clause must have some kind of syntactically expressed subject, and clauses with transitive verbs must have syntactically expressed objects as well. The nearly obligatory subject comes before the verb and any auxiliaries, whereas the direct object comes immediately after the verb:

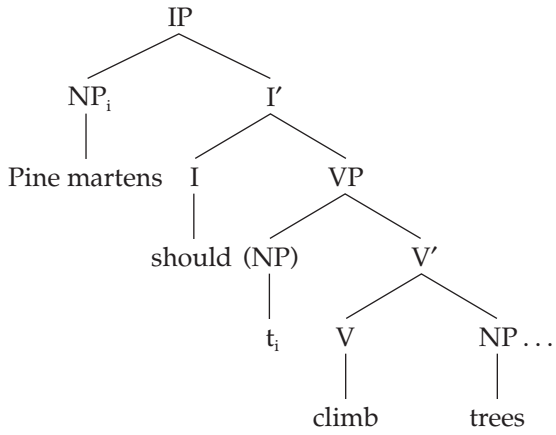
(1) Pine martens (should) climb trees at night near human habitations.

Furthermore, the object and the verb make up a phrasal unit to the exclusion of the subject, as shown by traditional phrase structure tests like VP-deletion, VP-pronominalization, and VP-fronting:

(2) a. Susan [$_{VP}$ hit the table] and Bill did [$_{VP}$ (so)] too.
Susan said she would hit the table, and [$_{VP}$ hit the table] I guess she did –.
b. *[$_{XP}$ John hit] the table and [$_{XP}$ (so)] did the chair too.
*John said he would hit the table, and [$_{XP}$ John hit] I guess – did it.

Thus, objects are the only NPs that are immediately contained in the surface verb phrase in English, whereas subjects are the only NPs that appear outside the verb phrase in simple English sentences:[1]

(3)



This strict correspondence between grammatical function and phrase structure position opens up the possibility of taking a reductive approach to grammatical functions, eliminating terms like "subject" and "object" from grammatical theory in favor of terms like "NP outside the VP" and "NP that is immediately contained in VP." Historically, this is the approach that has been taken in most narrowly Chomskyan work since the late 1960s (see McCloskey 1997 for a recent overview, focussing on subject positions). Syntactic conditions can then be written in such a way that they are sensitive to these unique phrase structure relationships, in order to capture the various other distinctive properties of subjects and objects. For example, in most Indo-European languages the verb agrees (overtly) with its subject and not its object (unless the subject bears some non-standard case, like dative or ergative). This can be related to the fact that the subject alone has left (overtly) the verb phrase – assuming that being outside the verb phrase and hence inside the local domain of a functional head like I(nfl) is a condition on agreement, as in much current "Minimalist" work (Chomsky 1995b). Similarly, the subject "has prominence" over the object in a variety of ways involving anaphora, coreference, and quantification. Thus, pronouns and anaphors contained in the object can be referentially dependent on the subject, but not vice versa, as sketched in (4):

(4) a. John$_i$ washed himself$_i$.
John$_i$ washed pictures of himself$_i$.
Every man$_i$ washed his$_i$ car.
*He$_i$ washed John's$_i$ car. (out by Condition C)

b. *Heself$_i$ washed John$_i$. (out by Conditions A and C)
*Friends of himself$_i$ washed John$_i$. (out by Condition A)
*His$_i$ friends washed every man$_i$. (out by weak crossover)
John's$_i$ friends washed him$_i$.

These patterns are captured by making c-command a condition on referential dependencies, so that X can be referentially dependent on Y if Y c-commands

X (Condition A, weak crossover), but not if X c-commands Y (Condition C) (Reinhart 1983). C-command is defined in (5), with the effect that the subject of a clause c-commands the object of that clause, but not vice versa:

(5) X c-commands Y iff the first phrase that properly contains X also contains Y.
Three of the most important principles governing referential dependency can then be stated as follows:

(6) a. If Y is an anaphor, it can be coreferential with X only if X c-commands Y.
b. If Y is a pronoun and X is a quantified expression or its trace, Y can be a variable bound by X only if X c-commands Y (weak crossover).
c. If Y is a lexical NP, it can be coreferential with X only if X does not c-command Y (Condition C).

When this approach is followed to its logical conclusion, phrase structure relationships become absolutely crucial to syntax, whereas traditional grammatical function labels like subject and object survive only as convenient labels for particular phrase structure configurations.

However, it has become increasingly clear since the late 1970s or earlier that not all languages are comfortably configurational in this English sense. In many (perhaps even most) languages, subjects and objects cannot be identified by word order and simple constituency tests in any straightforward way. Classic illustration of this comes from the Australian language Warlpiri – a language which is important both because historically it was used by Kenneth Hale to call these problems to the attention of generative linguists at large, and because by now it is one of the best-studied languages of this type, thanks to the long-term attention of Hale, and his students and colleagues (including David Nash, Jane Simpson, Mary Laughren, and others). Hale (1983) shows that in Warlpiri any word order of the subject, verb, and object is possible, as long as the auxiliary that bears tense and agreement is in the second position in the clause:

(7) a. Kurdu-ngku ka-ju nya-nyi ngaju. (Simpson 1983: 140)
child-Erg Pres-1SgO see-NonPast I(Abs)
"The child sees me."
b. Kurdu-ngku ka-ju ngaju nya-nyi.
c. Nya-nyi ka-ju kurdu-ngku ngaju.
d. Ngaju ka-ju nya-nyi kurdu-ngku, etc.

Sometimes more than one word can appear before the auxiliary, as long as those words form a noun phrase or other constituent. However, the verb and its object do not form a constituent in this sense; this is true regardless of whether the object or the verb comes first:

(8) *Ngaju nya-nyi ka-ju kurdu-ngku. (Simpson 1983: 141)
I(Abs) see-NonPast Pres-1SgO child-Erg
"The child sees me."

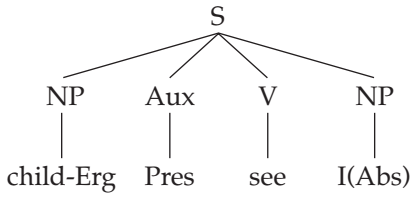
(Neither could the verb plus the subject be topicalized in this way, as one might imagine if they formed a constituent.) Hale (1983: 7) also shows that either the subject or the object or both can be omitted, in which case the "missing" elements are interpreted as pronominals:

(9) a. Ngarrka-ngku ka panti-rni.
man-Erg Aux spear-NonPast
"The man is spearing it."
b. Wawirri ka panti-rni.
kangaroo Aux spear-NonPast
"He/she is spearing the kangaroo."
c. Panti-rni ka.
spear-NonPast Aux
"He/she is spearing it."

However, there is no kind of pronominalization that uniquely affects the verb and its object/theme as a unit in Warlpiri. In these and various other respects, the subject and the object appear to behave identically in this language.

Given facts like these, it is quite natural to suggest that the phrase structure of a Warlpiri clause is symmetrical, as in the following representation of (7a), based on Bresnan (1982a) and Simpson (1991: 99):[2]

(10)



In this structure, I leave open the relationship between S and V: if V is the head of S, then both the subject and object are inside the VP; if it is not, then both are outside (both views have been held). Either way, subjects and objects are not distinguished by phrase structure configurations. Such a language is called *nonconfigurational*.

More generally, the term "nonconfigurationality" can be used in either a relatively narrow sense, or in a broader sense. In the narrow sense, a nonconfigurational language is one that has the characteristic cluster of features that Hale (1983) identifies for Warlpiri: free word order, possible omission of all grammatical functions, and the possibility of having discontinuous NP constituents (see below for discussion). In a broader sense, languages with a reasonable number of similar properties, or indeed any language in which it seems difficult

and/or inappropriate to use phrase structure to distinguish grammatical functions, could be called nonconfigurational.[3] The class of languages that have been called nonconfigurational includes most Australian languages (see, for example, Dyirbal (Dixon 1972), Nunggubuyu (Heath 1986), Jiwarli (Austin in press), Jingulu (Pensalfini 1997)); various American Indian languages, including Salish (Jelinek and Demers 1994) and Uto-Aztecan (Jelinek 1984), Muskogean (Jelinek 1988), Iroquoian (Baker 1996), Algonquian (Reinholtz and Russell 1994), and Klamath/Sahaptin/Nez Perce (Barker 1964; Rude personal communication); certain South American languages, notably Quechua (Lefebvre and Muysken 1988), various New Guinean languages (see, e.g., Yimas (Foley 1991)), South Asian languages such as Malayalam (Mohanan 1982), Hungarian (É. Kiss 1987), Japanese (Farmer 1984), and perhaps even German (see Webelhuth 1992 for a review of the controversy on this). Of course, this is far from a homogeneous group of languages in other respects – an issue that I return to extensively below.

1 Syntactic Similarities Between English and Nonconfigurational Languages

Interestingly, even in highly nonconfigurational languages like Warlpiri some familiar English-like asymmetries between the subject and the object can usually be found. Typically these are seen not in superficial phrase structure phenomena, but in "deeper" patterns of reflexivization, anaphora, and control. For example, Hale (1983) shows that the patient/object in Warlpiri can be an anaphor referentially dependent on the agent/subject, but the subject cannot be an anaphor referentially dependent on the object. This is shown in (11a), where the reflexive element shows up as a clitic on the auxiliary in the slot occupied by object clitics, while the subject is an overt NP in ergative Case. (11b) shows that the reflexive element cannot be a subject clitic next to the auxiliary, while the NP it is dependent on is in the unmarked absolutive Case characteristic of transitive objects:

(11) a. Kurdu-jarra-rlu ka-pala-nyanu paka-rni.
child-D-Erg Pres-3DS-ReflO strike-NonPast
"The two children are striking themselves/each other."

b. *Ngarrka ka-nyanu-(Ø) nya-nyi. (Hale 1983: 43)
man-Abs Aux-Refl(-3SgO) see-NonPast
"*Heself$_i$ sees the man$_i$." (OK as: "He sees himself as a man.")

This is exactly parallel to the English reflexivization facts in (4). Hale (1983: 20–1) also discusses control structures, in which the agent/subject (and only the subject) of a non-finite clause must be phonologically null and is interpreted as the same as a designated argument of the matrix clause (see also Simpson and Bresnan 1983):

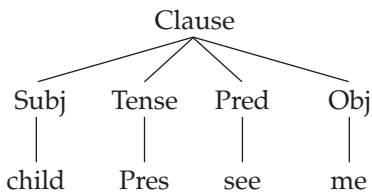
(12) Ngarrka-ngku ka purlapa yunpa-rni [PRO karli
man-Erg Pres corroboree sing-NonPast boomerang
jarnti-rninja-karra-rlu].
trim-Inf-Comp-Erg
"The man is singing a corroboree song while trimming the boomerang."

Again, these properties are like control of infinitival and participial clauses in English. Therefore, in Warlpiri and many other nonconfigurational languages we find a partial dissociation between direct phrase structure evidence and the kinds of syntactic principle that are held to be defined over phrase structure.

There are in principle two ways to react to this kind of conflict, both of which involve positing additional levels of representation. The standard principles-and-parameters style approach is to say that Warlpiri does have a syntactic representation (such as S-structure, or LF) in which the subject asymmetrically c-commands the object, just as in English. The principles regulating things like anaphora then apply at that level in the usual way. However, for some extrinsic reason this structure is disrupted, so that the verb and the object do not form a constituent on the surface, at least at the level of PF.

The alternative is to say that these facts show that grammatical dependencies such as anaphora and control are not sensitive to phrase structure after all, but rather to grammatical functions or thematic roles that are characterized apart from phrase structure. On this view, the c-command based system in (5) and (6) seems to work as well as it does in English only because subject (and agent) happen to be correlated with a particular structural position in English. However, this need not be so across languages. This is the standard view of most generative theories other than principles-and-parameters (P&P), including Relational Grammar (RG), Lexical Functional Grammar (LFG), and Head-Driven Phrase Structure Grammar (HPSG). For example, Bresnan (1982a) and Simpson (1991) claim that a Warlpiri clause like (7a) has, in addition to its phrase structure representation, a "functional representation" (f-structure) which can be expressed like this:

(13)



Given this, one can stipulate that only the subject of a non-finite clause can be controlled (see (12)). Similarly, one can state that the Warlpiri reflexive/reciprocal anaphor requires an antecedent that is a subject within the same local clause (Simpson 1983: 187–9). This accounts for the contrast in (11).

Pollard and Sag (1994) develop a similar idea in their "nonconfigurational binding theory," although they generalize it somewhat. They claim that an anaphor must be coindexed with an antecedent that locally o(bliqueness)-commands it, where the local o-command relationship is defined as follows:

(14) Let Y and Z be [distinct phrases in the same clause], Y referential. Then Y locally o-commands Z just in case Y is less oblique than Z. (Pollard and Sag 1994: 253)

They define relative obliqueness in terms of a standard hierarchy of grammatical functions: the subject is less oblique than the primary object, which is in turn less oblique than the secondary object, PPs and verbal and/or predicative complements (Pollard and Sag 1994: 24). A similar idea approach to binding and anaphora has been developed in LFG (Bresnan personal communication).[4]

Which of these directions is the correct one has generated substantial debate in the literature, making the topic of nonconfigurational languages much more than a curiosity relevant only to specialists of (say) Australian languages. On the contrary, the question of how to fit nonconfigurational languages into linguistic theory is relevant to some of the deepest issues of linguistics, including the questions of how much variation Universal Grammar allows and what are its proper primitives (phrase structure, grammatical functions, or something else). Bresnan in particular has identified it as a major issue bearing on fundamental design features of linguistic frameworks (Bresnan 1982a, Austin and Bresnan 1996).

Before discussing these questions substantively, it is worth realizing that the difference between these two approaches can in practice be less significant that it seems at first. Both theories involve attributing two distinct representations to Warlpiri, one which is more universal (and hence more English-like) and one which represents more accurately the surface facts of the language. In this respect, the PF representation of P&P is comparable to c-structures such as (10) in LFG, while the S-structure/LF representation of P&P is comparable to f-structures such as (13) in LFG. It is true that the representation scheme of S-structure/LF is formally a phrase marker in P&P, whereas this is not true of f-structure in LFG. However, this phrase marker is not intended to represent linear order or surface constituency in the sense of phonological phrasing; for many P&P practitioners these are left undefined until PF. Indeed, it is in effect often little more than a functional structure that uses the representation schema Subject = [NP, IP] and Object = [NP, VP].[5] Of course, the P&P approach needs to present a satisfying theory of how this abstract phrase marker can be related to word order and phonological phrasing at PF. However, the LFG approach has a parallel need to explain substantively how f-structures may be related to c-structures, and what restrictions hold on how this can happen. In practice, this is not a well-developed aspect of either kind of theory; therefore, it is not currently a useful point of comparison.

2 Three Types of Nonconfigurationality

Before attempting to engage these basic issues of representation, however, it is important to explore the limits of the view that seems to emerge out of the last section, and is taken for granted in some of the literature: that nonconfigurational languages are approximately the same as configurational languages at an abstract, functional level of representation, and differ only at the most concrete level of representation (c-structure or PF). Crudely speaking, the assumption has been that the radical differences appear only in the domain of word order and phrasal groupings, not in other areas. However, this idealization turns out not to be entirely true. Thus, whereas the syntax of reflexives and reciprocals and some features of control seem relatively consistent over all these languages (but see below), other "deep" properties seem to be more variable – at least as far as one can tell from the relatively few languages that have been studied carefully from this perspective.

Consider, for example, Mohawk as described and analyzed by Baker (1991, 1996). Like Warlpiri, Mohawk allows the elements of a simple sentence to appear in any imaginable word order, allows NPs to be omitted freely, and shows no evidence of a verb + object phrasal constituent on the surface. Indeed, Mohawk goes farther still: subjects and objects do not behave differently even for certain anaphora related phenomena.

Thus, a name contained inside the understood direct object can be coreferential with a pronominal subject, just as well as the other way around:

(15) a. Wa'-t-há-ya'k-e' [$_{NP}$ ne thíkʌ Sak raó-[a]'share'].
Fact-Dup-1SgS-break-Punc PRT that Sak MSgP-knife
"He$_i$ broke that knife of Sak's$_i$." (coreference OK)

b. Ro-ya'takéhnh-ʌ [$_{NP}$ thíkʌ ne Sak raó-[a]'share'].
MSgO-help-Stat that PRT Sak MSgP-knife
"That knife of Sak's$_i$ is helping him$_i$." (coreference OK)

This is rather a puzzle if nonconfigurationality is simply a PF/c-structure phenomenon. In that case, the functional representation of (15a) and (15b) should be essentially the same as the English counterparts, and Condition C should rule out the coreferential interpretation of (15a) (compare the last sentence in (4a)). The easy way out would be to say that Condition C does not hold in Mohawk, but that is a rather undesirable option for at least two reasons. First, Mohawk does have what look like real Condition C effects in other syntactic situations, as shown by Baker (1991, 1996: sec. 2.1.1). Second, Condition C is not the only principle that seems to apply in a peculiar way in Mohawk: weak crossover, for example, shows a similar effect. Thus, a questioned object cannot bind a pronominal inside the understood subject; neither can a questioned subject bind a variable inside the understood object:[6]

(16) a. Úhka wa'-akó-[a]ti-' ne akaúha ako-núhkwa?
who Fact-FSgO-lose-Punc PRT her FSgP-medicine
*"Who$_i$ lost her$_i$ medicine?" (pronoun deictic only)
b. Úhka yako-ya'takéhnha-s ne akaúha ako-núhkwa?
who NSgS/FSgO-help-Hab PRT her FSgP-medicine
*"Who$_i$ did her$_i$ medicine help?" (pronoun deictic only)

Crucially, there is an important point of consistency underlying the two "failures" here: in both cases, it seems that there is no c-command relationship between the subject and the object. This suggests that Mohawk structures are different from English ones at the functional level as well as the phrasal one.

Interestingly, facts from Warlpiri make the same point in the opposite way. Farmer et al. (1986: 33) show that English-like subject/object asymmetries are not found with respect to weak crossover in Warlpiri either. However, the observed grammaticality patterns are the opposite of those in Mohawk: the trace of an object is able to bind a pronoun inside the subject:

(17) Ngana ka nyanungu-nyangu maliki-rli wajili-pi-nyi.
who Pres he-Poss dog-Erg chase-NonPast
"Who$_i$ is his$_i$ dog chasing?" (pronoun can be bound variable)

(The authors do not give an example of an interrogative subject binding a pronoun inside the understood object, but this should be possible as well). Similarly, Simpson (1991: 179–80) reports findings of Mary Laughren that Warlpiri does not have subject/object asymmetries with respect to Condition C either; pronoun arguments of the verb are never coreferential with names embedded in their coarguments:

(18) a. Jakamarra-kurlangu maliki ka nyanungu-rlu wajili-pi-nyi.
Jakamarra-Poss dog-Abs Pres he-Erg chase-NonPast
*"He$_i$ chases Jakamarra's$_i$ (own) dog." (coreference is impossible)
b. Jakamarra-kurlangu maliki-rli ka nyanungu wajili-pi-nyi.
Jakamarra-Poss dog-Erg Pres he-Abs chase-NonPast
*"Jakamarra's$_i$ (own) dog chases him$_i$." (coreference is impossible)

Again, this grammaticality pattern is the opposite of Mohawk. Thus, in Mohawk it seems that neither the subject nor the object c-commands the other, whereas in Warlpiri it seems that the subject c-commands the object and vice versa. Simpson (1991) concludes that these anaphora conditions should be defined over a flat c-structure like (10) in Warlpiri, but this does not fit comfortably with the early LFG assumption that f-structure is the sole input to the semantic component (Kaplan and Bresnan 1982: 175). Thus, Warlpiri reinforces the impression that the differences between configurational and nonconfigurational languages exist at the "functional" level as well.

A third non-English-like pattern of facts characterizes languages like Japanese and Hindi. In these languages, anaphoric conditions like Condition C and weak crossover seem to be crucially interrelated with word order. If the subject precedes the object, then the subject acts as though it c-commands the object, making coreference between lexical noun phrases impossible and bound variable interpretations possible (Hoji 1985):[7]

(19) a. *Soitu-ga Taroo-no hon-o mituke-ta
guy-Nom Taro-Gen book-Acc found-Past
"The guy$_i$ found Taro's$_i$ book."
b. Dare$_i$-ga [*pro*$_i$ e$_k$ hitome mi-ta] hito$_k$-o
Who-Nom first-glance look-at-Past person-Acc
sukini natta-no?
fell-in-love-Q
"Who$_i$ fell in love with a person s/he$_i$ saw at first glance?"

In this word order, the object does not act as though it c-commands the subject, making coreference between names possible, and bound variable interpretations impossible:

(20) a. Soitu-no hahaoya-ga Taroo-o sikat-ta
guy-Gen mother-Nom Taro-Acc scold-Past
"The guy's$_i$ mother scolded Taro$_i$."
b. ??[e$_k$ *pro*$_i$ hitome mi-ta] hito$_k$-ga dare$_i$-o
first-glance look-at-Past person-Nom who-Acc
sukini natta-no?
fell-in-love-Q
"Who$_i$ did a person that saw him/her$_i$ at first glance fall in love with?"

However, when the object comes before the verb in an OSV word order, the subject no longer acts as though it c-commands it, causing coreference between names to improve (21a). Moreover, the object gains the ability to c-command the subject, making bound variable anaphora possible in (21b):[8]

(21) a. Taroo-no hon-o soitu-ga mituke-ta
Taro-Gen book-Acc guy-Nom found-Past
?"Taro's$_i$ book, the guy$_i$ found."
b. Dare$_i$-o [e$_k$ *pro*$_i$ hitome mi-ta] hito$_k$-ga
who-Acc first-glance look-at-Past person-Nom
sukini natta-no?
fell-in-love-Q
"Who$_i$ did a person that saw him/her$_i$ at first glance fall in love with?"

These then are languages where anaphoric conditions do not seem sensitive to grammatical functions (or not grammatical functions only), but rather to word order – in contrast not only to English but also to Warlpiri and Mohawk, where word order does not seem to be a crucial factor.

Put together, this range of facts does not pose any inherent problem to the P&P research program of making conditions sensitive to syntactic structure. If anything, it can be construed as supporting that position, since languages where the superficial phrase structure is significantly different from that of English also show significant differences in these other areas. If anything, what is needed is adjustments to P&P's tenets about what phrase structures can be like, rather than the addition of a distinct functional structure.

The other moral of this mini-survey is that it is clearly not the case that all nonconfigurational languages have essentially the same basic syntax. Rather, there seem to be at least three distinct types (and possibly more). This should not be a surprise, since these languages are typologically quite different in other respects as well. In particular, Mohawk is a pure head marking language in the sense of Nichols (1986, 1992): it has very rich agreement morphology and no overt Case marking. Warlpiri, on the other hand, is a dependent marking language, with a well-developed and syntactically significant system of Case morphology. Indeed, fairly closely related languages like Jiwarli are pure dependent marking languages (Austin and Bresnan 1996, Austin in press). Japanese is also a low agreement, dependent marking language, but it has a rather typical head final syntax and a discernible unmarked word order (SOV) – unlike Warlpiri and Mohawk (Mithun 1987, Hale 1992). Furthermore, while available data are fragmentary at best, one can begin to discern what look like non-accidental correlations between the anaphora patterns above and these broad typological classifications. For example, German and Hindi seem to work rather like Japanese in these respects (see Webelhuth 1992: sec. 5.6, Mahajan 1990, Srivastav-Dayal 1993, among others, as well as Mohanan's 1980, 1982, 1983 description of Malayalam, and the discussion in Speas 1990). On the other hand, at least some other Case-poor head marking languages have been found to show the same kind of neutralization of Condition C asymmetries as Mohawk (Baker 1996 cites facts from Southern Tiwa; also Williamson 1984 for Lakhota, Reinholtz and Russell 1994 for Swampy Cree, and Jeff MacSwan personal communication for Nahuatl). Thus, there is not one nonconfigurationality challenge, but several.

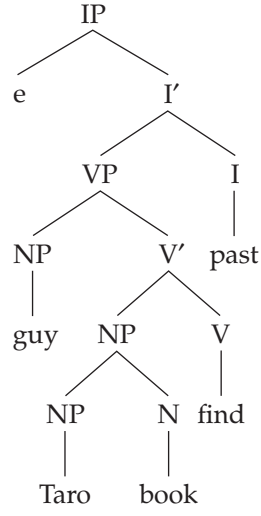
In the subsequent sections, I discuss these three languages types each in turn. In each case, the same analytic and expositional strategy will be used: I take the facts above at face value as evidence of c-command relationships, and see what this implies about the syntactic structure. Then I consider how that structure might be integrated into what is otherwise known about possible linguistic relationships. The discussions will not be equal in detail, however. My treatment of the Japanese type will be shortest, because this case has been thoroughly studied by communities of native speaker linguists, and a rather well-known standard treatment has emerged. My goal, then, is only to show

how this work fits into the broader topic, and to contrast Japanese with the other kinds of nonconfigurational language. The treatment of the Mohawk type is only slightly fuller; it is a brief summary of the view discussed at length in Baker (1996). Finally, the Warlpiri-type gets the fullest discussion, because here the controversies are sharpest. Indeed, Austin and Bresnan (1996) recently argued that here is where the need for an LFG style architecture is seen most sharply, and there is no standard view of how to approach these languages in a P&P framework. However, I will show that a variant of a suggestion by Speas (1990) (which in turn is a development of Jelinek 1984) can meet many of the challenges of these languages in an interesting way, and I will work out the specific similarities and differences this predicts between Warlpiri and the other types of language. I conclude with some tentative remarks about what Universal Grammar is and is not, based on this discussion.

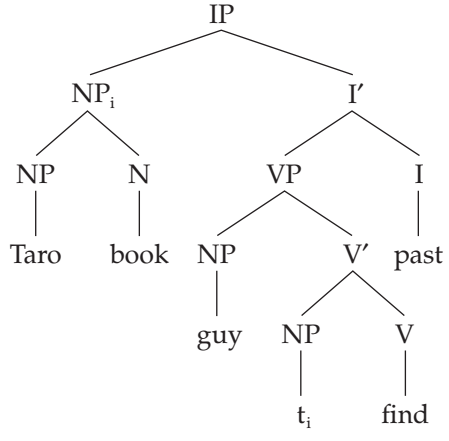
3 Japanese-Type Nonconfigurationality as Movement

Take Japanese first, then. Recall that when the word order is SOV, the subject acts as though it asymmetrically c-commands the object for purposes of anaphora (and quantifier scope). Thus, there is no barrier to saying that such sentences have a perfectly configurational structure, essentially like English apart from the basic difference in head–complement order. Then OSV orders arise as a result of moving the object to some position higher than the subject, as a normal instance of Move-α. So the phrase structures are:

(22) a.



b.



Now in the derived structure (21b) (assuming no reconstruction and a favorable definition of "A-positions"), the object c-commands the subject, and principles

like weak crossover and Condition C can apply in a reasonably straightforward way. Note that this is a reasonably unproblematic instance of movement: in particular, it is clause bounded, obeys the Proper Binding Condition that a moved element must c-command its trace, and originates in a properly governed position. (In contrast, one cannot scramble the object of a P, or a genitive NP, for example; see Webelhuth 1992: ch. 5.) Indeed, for purposes of concreteness I have presented the movement as essentially a variant of passive, in which the subject is generated in Spec, VP (as is widely assumed), and the underlying object targets the Spec, IP position, following the version of Kuroda (1988). Notice that passive reverses Condition C and weak crossover patterns in English as well:

(23) a. John's$_i$ car was washed t by him$_i$. (Compare (4))
b. Every man$_i$ was criticized by his$_i$ friends.

The major outstanding problems with this approach are how exactly to characterize the landing sites of this kind of scrambling in general (including their status with respect to the A-/A'-distinction) (Mahajan 1990, Webelhuth 1992, Saito 1992, among others), and the question of why this kind of movement that places objects in A-like positions outside of subjects seems to be allowed only in head final languages (Fukui 1993). No doubt much can be said about this analysis, both pro and con, and there are important second-order differences among the languages that I am grouping together as "Japanese-type." But this general approach has been a widely adopted and productive one. I will consider languages like this no further, except by way of contrast with the other, potentially more radical kinds of nonconfigurationality.

4 Mohawk-Type Nonconfigurationality as Dislocation

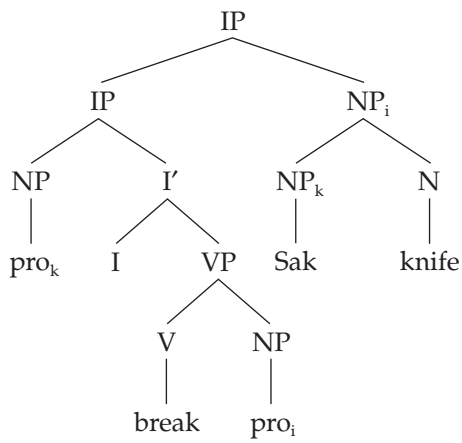
Consider next the Mohawk type of nonconfigurationality. In this language, examples like (15a) and (16a) show that the NP interpreted as the direct object is outside the c-command domain of the subject, in contrast to English and Japanese in the SOV order. However, other kinds of evidence seem to contradict this result. For example, objects but not subjects can be incorporated into the verb in Mohawk:

(24) a. O-nʌ'y-a' wa'-t-ka-tsiser-á-hri-ht-e'.
NSgO-stone-NSF Fact-Dup-NSgS-pane-Ø-shatter-Caus-Punc
"The stone broke the window-pane."
b. *O-tsíser-a' wa'-t-ka-nʌy-á-hri-ht-e'.
NSgO-pane-NSF Fact-Dup-NSgS-stone-Ø-shatter-Caus-Punc
"The stone broke the window."

This shows that the object but not the subject is a governed internal argument of the verb in Mohawk, assuming either the head movement analysis of incorporation in Baker (1988) or something like Selkirk's (1982) First Order Projection Condition on productive synthetic compounding. And there is other data to confirm this as well (Baker 1996).

These conflicting results can be reconciled if we say that there is in fact an object position internal to the smallest VP, but the overt NPs in sentences like (15a) and (16a) cannot be in that position for some reason. What then occupies the true object position in such examples? The most likely answer is a null pronoun (*pro*). Such pronouns are independently known to be possible in Mohawk; indeed, Mohawk has the typical nonconfigurational property of allowing free pro-drop in all syntactic positions (*wa'tháya'ke'* "He broke it" and *wa'akoti'* "She lost it" count as complete clauses by themselves). The possibility of *pro* is also expected theoretically, given that Mohawk is a head-marking language, and there is typically plenty of agreement on the heads to license *pros*. The independent overt NPs, then, are adjoined to the clause as a whole and enter into a dislocation relationship with the null pronouns in the argument position, as in (25):

(25)



Notice that the overt NP is linked to the direct object position, but it is nevertheless outside the c-command domain of the subject position; therefore a pronominal subject can be coreferential with a name inside the understood object (as in (15a)), whereas an interrogative subject cannot bind a pronoun inside that understood object (as in (16a)). This "dislocation" relation between an overt NP and a weak or null pronoun is not unique to nonconfigurational languages; on the contrary, a similar dislocation construction exists in Romance languages, studied by Cinque (1990b: ch. 2):

(26) Gianni, lo conosciamo. (Italian; Cinque 1990b: 61)
"Gianni, we know him."

This analysis of Mohawk is similar in spirit to the analysis of OSV orders in Japanese given above; in both cases, the object escapes the c-command domain of the subject by entering into some familiar, chainlike relationship. However, the exact relationship entered into is somewhat different in the two cases:[9] the empty object in Mohawk is a *pro* whereas in Japanese it is a trace; the NP is base generated in the clause-peripheral position in Mohawk rather than moving there; and the peripheral position is an A'-position rather than an A(-like) position in Mohawk. This last fact implies that the "shifted" object does not gain the ability to bind the subject in Mohawk the way it does in Japanese (compare the grammatical (21b) with the ungrammatical (16b)).

Putting these factors to one side, the most striking difference between Mohawk and Japanese is that in Japanese the movement of the object is optional, whereas in Mohawk the dislocation of the object is apparently obligatory. Thus, the Japanese object has the option of staying in the argument position, in which case the clause has configurational properties quite similar to English, as in (19) and (20). However, the ungrammaticality of (16a) (in any word order) shows that this is not possible in Mohawk: if the NP had the option of appearing in the direct object position, then a bound variable reading of the possessor should be allowed, contrary to fact. Thus, we must say that the argument positions can *only* be null pronouns (or the traces of incorporated nouns) in Mohawk. This is a version of the so-called "Pronominal Argument Hypothesis," a traditional approach to head marking languages introduced into P&P by Jelinek (1984) as a way of handling certain nonconfigurational languages and developed by her in many subsequent papers (see also Van Valin 1985, Mithun 1987, for developments of the same idea in other theoretical frameworks). This fits well with the intuition that Mohawk is a more deeply nonconfigurational language than Japanese, and that unlike Japanese it has no basic word order.

Indeed, the fact that only null pronouns can appear in argument positions in Mohawk does not need to be stipulated as something special about it as a nonconfigurational language. On the contrary, something very similar is found in Romance languages, where the object NP generally *must* be dislocated (or omitted) whenever the object clitic is present on the verb:[10]

(27) *Lo conosciamo (a) Gianni. (Cinque 1990b: 60)
"We know Gianni."

The classical Government Binding era account of the ungrammaticality of (27) is to say that the clitic absorbs the accusative Case features of the verb, leaving the object un-Case marked (Borer 1984). The same idea can be applied to Mohawk. The only difference is that whereas object clitics are optionally generated on the verb in Italian, they are obligatory in Mohawk as a basic typological property of the language: Mohawk is by all accounts a pure and obligatory head marking language (the Polysynthesis Parameter of Baker 1996).

Therefore, overt NPs in the object position will *always* be un-Case marked in Mohawk, in violation of the Case Filter.

Certain other differences between the kind of nonconfigurationality manifested by Mohawk and the kind manifested by Japanese also follow from this idea. Perhaps the most obvious is that we predict a much tighter connection between ubiquitous pro-drop and free word for Mohawk-type languages than for Japanese-type languages. The diversity of word orders in Mohawk comes from different choices of where to adjoin a dislocated NP, and this presupposes that the argument position can always be filled by a *pro*. In contrast, new word orders in Japanese come from movement, and this is logically independent of whether *pro* is licensed or not. These predictions seem correct: pronouns are freely omittable in head marking languages like Cree, Nahuatl, Southern Tiwa, and Lakhota; they are also freely omittable in Japanese and Malayalam (Mohanan 1982: 544) but not in other SOV-plus-scrambling languages such as German.

A more subtle difference is that languages like Mohawk do not permit NPs that are referentially defective in some way or another. Since these NPs are not referential, they are in principle unable to be coreferential with the *pro* in argument position, and hence they cannot be unlicensed. Thus, simple NP anaphors and negatively and universally quantified NPs are all impossible in Mohawk, while *wh*-expressions must appear fronted to the Comp position and cannot show the same free word order of other elements (Baker 1996: ch. 2):

(28) a. #Sak ro-núhwe'-s ra-úha.
Sak MSgS/MSgO-like-Hab MSgO-self
"Sak likes himself." (OK as "Sak$_i$ likes him$_k$.")
b. *Akwéku wa'-t-ha-[a]hsʌ''tho-'.
all Fact-Dup-MSgS-cry-Punc
"Everybody cried."
c. (Oh nahótʌ) Sak wa-ha-hnínu-' (*oh nahótʌ)?
what Sak Fact-MSgS-buy-Punc what
"What did Sak buy?"

Other head marking nonconfigurational languages are similar in these respects. On the other hand, nonreferential elements can perfectly well be moved; hence simple NP anaphors, nonreferential quantifiers, and interrogatives can be found in languages like Japanese and Hindi, and they can be in both SOV and OSV orders:

(29) a. Zibunzisin-o Hanako-ga t hihansita (koto) (Japanese)
self-Acc Hanako-Nom criticized fact
"Herself, Hanako criticized." (Saito 1992)
b. Sab-ko uskii bahin t pyaar kartii thi. (Hindi)
everyone-Acc his sister love do-Fem be-Fem
"His sister loved everyone." (Chamorro 1992)

c. John-ga dare-o nagut-ta no?/ Dare-o John-ga nagutta no?
John-Nom who-Acc hit-Past Q/ who-Acc John-Nom hit-Past Q
"Who did John hit?" (Japanese)

This illustrates nicely the claim that nonconfigurationality has somewhat different causes in typologically different languages; hence it is associated with a predictably different cluster of properties in those languages.

5 Warlpiri-Type Nonconfigurationality as Secondary Predication

Finally, we come back to the case of Warlpiri. This is the most controversial of the three, and there is no standard approach to it within a P&P-style framework. Austin and Bresnan (1996) argue at some length that Jelinek's (1984) Pronominal Argument approach is not appropriate for Warlpiri, in some cases developing arguments that are implicit in Simpson (1991). Their argument is strengthened by comparison with Jiwarli, a related language which is essentially identical to Warlpiri in its nonconfigurational properties, but which has none of the pronominal clitics that Jelinek's analysis seems to depend on (see also Austin in press). These languages thus pose the problem of nonconfigurationality in perhaps its sharpest form. Nevertheless, in the remainder of this chapter I elaborate on a suggestion by Speas (1990) about how to treat languages like these that seems to have promise for incorporating them into the view of Universal Grammar that has been supported in the other cases.

5.1 Basic clause structure in Warlpiri

Again, suppose we begin by taking the Condition C and weak crossover evidence in (17) and (18) at face value, as giving evidence of syntactic c-command relationships.[11] These examples then show that the subject is c-commanded by the object, and that the object is also c-commanded by the subject. Simpson (1991) interprets this as further evidence that there is no VP in Warlpiri, which implies that the difference between subject and object cannot be reduced to phrase structure, and a distinct functional representation is needed. However, the study of Mohawk makes it clear that there is another possibility: what we call informally the "subject" and the "object" could in fact be more complex, chain-like entities with elements in more than one syntactic position. So then the question is: is there ever some kind of expression that is associated with the subject but falls within the c-command domain of the object in well-studied configurational languages? If so, this could be the independently motivated linguistic relationship that plays the same role in the analysis of Warlpiri as Clitic Left Dislocation plays in the analysis of Mohawk and passive-like NP movement plays in the analysis of Japanese.

The answer is maybe yes. Speas (1990) suggests that the actual arguments in Warlpiri are the clitic pronouns on the auxiliary (following Jelinek 1984 and unpublished work by Mary Laughren), and that the lexical nominal expressions have the status of secondary predicates, licensed in essentially the same way as secondary predicates are in English. Now Speas does not explore the syntax of secondary predication in English in any great detail to show exactly where such secondary predicates appear in a structure; she simply notes that it is not easy to construct the crucial examples because it is somewhat rare for secondary predicates to have complements (Speas 1990: 93–4). However, standard constituency tests show rather clearly that subject oriented depictive predicates are inside the VP somewhere (Andrews 1982, Roberts 1988, Legendre 1997):

(30) John wanted to leave the room happy . . .
  a. —and [$_{VP}$ leave the room happy] he did.
  b. —*and [$_{VP}$ leave the room] he did happy.

Moreover, it has become quite standard in the P&P theory to say that some or all direct objects raise out of the (minimal) VP at some level to a Case-checking position (Chomsky 1995b). This hypothesis is particularly well supported for pronominal objects, which often appear overtly cliticized to Infl (Romance) or shifted leftward (Scandinavian) or rightward (Irish), even in languages where other direct objects seem to remain inside the VP. If we put these two facts together, then we clearly expect (pronominal) objects to c-command secondary predicate material associated with the subject, and subjects to c-command secondary predicate material associated with the object. Arguably this is supported by the following Condition C data, although relevant examples are hard to construct and judgments are delicate:

(31) a. *He$_i$ always sent soldiers$_k$ to the front [loyal$_k$ to Hitler's$_i$ ideals].
  b. ?*John$_k$ tried to read it$_i$ [sympathetic$_k$ to *Mein Kampf*'s$_i$ basic thesis].

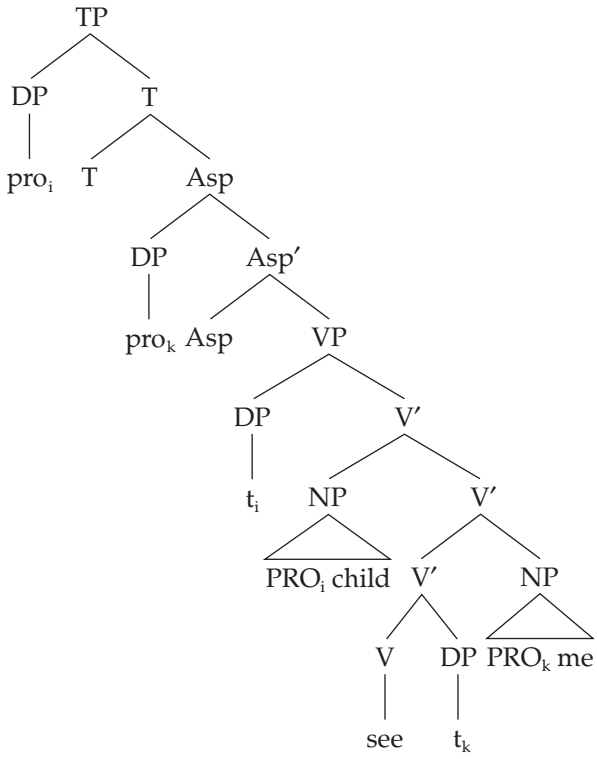
The pronominal subject in (31a) clearly cannot be interpreted as coreferential with a name inside the object oriented depictive; however, it is (almost?) as bad to have a pronominal object interpreted as coreferential with a name inside the subject oriented depictive, as shown in (31b).[12] There seems to be no clear contrast here. Similar data involving weak crossover are given in (32):

(32) a. As much as possible, every dictator$_i$ sends soldiers$_k$ to the front loyal$_k$ to his$_i$ ideals.
  b. As much as possible, John$_i$ reads every book$_k$ sympathetic$_i$ to its$_k$ basic thesis.

Again, there is no clear contrast between a subject's ability to bind into an object oriented depictive (32a) and an object's ability to bind into a subject oriented depictive (32b). (I find both slightly awkward, but basically acceptable.)[13]

If these judgments are correct, then we have supported Speas's claim that the depictive secondary predicate construction has the right properties to serve as a basis for explaining the anaphora facts in Warlpiri. Concretely, we can assume that a simple Warlpiri clause like (7a) has roughly the structure in (33):[14]

(33)



Here there is no reason not to take the basic VP as being as configurational as the English VP on one's favorite version of the VP-internal subject hypothesis. This makes possible a structural account of the basic reflexive and control facts mentioned in section 1, in which Warlpiri works much like English. The secondary predicates are licensed by being in a local configuration with the theta-positions of the corresponding primary arguments; therefore, they are VP-internal as well. (Exactly what the locality condition is is not particularly important. I return below to the question of whether the NPs are predicated directly of the arguments or are predicated of a PRO that is controlled by those arguments.) The pronominal arguments raise to the relevant VP-external specifier positions in the standard way, where they are licensed. Once this happens, the raised positions of the pronouns c-command both secondary predicate positions. In this way, the symmetry of the binding facts is captured without compromising the basic configurationality at the core of the Warlpiri clause.[15]

As Speas points out, part of the attraction of this proposal is that it is clear on anyone's account that nominals in Warlpiri *can* be used as secondary predicates. (34) is a good example of this:

(34) Nya-nyi ka-rna-ngku ngarrka-lku. (Hale 1983)
see-NonPast Pres-1SgS-2SgO man-after
"I see you as a man now."

Here since the object pronominal is second person, there is no temptation to analyze the absolutive case nominal *ngarrka* "man" as a true argument; rather it is a depictive predicate of the object. More generally, nominals can freely be used as main predicates in Warlpiri, and anything that can be used as a main predicate can also be a secondary predicate (Simpson 1991). Thus, the general architecture of the grammar is set up so that one expects this case to exist, and Simpson (1991) discusses at length the mechanisms that are needed to account for these NP secondary predicates within LFG. Thus, Speas's proposal does not require that one add any new syntactic resources to the analysis of Warlpiri; it is only a reassessment of which relationships are involved in which particular examples.

One crucial feature of this account is that it takes the true arguments of the verb in a simple clause to be pronominal elements, distinct from the overt nominals. In this, it counts as a variant of Jelinek's Pronominal Argument Hypothesis. We therefore predict that there should be certain syntactic similarities between Warlpiri-type languages and Mohawk-type languages that follow from this shared syntactic feature. This seems to be correct. The first and most obvious prediction is that Warlpiri-type languages should allow *pro*-drop in all positions – like the Mohawk-type languages, but unlike some of the Japanese-type nonconfigurational languages (e.g. German). This is clearly correct for Warlpiri, as illustrated back in (9). It is also true for Jiwarli, even though this language does not have an auxiliary with clitic-like elements (Austin and Bresnan 1996). On a theoretical level, the reason for this is because there is never a syntactic requirement that a secondary predicate be included in a structure, just as there is never a requirement that a sentence have a dislocated element.

More subtle predictions also hold. Recall from above that because of the inherent referentiality of its pronominal arguments, Mohawk cannot have nonreferential NPs like true quantifiers or simple NP anaphors, and interrogative phrases must be fronted by true *wh*-movement. These same effects are found in Warlpiri as well. Bittner and Hale (1995) discuss at length the fact that the way of expressing universal-like quantification in Warlpiri has very different syntax and semantics from phrases with *every* in English. Their idea is that *panu* is not a quantifier at all; it is basically just a noun that means "large group." What look like different quantificational forces are really the interactions of this lexical N meaning with the definiteness ambiguities that are rampant in Warlpiri. (Note also that this element is plural, like English *all*, not singular like *every*.)

(35) Panu ka-rna-jana nya-nyi.
many Pres-1SgS-3PlO see-NonPast
"I see many of them." "I see all of them." "I see them, who are many."
"I see a large group (of them)." "I see the large group (of them)."
"I see them, who are a large group."

Second, it is true that Warlpiri has no simple NP anaphor. Reflexive predications are expressed using a reflexive clitic, which replaces the normal object clitics in the Aux, as shown in (11a). If this clitic is absent in a matrix clause, no coreference between the subject and the object is possible (Simpson 1991: 168, who credits Hale):[16]

(36) Jupurrurla-rlu ka (nyanungu) nya-nyi.
Jupurrurla-Erg Pres him seek-NonPast
"Jupurrurla is looking at him/*himself."

Third, it is the case that nonreferential interrogative phrases must move overtly to a clause initial, Comp-like position in Warlpiri as in Mohawk. Indeed, Hale (personal communication) reports that virtually the only ordering constraint on NPs in Warlpiri is that interrogative phrases are clause initial (see (17) for an example); this is also true for Jiwarli (Austin classnotes). Thus, there is good support for the claim that the argument positions in the Australian languages are inherently pronominal. In this respect, the nonconfigurationality of those languages is more like that of Mohawk than like that of Japanese-type nonconfigurational languages, which have a discernible unmarked word order, allow reflexive NPs, have nonreferential quantifiers, permit *wh*-in-situ, and do not necessarily have free *pro*-drop.[17]

Austin and Bresnan (1996) argue explicitly against the idea that the Pronominal Argument Hypothesis holds in these Australian languages. Their simplest argument is that the clitic pronouns that Jelinek (1984) takes to be the arguments of the verb in Warlpiri are not present in non-finite clauses in Warlpiri or in any clauses in Jiwarli; nevertheless, these cliticless clauses show all the same nonconfigurational properties. Strictly speaking, however, this only argues against the most literal interpretation of Jelinek's hypothesis. Baker (1991, 1996) takes a slightly different view, more in line with standard P&P assumptions. He claims that the arguments are not the clitic pronouns, but rather phonologically null pronouns (*pro*), the clitic/affixes being morphological elements that bear a licensing/agreement relationship to these *pro*s. On this view, we do not necessarily expect to see an overt manifestation of the pronominal arguments in Jiwarli. The only thing that might be considered odd about this language is that *pro*s appear without any agreement morphology to license them. But it is now well known that the relationship between rich agreement and the appearance of *pro* is not as tight as was once thought. On the contrary, languages with no agreement, like Chinese and Japanese, often allow *pro* as freely as languages like Mohawk with very rich agreement (Jaeggli

and Safir 1989b). Indeed, the fact that null pronouns occur freely in these languages is a feature of the LFG analysis too.[18]

5.2 *Nonconfigurationality and the noun–adjective distinction*

Overall then, there is nothing particularly radical about the proposal that *pro*-drop is possible in the Australian languages, or that nominals can function as secondary predicates. The only radical element of the Speasian approach is the claim that *pro*s are *always* present, and overt nominals are *always* secondary predicates. This strong claim is necessary in order to explain the Condition C facts in (18); if the ergative case nominal had the option of being in the true subject position, then it would be outside the domain of the object pronoun, and the indicated coreference should be possible in (18b). Similarly, if it were possible for overt phrases to be in argument positions, then quantified and anaphoric elements should in principle be possible (although perhaps restricted to a particular clausal position). Therefore, we need to explain why NPs cannot appear in true argument positions in Warlpiri, which makes their status as secondary predicates a necessity, not merely an option. Nor can we use the Baker (1991, 1996) solution to this problem for Mohawk, in which the obligatory agreement morphemes absorb the Case properties of the heads. This analysis would not plausibly extend to Jiwarli, because it does not have such elements.

Speas (1990) offers the beginnings of a proposal for this too: her basic idea is that whatever property of Warlpiri nominals makes them such good secondary predicates also makes them bad arguments. This is conceptually attractive: arguments and predicates are very different logical entities, so one does not necessarily expect the same element to serve as both. Indeed, it should not be taken for granted that NPs can be depictive secondary predicates in Warlpiri and Jiwarli, given that NPs cannot be used as depictive secondary predicates in English (Rapoport 1991: 168–9). This is shown by the contrast in (37):

(37) a. I never saw Reagan angry.
b. *I never saw Reagan (the) president.
(Intended meaning: I never saw Reagan when he was president.)

Thus, it is plausible to think that whatever makes NPs usable as secondary predicates in Warlpiri also makes them unusable as arguments.

We can consider taking a step beyond Speas at this point. NPs in English contrast with APs in that APs can serve as depictive secondary predicates (37a). Now it is independently known that in Warlpiri and many other Australian languages there is no syntactic distinction between the class of nouns and adjectives. Bittner and Hale (1995: 81–3) discuss this for Warlpiri, showing that the single morphosyntactic category "nominal" includes names and

common nouns (woman, man, food), but also expressions of quality or cardinality (big, sick, many) (see also Simpson 1991: 41). The same general system seems to be present in Jiwarli (Austin classnotes). Now the standard (informal) way of describing this situation is to say that "adjectives" are really nouns in these languages (as Bittner and Hale do). Suppose, however, that we think of this the other way around: that what English speakers naturally think of as nouns are really adjectives in Warlpiri and Jiwarli. At first, this seems almost inconceivable: the intuition is almost universal that noun is a more basic and more universal category than adjective (see, for example, Dixon 1982b, Hopper and Thompson 1984, Bhat 1994). However, strong intuitions often reflect habit more than truth. Based on work by Geach (1962) and Gupta (1980), Larson and Segal (1995: 128–32) suggest that the difference between common nouns and other predicates (including adjectives) is that common nouns are "sortal," meaning that in addition to the condition on applicability that all lexical items have, they also have a condition on identity. If that is correct, then common nouns in English are actually more elaborate in their lexical entries than adjectives are. If neutralization is the loss of additional distinguishing features, then it makes sense that the neutralized category of "nominal" in Warlpiri might be formally more similar to English adjectives than to English nouns. Indeed, this is consistent with what we know about Warlpiri (and Jiwarli) syntax. In English, As differ from Ns in that they can head secondary predicates; in Warlpiri, nominals are like As in this respect, as we have seen. In English, As differ from Ns in that they cannot be the complement of an article (**an intelligent* vs. *a genius*);[19] in Warlpiri, nominals are like As in this respect (and, as a result, the language has no true articles). In English, As differ from Ns in that they can be attributive modifiers of other nominals (*an intelligent woman* vs. **a genius woman*); in Warlpiri, nominals are like As in this respect too. Thus, Hale and Simpson both claim that a valid gloss for (38) is "The childish small thing is chasing it," where the "noun" "child" is a modifier of the "adjective" "small," rather than vice versa:

(38) Kurdu-ngku wita-ngku ka wajili-pi-nyi. (Simpson 1991: 265)
child-Erg small-Erg Pres chase-NonPast
"The childish small thing is chasing it." OR "The small child is chasing it."

Last but not least, in English, As differ from Ns in that their projections never appear in argument positions (**Intelligent will solve your problems* vs. *Brains will solve your problems*). And, as we have seen, in Warlpiri nominals cannot appear in argument positions either. Since Warlpiri nominals act like adjectives in all these ways, it makes sense to claim that they really are adjectives – and the fact that Warlpiri is a strongly nonconfigurational pronominal argument language follows immediately from this.[20]

We have already discussed certain similarities between Warlpiri-style nonconfigurationality and Mohawk-style nonconfigurationality that follow from *pro*s being present in basic clauses in both languages. We are now in a position

to predict certain differences as well, differences that follow from the fact that overt nominals are licensed by forming dislocation chains in Mohawk but by secondary predication in Warlpiri. We have seen one difference already: the fact that overt NP material is inside the c-command domain of the pronominal arguments in Warlpiri, but outside their c-command domain in Mohawk. This leads to the differences in anaphora that got the discussion started. By the same token, we predict that the "scrambling" of constituents should be much more local in Warlpiri than in Mohawk. This seems to be correct. Baker (1996: ch. 3) shows that an NP can be separated from the clause it is interpreted with in Mohawk; this is expected, given that CLLD has the same property in Italian (Cinque 1990b):

(39) Thík∧ á'share' wa'-ke-rihwáruk-e' tsi Sak wa-ha-[a]táte-ni-'.
that knife Fact-1SgS-hear-Punc that Sak Fact-MSgS-Refl-lend-Punc
"That knife, I heard that Sak helped himself to it."

On the other hand, a nominal in Warlpiri cannot generally be separated from the clause it is interpreted with. Thus, (40a) is possible, where the embedded verb "dance" and its understood object "corroboree" form a clausal constituent before the second position auxiliary; however, (40b) shows that it is bad for the object to be separated from its verb by the auxiliary, which is an element of the matrix clause (Simpson 1991: 132):

(40) a. Purlapa pi-nja-karra-rlu kala-lu pirlirrpa yilya-ja.
corroboree dance-Inf-Comp-Erg Hab-3PlS spirit send-Past
"By dancing a corroboree they would send away the spirit."
b. *Purlapa kala-lu pi-nja-karra-rlu pirlirrpa yilya-ja.
corroboree Hab-3PlS dance-Inf-Comp-Erg spirit send-Past
"By dancing a corroboree they would send away the spirit."

Similarly, Austin (classnotes) shows that NPs do not appear separated from the associated verb by material belonging to another clause in Jiwarli, except in one very particular situation where the matrix verb is auxiliary-like and probably undergoes restructuring with the embedded verb. This is what we expect if nominals are licensed as secondary predicates in these languages: such predicates cannot appear outside the verb phrase (cf. English: **Raw*, *John ate the meat* (Rizzi 1990: 48–50)), and thus *a fortiori* they cannot appear adjoined to a higher clause (**Raw*, *I think John ate the meat*).[21]

The other clear difference between Warlpiri-type nonconfigurationality and Mohawk-type nonconfigurationality is that so-called discontinuous expressions are a much freer and more salient characteristic of Warlpiri than they are of Mohawk. Basically, any multiple word NP in Warlpiri can be a discontinuous NP as well, whereas this is certainly not true in Mohawk. (41) shows a typical example of an "adjective" separated from the associated "noun" (Simpson 1991: 257; compare (38)):

(41) *Kurdu-jarra-ngku* ka-pala maliki wajili-pi-nyi *wita-jarra-rlu*.
child-Dual-Erg Pres-3DS dog chase-NonPast small-Dual-Erg
"Two small children are chasing the dog."

(42) gives a minimal pair of a kind of multiple discontinuous NP that is common in Warlpiri but impossible in Mohawk:

(42) a. *Kuyu* Ø-rna luwa-rnu *wawirri*. (Warlpiri; Hale
animal Perf-1SgS shoot-Past kangaroo personal communication)
"I shot a kangaroo."
b. ?**Kʌ'tsu* ne auhá'a te-wak-éka'-s *rababhót*. (Mohawk;
fish PRT most Cis-1SgO-like-Hab bullhead Baker 1996)
"I like bullhead fish the best."

Similarly, demonstratives can be freely split from more contentful nominals in Warlpiri, whereas in Mohawk this is rare and subject to tight syntactic constraints:

(43) a. *Wawirri* kapi-rna panti-rni *yalumpu*. (Warlpiri;
kangaroo Aux-1SgS spear-NonPast that Hale 1983: 6)
"I will spear that kangaroo."
b. ?**Kwéskwes* wa-hi-yéna-' *kíkʌ*. (Mohawk;
pig Fact-1SgS/MSgO-catch-Punc this Baker 1996)
"I caught this pig."

This important difference also follows from the difference in how nominals are licensed in the two languages. In Romance languages, only a single NP can be in a dislocation relationship with a given *pro*, presumably because chain formation must take place. Hence, the Mohawk examples are out for essentially the same reason as (44) is in Spanish:

(44) **Este*, lo ví en la fiesta, *(el) hombre*.
"That, I saw him at the party, (the) man."

On the other hand, more than one depictive secondary predicate can be associated with a single argument position in English:

(45) a. I only eat fish raw fresh.
b. I often send Mary home drunk, and she gets there just fine. The problem is that on Tuesday *I sent her home drunk exhausted*.

(Admittedly these examples are unusual; they are accepted only if the first depictive is presupposed, old information and the second bears contrastive focus; hence the context in (45b). Why these pragmatic restrictions hold is unclear.) The Warlpiri examples with multiple realizations of the argument are possible for the same reason as (45).

Finally, it is worth pointing out some typological support for the idea that the neutralization of the noun/adjective contrast can be a factor in causing (a particular type of) nonconfigurationality. Bhat (1994: ch. 9, esp. pp. 168–9) observes that languages with little or no noun/adjective distinction also tend to allow discontinuous constituents, which is a key feature of Hale's notion of nonconfigurationality. Absence of a noun/adjective distinction and nonconfigurationality both seem to be wide spread in Australian languages ranging from Jiwarli to Dyirbal (Dixon 1972). Outside of Australia, other languages that have the typical Australian cluster of nonconfigurational properties (*pro*-drop, free word order, and widespread discontinuous constituents) include Quechua (Lefebvre and Muysken 1988: 162–5), Yimas (Foley 1991: 180–91, 369–76), and languages of the Klamath/Sahaptian family (Barker 1964: 338–9; Noel Rude personal communication). Strikingly, in all these families adjectives and nouns belong to the same lexical class, there being either no distinction at all or at most a very minor one. In particular, the putative adjectives are inflected for the same features as nouns (Quechua: Lefebvre and Muysken 1988: 25–7, Weber 1989; Yimas: Foley 1991: 93–4; Klamath/Sahaptian: Barker 1964: 260–1, 315–18, Noel Rude personal communication). This correlation gives credence to the idea that these two properties are related theoretically.

5.3 A note on syntax and pragmatics

It goes without saying that there are some remaining problems that need to be faced and details of implementation to be worked out before this Jelinek/Speas approach can claim to be a complete theory of Warlpiri-style nonconfigurationality. Unfortunately, limitations of space and insight do not permit me to explore all the relevant issues here.[22] One type of objection is obvious and important enough to demand attention, however. This is a pragmatic problem: sentences with secondary predication in Warlpiri/Jiwarli are not *used* in the same kinds of situation as sentences with secondary predication in English, and they do not have the same communicative effect.

This problem has more than one aspect. For example, depictive APs are used to characterize the way an object is at the time of an event in English only if the object had or could have had a different quality at some other time. As a result, only "stage-level" APs that refer to temporary properties are usable in English (Rapoport 1991). This is clearly not true in Warlpiri, where a nominal characterizes the argument at the time of the event, but there is no implicit contrast with what it was at other times or in other possible worlds. In particular, the secondary predicate nominal can be at individual level in Warlpiri.

Some of the Simpson/Bresnan/Austin criticisms of Jelinek (1984) also fit under this rubric. These authors find it implausible that there is a pronoun for every argument of every clause in Warlpiri, because personal pronouns are always definite, and they typically need some antecedent in the prior context

to be felicitous. However, Warlpiri and Jiwarli nominals can be understood as indefinite, and can be used out of the blue at the beginning of a discourse with no discernible change in their syntax. In English, one would not say *John ate it raw* unless the raw thing was already known to the hearer, whereas the Jelinek/Speas approach implies that such an utterance is felicitous in Warlpiri.

Baker (1996: ch. 3) actually faces very much the same issue in Mohawk. There I argue that all nominals in Mohawk are clitic-dislocated, and that NPs have the formal syntactic properties of dislocated elements. However, Mohawk clauses clearly do not have the pragmatics of clitic left dislocation in Romance. For example, only definite NPs can be dislocated in Romance, and the dislocated element functions as a topic in discourse (Cinque 1990b, Rizzi 1997). Baker discusses how to resolve these tensions in some detail.

But, to make a long story short, the lesson of all this might simply be that pragmatics is patently *not* universal. More specifically, if these analyses of nonconfigurational languages are on the right track, Universal Grammar must consist primarily of substantive conditions on syntactic structure, and secondarily of a set of constructions that are consistent with those conditions. However, Universal Grammar must *not* associate a unique pragmatic value to the licit constructions. Rather, the pragmatic values of the particular constructions probably emerge from a variety of considerations. Natural form/function correspondences are presumably one, but another that is likely to be important is some notion of contrast. Since dislocation is a marked option in Romance languages, it comes to be associated with a particular pragmatic value, in contrast to the simpler structure that is also possible and is used in more neutral contexts. This choice between two structures does not exist in Mohawk, since dislocation is forced by Case theory plus the head marking requirement; hence dislocation structures are forced to do a wider range of duties in Mohawk. Similarly, English has a choice between saying "I ate a raw one" and "I ate one raw," so these assume different pragmatic values with regard to definiteness, contrast, and old versus new information structure. Warlpiri, however, has no true nouns, so there is nothing to contrast with the secondary predication structure, and it is used in a wider range of situations. There is much to spell out about how this works out in detail – especially in regard to how definiteness and indefiniteness play out in these articleless languages. But the general picture seems plausible. Indeed, it is just what one would expect on a broadly Chomskyan approach, in which language structure is distinguished from language use.

6 Conclusions

In closing, let me summarize the major lessons that have been learned from investigation into nonconfigurational languages so far.

The first and least controversial lesson is that nonconfigurationality is not a unified phenomenon. Rather, there seem to be several somewhat different kinds of nonconfigurational language. They have non-accidental similarities, but they also have important differences that can be cross-classified in various ways. The kind of nonconfigurationality a language has seems to be related to its other typological properties, such as whether it is head marking or dependent marking, its word order, and its basic category system.

Second, we have seen that the same Universal Grammar holds for this full range of languages, where Universal Grammar is viewed as (primarily) a set of formal constraints and (derivatively) a library of structures that obey those constraints. For example, the whole inquiry has been based on the assumption that things like Condition C and the weak crossover condition are essentially the same across languages. Similarly, the principles that regulate dislocation are basically the same in Mohawk and Italian, while the principles of secondary predication are the same in English and Warlpiri. Even at the points where languages are most different in terms of structure, similar causal factors can be discerned. Thus, the Case filter applies in Mohawk as it does in Romance, forcing dislocation in the presence of object clitics, and whatever bars APs from appearing in argument positions in English also blocks nominals in argument positions in Warlpiri. Indeed, it is the rigidity of Universal Grammar that makes languages look so different on the surface, because a small difference in basic structure caused by the obligatoriness of clitics or the absence of a distinct class of nouns has repercussions for how all the other principles apply. If instead Universal Grammar were a loose-knit collection of functional strategies, one might expect a difference in one area to be compensated for by a counterbalancing difference in another area. In contrast, the pragmatic values of particular constructions do not seem to be defined by Universal Grammar, but emerge out of the system of a particular language taken as a whole.

Finally, we can ask if we have learned anything about what system of grammatical representation is most adequate in general. Here I think the right answer is no. We have seen that languages in which phrase structure is significantly different from English also typically have significant differences in areas like anaphora. Thus, there is no refutation of the P&P idea that "functions" are defined over structure. But there is no direct refutation of an LFG-style architecture either. If it is correct that all Mohawk clauses involve dislocation and all Warlpiri clauses involve secondary predication, this could be expressed in one framework as well as another. Thus, I have parried an attack that LFG has made on P&P, but have not attempted a serious riposte. The choice of overall system of representation probably will have to be made on other grounds. It is worth nothing, however, that these results are compatible with Chomsky's "Minimalist" idea of reducing the number of meaningful grammatical levels to the logical limit (i.e., one: LF), since the same structure seems relevant to both things like word order and anaphora.

NOTES

* The original research reported in this chapter was supported by the Social Sciences and Humanities Research Council of Canada, grant 410-95-0979, and FCAR of Quebec, grant 94ER0578. This chapter never would have come to be if I had not had the opportunity to attend Joan Bresnan's and Peter Austin's seminars on Nonconfigurationality and Australian languages at Stanford University when I was a fellow at the Center for Advanced Studies in the Behavioral Sciences in the fall of 1993. The rich and vigorous discussions in these classes (which also led to Austin and Bresnan 1996) shook me out of my complacency to be content with my views about nonconfigurationality in Mohawk without trying to figure out how those views fit into a more comprehensive picture of nonconfigurationality. I thank them for providing such stimulating forums and a wealth of data. I have also benefited from the chance to present aspects of this material in talks at MIT and McGill University, and thank the audiences there for their input. Special thanks go to Kenneth Hale, Rob Pensalfini, Hidekazu Tanaka, Lisa Travis, Claire Lefebvre, Noel Rude, and Mark Donahue for their comments and information on their languages of expertise. Responsibility for mistakes remains my own.

Glosses for agreement morphemes in Mohawk include the following elements: indication of person or gender (1, 2, 3, M, F, Z(oic), or N(euter)), indication of number (Sg, Pl, or D(ual)), and indication of "series" (S (roughly subject), O (roughly object), or P (possessor)).

1 These statements are true at the surface level in English. Many linguists believe that the subject originates inside the VP and is raised to the specifier of IP (see McCloskey 1997 for a review), and that the object moves out of the VP abstractly. These points will become relevant below. Presumably the VP is itself configurational in the sense that the subject is generated in a distinctive position within the VP, higher than the object.

2 In more recent LFG work, this structure has been revised somewhat to give a better account of the second position auxiliary. This is taken to be the head of an IP projection, the specifier of which is filled by some constituent taken from the otherwise nonconfigurational clause (Kroeger 1993, Austin and Bresnan 1996). I accept this development, but abstract way from it in this discussion.

3 Thus, at one point even rigid VSO languages like Irish were classed as nonconfigurational, because this word order made it difficult to claim that there was a VP that contained the verb and the object but not the subject. However, there is now a standard configurational analysis of most of these languages, in which their basic clause structure is much like English, except that the verb raises to I and the subject does not raise to Spec, IP (see Speas 1990, McCloskey 1997, for reviews).

4 In contrast, earlier published work in LFG depends on the notion

f-command, which does not distinguish subjects from objects within a single clause (Bresnan 1982).

5 Admittedly this is a somewhat odd-looking representational schema that has evolved historically from the study of English. However, it may in turn be grounded in a principled way in the universal compositional semantics of the clause; see Marantz (1984), Hale and Keyser (1993), and Baker (1997b: sec. 5) for some discussion.

6 These sentences use an overt pronoun rather than a null one in order to avoid the possibility that the possessor is a parasitic gap, an option that some Mohawk speakers – but apparently not all – seem to allow (Baker 1996: sec. 2.1.6).

7 Japanese pronouns are rather different from English ones in certain ways that lie behind how these examples are constructed. The null pronoun *pro* is not convenient for (19a), (20a), and (21a) because its invisibility means that one cannot tell if the object comes before or after the subject. On the other hand, it is not clear that overt anaphoric elements such as the colloquial *soitu* are really pronominal in the sense of being subject to Chomsky's Condition B (hence the use of an epithet-like gloss "the guy" in these examples). Fortunately the exact nature of this element (which is always unbound in these examples) is not directly relevant: the focus of inquiry here is on Condition C with respect to the name *Taro*. I thank H. Tanaka for help with these examples.

8 Technically, the *pro* in (21b) could also be analyzed as a parasitic gap; however, on this interpretation too the category it is contained in must be c-commanded by *dare-o*.

9 In this I disagree with Webelhuth (1992), who conjectures that free word order is always a result of clause internal movement triggered by focus features.

10 Some dialects of Spanish and Romanian are a well-studied exception to this generalization.

11 Note that Simpson (1991: 178) gives data showing that at least some version of Condition C is operative in Warlpiri in cases of clausal embedding.

12 Compare Roberts (1988: 708, n. 5), who admits that his sentence (ia), which is structurally parallel to (31b), is worse than his theory predicts it should be. I have found that some speakers do find (31b) better than (31a), however.

13 Roberts (1988: 709) gives a sentence like (32b) as bad, but he does not contrast it with one like (32a) and his sentence is not very meaningful to begin with.

14 Here I abstract away from the Aux-second affect in Warlpiri (see n. 2). Also, I assume for concreteness that the Case checking position for the pronominal object is the specifier of an Aspect Phrase, but any other functional category position outside the VP would do. In fact, it is possible that the Case of the object pronoun is checked in highest functional category (here TP), given Warlpiri's morphological ergativity (Bittner and Hale 1996b); if so, then it is even clearer that the pronominal object ends up c-commanding the secondary predicate associated with the subject.

15 Chris Collins (personal communication) points out that if one extends this view of Warlpiri clause structure to NP-internal structure in Warlpiri, then this explanation of the Condition C effects in (18) will be lost. In

particular, suppose that the possessor phrase is analyzed as an NP (or AP), predicated of a genitive *pro* that is inside the NP (or AP) that is predicated of the object. Then (i) would be a schematic representation of the structure of (18a):

(i) (He_i) [$_{VP}$ chase (it_k) [$_{NPk}$ (his_i) dog [$_{NPi}$ Jakamarra]]]

The binding theory is satisfied by this indexing. In particular, the *pro* possessor should be able to corefer with the subject by condition B, and the depictive predicate should be outside the domain of Binding Theory and therefore should not affect this possibility.

Fortunately, there is good reason *not* to extend this view of clause structure to NPs in Warlpiri. Simpson (1983, 1991) argues that the possessor suffix in Warlpiri is a kind of derivational Case, which forms adjuncts to NP, not a structural Case that marks an argument of the noun (or a secondary predicate of such an argument). Moreover, according to her rules *pro* is not licensed in possessive positions in this language in the first place. Therefore, the problematic representation in (i) is not available in Warlpiri.

Simpson's treatment of the possessive affix in Warlpiri makes it tempting to compare it to suffixes like *-ian* that derive "referential adjectives" in English (e.g. *the Italian invasion of Albania*, which is a near paraphrase of *Italy's invasion of Albania*, with an ordinary possessive NP). Now, it is known that these "referential adjectives" are not possible antecedents for anaphors or pronouns, even apart from questions of c-command ((iia) is discussed by Kayne 1984: 63, Giorgi and Longobardi 1991: 125–6):

(ii) a. *The Albanian destruction of itself/themselves (was tragic.)
(cf. Albania's destruction of itself . . .)

b. The Italian$_i$ invasion of Albania haunted it$_{*i}$ for years.
(cf. Italy$_i$'s invasion of Albania haunted it$_i$ for years.)

This raises the intriguing possibility that coreferential interpretations in examples in (18) are ruled out for the same reason as they are in (ii). If so, then these particular sentences turn out not to tell us much about clause structure in Warlpiri after all, *contra* Simpson (1991). More work is needed on these issues.

16 However, there is a complication in embedded clauses. Such clauses have no auxiliary to host clitics, and an empty object in such a clause can apparently be understood as a reflexive (Simpson 1991: 169). This may require some revision of the standard P&P typology of empty categories, but it does not bear directly on the matters at hand.

17 Another property that Warlpiri-type languages and Mohawk-type languages seem to share is that they resist taking clauses as arguments (see Simpson 1991: 20–1 for Warlpiri, Austin personal communication for Jiwarli, and Baker 1996: ch. 10 for Mohawk-type languages). This is another difference between them and Japanese-type languages. This property might also be derivable from the Pronominal Argument Hypothesis, given that the pronominal arguments are inherently nominal and therefore cannot form chain-like relationships with (unnominalized) clauses, due

to the mismatch in syntactic category.

18 Most of the other Simpson and Bresnan/Austin arguments against the Pronominal Argument hypothesis involve the pragmatics associated with having a pronoun in the structure in some way or another. I return briefly to this issue in section 5.3.

19 Bare adjectives in English can sometimes appear following the definite determiner "the," with the nominal as a whole referring generically to the class of people that have this property. However, even in these cases it can be shown that the adjective is the modifier of a null nominal head meaning roughly "people." Hence, the adjective is not technically the complement of the determiner; rather the null N is.

20 Of course it would be desirable to deepen this proposal by showing how these syntactic differences between adjectives and nouns follow in a principled way from a single defining difference – perhaps the fact that Ns are sortal and As are not. I hope to attempt this in future work.

21 The reader should take note, however, that (40) and (39) are not really a minimal pair, since the embedded clause in the Mohawk example is a complement, whereas in the Warlpiri example it is an adjunct. This difference may not be an innocent one, but it is probably unavoidable, if Warlpiri does not have true complement clauses (see n. 17).

22 Perhaps the most important syntactic problem is that it is not clear that the very free word order found in Jiwarli and Warlpiri follows immediately from the analysis of nominals as depictive predicates. These depictive predicates are presumably adjoined to some projection of the verb, and Speas is content to assume that free word order is a theoretical possibility, since no fundamental principle of grammar determines whether they should adjoin to the left or the right of the verbal projection. However, depictive secondary predicates in English are *not* particularly free in their word order: unlike adverbs, they can only be adjoined to the right of VP, and object oriented depictives must adjoin inside of subject oriented ones:

(i) a. I only eat fish raw drunk. (compare "I eat fish slowly drunk.")
    b. *I raw eat fish drunk. (compare "I slowly eat fish drunk.")
    c. *I only eat fish drunk raw. (compare "I eat fish drunk slowly.")

Thus, there is a difference between secondary predication in English and nominals in Warlpiri that still needs to be understood. One promising place to start would be to better understand the special role that Warlpiri's Case morphology plays in the licensing of secondary predication and in control more generally (see Simpson 1991: chs 4, 5, for extensive discussion of the relevant facts), since English does not have Case in this sense.