SYNTACTIC ORIENTATION AS A SEMANTIC PROPERTY

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The notion of "orientation" that Dixon discusses can be seen lurking in Vendler's (1957) discussion of aspect: An "activity" terminates at the whim of the agent (i.e., it has "subject orientation"), whereas an "achievement" terminates in the culmination of an activity (i.e., it has "object orientation", though I find Dixon's use of the word "object" in this term a bit misleading). Vendler's paper and Dixon's each shed much light on the subject matter of the other. Dixon's discussion of John finished the book *overlaps to a large extent with Newmeyer (1970), although Dixon and Newmeyer arrived at their conclusions quite independently and roughly simultaneously.*

What I take for granted throughout this paper is that a language contains a set of basic norms--semantic, syntactic, morphological, and maybe even phonological norms--from which it deviates in different ways and to different degrees a great deal of the time. Take a very simple example, the word *head*. Ask anyone what this means/refers to and they will talk about

a human or animal head. This is the "central" or "norm" meaning. Other meanings--the head of a cabbage, or a procession, of a company or a country or a university department--are extensions of meaning, from and with respect to the norm meaning. Similarly, items have norm patterns of syntactic behavior. They can have extensional syntactic function, differing in some way from the norm pattern, by analogy with the syntactic pattern of some other item, and so on. Sentences conforming to a norm pattern are accepted as grammatical by all speakers. There are other sentences whose grammaticality linguists argue about, each side trying to persuade the opposition that this definitely is grammatical or definitely is not, as if there could or should be any hard and fast division. What is to be explained is the fact that people do differ in their judgments of grammaticality of certain sentences; these are the nonnorm sentences, the extensions from the norm. Whether a particular extension is acceptable is a complex matter, depending on whether ambiguity or confusion would be likely to result, the structure of some part of the real world, interference from phonologically similar surfaces structures, the strength of the analogy on which the extension is based; and so on. Depending on the interrelation of these and other factors, different speakers draw the threshhold of acceptability in different places in each particular case.

Some discussion of the norm-and-extension approach to word meaning is in Dixon (1971), and of its application to the syntacticomorphological phenomenon of noun classes in Dixon (1968). Burling (1965) applies the method to kinship terminology. This paper does not give detailed syntactic exemplification; it merely works within this theoretical frameword, taking it for granted. Some incidental exemplification will, however, be found in Section 4.

The rather different meanings of *cease* and *finish* in English are demonstrated by the following sentences:

(1) *John has ceased shelling the peas.*

(2) *John has finished shelling the peas.*

(3) *John has ceased reading the book.*

(4) *John has finished reading the book.*

(2) implies that there are no more peas to be shelled, (1) that there probably are some peas unshelled but that John has decided he's had enough, at least for the time being. Similarly for (3) and (4). One way of describing this is to say that the sense of *cease* and the sense of *finish*

represented in these examples have the same basic semantic content but differ in their syntactic orientation. *Finish* involves "object orientation", that the discontinuation of the action is due to some property of the referent of the object (here, that it is all used up); *cease* involves "subject orientation", the discontinuation being due to the referent of the subject NP of the sentence.

Recognizing syntactic orientation as a part of the semantic representation of a lexical item is necessary not only for certain pairs of verbs in English, it is also needed for the semantic description of the class of adverbals in Dyirbal, a North Queensland language. It is probable that it will be necessary to deal with syntactic orientation in the semantic descriptions of many (or all) other languages. We next discuss Dyirbal adverbals, turning after that to the two quite different-- but probably related in some very deep manner--devices by which English parallels the Dyirbal constructions: first, pairs such as *cease/finish* and *start/begin;* and second, what we will call the "topic-manner" construction.

1. Besides closed, entirely grammatical, word classes such as pronoun and particle, Dyirbal has five open word classes--noun, adjective, verb, adverbal, and time modifier. Of these adverbal is the smallest class (although it is still "open" in that it can be added to, in the same way that noun and verb can be and that pronoun and particle cannot be), there being only around two dozen adverbals in the writer's corpus of about three thousand dictionary items.

Any VP in Dyirbal can contain any number of verbs, provided they agree in surface transitivity and in (tense or other) inflectional ending, and provided they have simultaneous reference. Thus *wayn^{y}d^{y}in* is 'go up', *warin^{y}u* is fly, and *wayn^{y}d^{y}in warin^{y}u* or *warin^{y}u wayn^{y}d^{y}in* (the order is free) is 'fly up'. Note that there are no overt markers of coordination anywhere in the grammar of Dyirbal. An adverbal, which has exactly the same morphological possibilities as a verb, can occur in a VP with any verb and serves to modify the meaning of the verb.

Most of the adverbals fall into pairs, where the members of each pair have a common basic semantic content but differ in syntactic orientation. For instance,

(a) Basic content 'do badly' occurs in the two transitive verbs *daran*, involving object orientation, and *ganbin*, involving subject orientation. *daran* implies that the event was unsatisfactory because of some property of the object,

ganbin that the unsatisfactoriness is due to the subject. For example, with *dʸaŋganʸu* eat, we get *daran dʸaŋganʸu* 'eat something that is, say, stale' as against *ganbin dʸaŋganʸu* 'eat sloppily'.

(b) Basic content 'discontinue' occurs in the transitive verb *dʸaybin*, involving object orientation, and the intransitive *wudanʸu*, with subject orientation. *dʸaybin* indicates that an action is finished, since there are no more objects on which it could be performed (for example, finish spearing because there is nothing left to spear); *wudanʸu* indicates that the subject finishes of his own accord and could have continued had he wished to (for example, stop washing, or stop singing, or the rain stops). Semantically, this pair appears exactly parallel to *finish/cease* in English.

There are other pairs; e.g., 'do slowly' either (i) with object orientation (because of the nature of the object, for example, a heavy load takes a long time to carry), or (ii) with subject orientation (the action being performed slowly at the whim of the subject); and also 'do quickly', 'do well', 'do first/start to do' (a rather complex concept that appears to be quite natural and unitary to speakers of Dyirbal but is difficult to render into English; a detailed discussion would be out of place here) and 'do something that shouldn't be done'.

In English we have nothing beyond our own intuition to tell us that *cease* and *finish* are closely related semantically. However, there is in Dyirbal a special "mother-in law" style of speech that provides support for many semantic decisions concerning verbs, nouns, and adjectives, as well as adverbals. Briefly, the "mother-in-law" style is obligatorily used in the presence of certain taboo relatives; the unmarked "everyday" style is obligatorily used in all other circumstances. The two styles have identical phonology and grammar but entirely different vocabularies; there are fewer words in mother-in-law, there existing a many-to-one relation between everyday and mother-in-law vocabularies. Thus, mother-in-law often has only a generic term, where the everyday style has only specific terms. Full mother-in-law data is not available for adverbals, but where it is available, it seems that mother-in-law has a single word corresponding to each adverbal pair in the everyday style. That is, mother-in-law does not have different items corresponding to different syntactic orientations, as does the everyday style, but merely has one item for each basic semantic content. Thus, in everyday

style we have both *ŋaynʸin* 'do first/start to do' with subject orientation, and *ŋunbiṛan* 'do first/start to do' with object orientation. For instance, with *nudin* 'cut' *ŋaynʸin nudin* is 'be first to start cutting trees down', whereas *ŋunbiṛan nudin* is 'make a small cut in a tree [to see whether the wood is hard or soft, say]'. Both *ŋaynʸin* and *ŋunbiṛan* are translated into mother-in-law by the same item, *ŋunin*. Thus, the mother-in-law correspondences for Dyirbal adverbals provide support for our grouping them into semantic pairs differing only in syntactic orientation. (For a fuller account of mother-in-law, and detailed data on verb correspondences, see Dixon, 1971.)

2. The types of semantic modification of verbs, interpreted with respect to either subject or object of the verb, that are achieved in Dyirbal by the single syntactic device of adverbal addition, are achieved in a number of different ways in English. Taking these in turn, we first have semantic pairs as in Dyirbal: the ideas 'commence' and 'discontinue' must be specified together with either subject or object orientation. The pair *cease/finish* was discussed above. Notice that *stop* appears to be synonymous with *cease* (and *stop* is a much commoner, and thus in some contexts more natural, word). However, *stop* has a more limited syntactic paradigm than *cease,* because of interference from the paradigm of the homonymous item indicating cessation of motion, as in *I stopped the night at Buffalo*. Thus, we can have *He ceased reading, He ceased to read,* and *He stopped reading* but not in this sense **He stopped to read*. The last sentence is already preempted by the paradigm of the other verb *stop*: *He stopped* [*at the library*] [*in order*] *to read*. Since it has a full paradigm, we use the less common *cease* in this paper.

It appears that the semantic difference between *begin* and *start* is exactly parallel to that between *finish* and *cease* (or *stop*). The underlying distinction is in many contexts neutralized, *begin* and *start* being used interchangeably rather more freely than *finish* and *cease*. However, their different syntactic orientations but identical basic semantic content can be seen from the sentences,

(5) *I'm going to settle down tonight and start reading Chomsky's new book again.*

(6) *I'm going to settle down tonight and being reading Chomsky's new book again.*

(6) implies that I shall commence tonight at page 1 again; in the case of (5), however, it is implied that I shall commence at page 187, or wherever I left off last week. *Begin,* like *finish,* involves object orientation--the commencement is with respect to the book; *start,* like *cease* and *stop* involves subject orientation--the commencement is with respect to the reader, not the book. Further support for this is given by the fact that *start at the beginning* is far more natural than *begin at the start*.

The pairing of *start* with *stop* and *begin* with *finish* is shown by sentences like:

(7) *I don't like his driving, it's all starting and stopping*.

which has an entirely different meaning from

(8) *I don't like his driving, it's all beginning and finishing*.

In one particular context there is an institutionalized pairing of *start* with *finish:* for races, such as horse races, motor races, and running events. The most likely explanation of this is that the commencement is at the volition of the official with the gun, which the riders obey; that is, the commencement is with respect to the subject; the finish, however, is when the race is completed; that is, it is with respect to the object, the race. Whether or not the reader accepts this or any other putative "explanation" is immaterial. The important thing is just to recognize that in this single specialized context there is an institutionalized pairing of *start* with *finish* that constitutes an exception to the normal pairings according to the underlying semantic structure of English.

3. Sentences like *He began reading the book, He finished reading the book* are normally assigned a deep structure containing two S nodes, with *begin* or *finish* in the higher sentence and *read* in the lower one. But in this case, the two sentences must have identical subjects, and we must have something of the nature of a "deep constraint" specifying this. Now in many languages modifying concepts like 'begin', 'finish', as well as 'try' and others may be realized by verbal affixes instead of or in addition to realization as separate words. In these cases, there is motivation for regarding the modifier as a part of the same deep VP as the main verb. Dyirbal, for instance, has one verbal affix 'do first/start to do' in addition to the adverbals mentioned; in Dyirbal, there are syntactic arguments

for the single deep VP treatment. In view of this, it is natural to suggest that in English, adverbal verbs such as *cease, finish, begin, start, try,* and also *continue* should be regarded as modifiers within a VP in deep structure (having a status something like that of modals). Now, the rules that produce surface from deep structures will for sentences involving these verbs supply an extra S node, and so on. This is meant only as a suggestion and while its advantages are obvious--elimination of the deep constraint, and of equi-NP deletion here, similarity of treatment with that demanded by the grammars of other languages--more syntactic arguments would have to be given and syntactic details worked out before it could seriously be put forward. It is not crucial for the arguments of this paper. That this approach has not to my knowledge been suggested before may be due to a gratuitous assumption that appears to underlie recent work, namely, that a deep structure must have at least the S nodes of the corresponding surface structure. This can be traced to the fact that work on deep structure as it were grew out of work on surface structure and has always had more of an eye on surface patterns than on underlying (and often universal) semantic patterns.

The unmarked surface structure construction involving *begin, try,* and so on is with the main verb in *-ing* form; all but one of the verbs can also occur with *to* constructions. The semantic difference between *-ing* and *to* constructions is an important but elusive one; the best discussion to date is in Bolinger (1968), where the contrast between *-ing* and *to* is said to involve "reification" versus "hypothesis or potentiality". It might be possible to explain in these terms the fact that all the verbs of the *begin, try* set with the exception of *finish* occur in a *to* construction. Thus, we have *He ceased shelling the peas, He ceased to shell the peas, He finished shelling the peas* but not **He finished to shell the peas*.

4. I am regarding the *-ing* construction as the unmarked form for a sentence involving *begin, finish, try,* etc. Partly because all these verbs occur in *-ing* constructions and only some in *to* constructions; partly because *-ing* seems intuitively more basic and seems intuitively the basis for NP-complement sentences discussed in the next paragraph. The *to* constructions are thus regarded as syntactic derivations from *-ing* forms, provided certain semantic conditions are satisfied (they are evidently not for *finish*).

Now we have

(16) *He began the book.*

(16) patently does not mean that he began doing to the book everything that one can do to a book. In each specific occurrence it will have a specific semantic interpretation - he began reading, or writing, or binding the book. This suggests that (16) is actually derived from sentence (17), (18), or (19).

(17) *He began reading the book.*

(18) *He began writing the book.*

(19) *He began binding the book.*

There is some rule specifying that a main verb in *ing* form can optionally be deleted following a verb of the *begin, try* set. Evidence for the main verb being present in underlying structure is not hard to find. For instance,

(20) *Tom finished my thesis today and he'll begin Fred's tomorrow.*

Each of the coordinated sentences in (20) is at least three ways ambiguous: Tom could be reading, writing, binding, etc. either thesis. But (20) itself is three ways and not nine ways ambiguous--whatever Tom did to my thesis, he'll do the same to Fred's.

There is a whole area of semantics around here, of the utmost importance, that does not fall within the scope of this paper but which might usefully be alluded to. Consider the sentence

(21) *John has finished the peas.*

This is at least three ways ambiguous, as the deleted verb is *shelling, cooking,* or *eating.* Similarly, in

(22) *Mary has finished the potatoes.*

the deleted verb could be *scraping, peeling, cooking, eating,* or whatever. However, the sentence

(23) *John has finished the peas and Mary (has finished) the potatoes.*

demands a similar deleted verb in each of its coordinate parts. Thus, John and Mary could be understood both to have finished eating, both to have finished cooking, or John to have finished shelling the peas and Mary to have finished scraping or peeling the potatoes. (23) could not imply that John has finished shelling the peas and Mary eating the potatoes. For eating or cooking, we can say that the same underlying verb is deleted in each case. But for the third possibility, different verbs must be involved.

In each case, the preparation of the food is the issue; different verbs are used for the different types of preparation of the two vegetables. Furthermore, either *scraping* or *peeling,* which are, as it were, in complementary distribution for potatoes (which method is followed depends mainly on the age of the potatoes) corresponds to *shelling*. It is thus clear that we do not require identity of verbs, rather identity of semantic type.[1] The sanest conclusion to draw from these examples is that for (16) and (21), (22), we should not hypothesize an underlying verb, but rather an underlying partial semantic specification at the "main verb" node.

Returning, for present convenience, to the hypothesis that an underlying verb is deleted to derive (16), we can see that there are constraints on this deletion.[2] First, verbs *begin, start, continue, cease, finish* (but not *try*) can essentially only modify "durative verbs", that is, only actions that are noninstantaneous can have beginnings and endings. In fact, the verbs can modify nondurative verbs, but the resulting sentences are more awkward than durative sentences, showing that here there is an extension of syntactic usage from the "norm pattern". Thus,

(24) *John (finally) finished buying the book.*

may only be fully comprehensible if we explain that there was a lot of bargaining involved and that it was extraordinarily protracted. *Finish* does not naturally modify *buy,* as it does naturally modify durative verbs such as *read, shell*. And an indication of the lack of naturalness of (24) is the fact that, unlike in the case of (17-19), *buying* cannot be deleted from (24). That is, main verb deletion is only applicable for durative verbs.

There are many other constraints. For instance, probably only verbs of a certain action set can be deleted. Verbs of other sets, such as *plan, decide, know, watch, hear* cannot be deleted. Thus, from *The generals finished planning the war* we cannot get *The generals finished the war,* and from *I began hearing the cuckoo in late March* we cannot get *I began the cuckoo in late March*.

Our suggestion thus far is that there is a certain set of verbs, *begin, continue,* and so on, that can in deep structure modify any verb, whether transitive or intransitive, of a certain semantic type. *Begin* and so on are not themselves marked for transitivity; thus, we avoid having to say, with P. Rosenbaum (1967), that they are intransitive verbs taking verb phrase complements. And we avoid Perlmutter's (1970) suggestion that there are two verbs *begin,* one transitive

and one intransitive.

Perlmutter's paper is interesting and provides important examples. All appear to be handlable within the framework of the suggestion here. For instance, sentences like *The doling out of emergency rations began* are derived from constructions like *They* (or unspecified plural subject) *began doling out emergency rations*. Note that the syntactic derivation only works if the subject is plural; thus, *Tom began grading papers* does not yield *The grading of papers began,* but *They began grading papers* does yield this.

There is a type of nominalization derivation that forms from *They* (or unspecified plural subject) *began fighting,* the sentence *A fight began*. This differs from the example of the previous paragraph in that the language does contain a noun *fight,* derived from the verb *fight,* and this appears in the subject NP of the derived sentence. Now Perlmutter points out that we can also have *A commotion began*. We could say, following recent work by Postal and others, that we have here to postulate an underlying verb *commote,* which is obligatorily nominalized. Thus, from the underlying **They began commoting* is derived *A commotion began*. This is obviously the right kind of explanation. However, this particular formulation does not seem ideal. Rather we can make use of the norm-and-analogic-extension idea and say

1. *Fight* is basically a verb, which can occur with *begin,* as in *They began fighting*.

2. This sentence can yield *A fight began* featuring the derived noun *fight*.

3. *Commotion* is a simple noun, not a derived one like *fight*. However, *fight* and *commotion* are near-synonymous nouns, that is, they have a large common semantic factor.

4. Nouns that are similar semantically tend to have the same syntactic possibilities. *Fight* can occur in *A ----- began* because of its derivational history. The construction is extended to apply to *commotion* also, because of its great semantic similarity to *fight*.

I maintain that this type of argument has to be used at very many places in the grammar of any language. And this kind of explanation is preferable to postulating an underlying verb that never exists as a verb and a sentence such as **They began commoting* that must obligatorily be changed into some other construction. However, the alternatives are largely equivalent, and the issue is quite irrelevant to the present

discussion.

Other examples that might appear to give difficulty are expressions like *The thunderstorm began*. An explanation can be given for these; it is not too usual and needs more justification than would be appropriate here. Briefly stated, just because each surface structure sentence must have a main verb seems to me no reason for insisting that each deep structure sentence have some specified main verb. Rather, the assumption that deep structure sentences must have full main verbs seems a gratuitous carryover from surface structure. For instance, I suggest that *rain* is primarily a noun, as in sentences like *Rain is falling*. However, we can have a deep structure with the subject NP specified as *rain* and with the main V node unspecified; the semantic interpretation of this is that any verb that can normally occur with *rain*,[3] according to selectional/semantic/extrasemantic considerations, is "understood". Now each surface structure must have a surface verb, and so from deep *Rain is -----ing* is derived *It is raining*. *Rain* fills the surface verb slot, and *it* is brought in as a dummy surface subject. Now the deep structure can involve an adverbal like *begin* modifying the understood V node. Thus deep *Rain begin is -----ing*. The surface structure form of this is *The rain is beginning* or *It is beginning raining*. Or, in past tense, *The rain began* or *It began raining*. The first alternative is the most acceptable; here, *begin* fills the main V slot in surface structure and there is no need for *rain* to move out of the subject NP. The second alternative involves unnecessary *rain* movement, by analogy with *It is raining*. Note that for the derived *to* construction we must have *rain* movement. That is, *The rain began* is parallel to *He began reading the book*, and *It began to rain* is parallel to *He began to read the book*.

The class of nouns that behave like *rain*, i.e., that can have a dummy V in deep structure and noun movement to fill the V slot in surface structure, is a natural semantic class: *rain, snow, sleet, hail,* etc. *Thunderstorm* is a hyponym of *rain* and, as is often the case with hyponyms, has analogous syntactic possibilities. However, movement to V slot is largely restricted to the generic terms, and is denied their hyponyms. Thus, we can say *A thunderstorm began* but not so naturally *It is thunderstorming*. And note *The thunderstorm began to rain down on us*, where the hyponym fills subject slot and its generic correspondent flips over to fill the main V slot in the surface structure.[4]

We have already spent too long discussing the *begin* set. But before moving on to consider the other syntactic devices

in English that correspond to some of the Dyirbal adverbals, we should make one last remark. McCawley (1968c) has insightfully discussed the need for semantic representation to involve tree structuring. However, his example *kill* = *make* + *become* + *not* + *alive* suffers from taking no account of syntactic orientation. He relates *kill* to *make die* and *die* to *cease living*. However, *die* is clearly related to *finish living*, rather than to *cease living*.[5] This can be seen by comparison with sentences such as *The frost finished my roses*.

5. We began with the observation that there is in Dyirbal a set of adverbal concepts - finish/start; do well/badly; quickly/slowly; do what shouldn't be done - each concept being further articulated into a pair of verbs differing in syntactic orientation. Now English has pairs, finish/start, discussed at length above. But it has no similar pairs do well/badly; slowly/quickly; etc. However, English does have a syntactic device for allowing further adverbal modification of a verb, where the modification is interpreted with respect to either subject or object of the verb. In fact, English allows a wider range of syntactic orientation than does Dyirbal.

The device is simple. The relevant NP (that which the adverb is syntactically oriented to) is merely brought to the front of the sentence so that it appears to be surface subject, and the appropriate adverb is inserted (normally after the object, although there is some freedom of position). The original subject is obligatorily deleted. Thus we have

(25) *John translated Shakespeare into Greek*.

With the adverb *well* we can have either subject orientation (26) or object orientation (27).

(26) *John translated Shakespeare into Greek well*.

(27) *Shakespeare translated into Greek well*.

Similarly, from (28) we can get (29) and (30).

(28) *Mary washed the clothes*.

(29) *Mary washed the clothes well*.

(30) *The clothes washed well*.

Note that if we omit the adverb from (27) and (30) we do not get acceptable sentences. Since the only property *Shakespeare* in (27) and *the clothes* in (30) have in common with subjects in normal sentences is that they are sentence-initial, I prefer not to refer to them as subjects here, but to use the term "topic" instead. Since this topicalization depends on the

inclusion of one of a limited set of manner adverbals, we can call (27) and (30) topic-manner construction.

Now NPs with a number of different underlying syntactic functions can be topicalized. For instance, we can have

(31) *The engineer recorded King Oliver's band with a Smithson microphone in Studio B.*

If the results of this are pleasing, we may consider them due to one or more of four factors (here parentheses indicate optionality):

(32) *The engineer recorded (King Oliver's band) well (with a Smithson microphone)(in Studio B).*

(33) *King Oliver's band recorded well (with a Smithson microphone)(in Studio B).*

(34) *The (/a?) Smithson microphone recorded (King Oliver's band) well (in Studio B).*

(35) *Studio B recorded (King Oliver's band) well.*

Here either the object -- which in this sentence, unlike (27) and (30), can be topicalized without a manner adverbal being present--or the instrument or the location can be topicalized. Note that all of these are relevant factors for the success of the recording session. Generally, locationals cannot topicalize--certainly *to* and *from* locationals do not appear to, simply because they are never a crucial factor for the success of an event; *in* and *on* locationals can, however. Other examples of topic-manner sentences are: *This oven cooks well, This flour cooks well, These bricks build well, This jug pours well.*

To me, *This pan fries well* is an acceptable sentence, since the success of a frying enterprise does depend greatly on the pan that is used. However, I find **This kettle boils well* impossible, since boiling is not an operation of which there can be degrees of excellence, that the kettle could contribute to. However, *This kettle boils quickly* is perfectly acceptable (in British English, at least).

I have for some time looked for some syntactic pattern among topic-manner sentences. It seems that the criterion for whether an NP can be topicalized from a certain sentence, with a particular manner adverbal, is not syntactic but is rather semantic or extrasemantic. If the referent of the NP is relevant (along the dimension specified by the manner adverbal) to the action referred to by the verb, then it can be topicalized. Thus we cannot have *Detroit recorded well* from *The engineer recorded King Oliver's band in Detroit,*

although we saw above that we can have *Studio B recorded well*. And this accounts for the fact that we cannot topicalize the objects from *He saw the rock*, *He gave the book to Mary*, *He heard the waterfall*, *He lost the money*, *He found the wallet*, *He bought the car*, whereas we can in *He kissed the girl*, *He sharpened the axe*, *He sells Chevrolets*.

Notice that some pairs of verbs in the lexicon are in a special semantic relationship that is relevant to topicalization. Thus, we have *Chomsky taught McCawley well*, but we do not topicalize *McCawley* if we want the adverb to have *McCawley* orientation; instead of **McCawley taught well* we have *McCawley learnt well*.

Whether or not a verb can figure in a topic-manner construction is a function of the semantic content of that verb. For instance, it appears that a pure motion verb is not semantically suitable. We can have *It carries well*, *It handles well*, but not **It takes well*, **It brings well*, **It sends well*. A much fuller knowledge than we have at present of the detailed semantic structure of the lexicon is necessary before it would be profitable to embark on a full discussion of the semantic conditions determining whether a verb can appear in topic-manner constructions.

We began with a set of adverbal concepts in Dyirbal - start/finish; do well/do badly; do slowly/do quickly; do what shouldn't be done. English handles start/finish through verbs or quasiverbs, in a way similar to Dyirbal. For do well/ badly; slowly/quickly, English uses the topic-manner construction. As we have described this construction so far, it might seem that all or many English adverbs could appear in such a construction. In fact, exactly as there are restrictions on verbs that can appear in topic-manner constructions, so are there restrictions on adverbs that can feature in the construction - severe restrictions in fact; it may be that the norm set is just well/badly; slowly/quickly (exactly the same four concepts as in Dyirbal). Admittedly, some other adverbs appear to occur in topic-manner constructions. For instance, *These clothes washed easily*. However, this is probably an extensional pattern by analogy with the norm pattern *These clothes washed well*. The norm constructions for *easily* are *It is easy to wash these clothes*, *It is easy to please John*, and *These clothes are easy to wash*, *John is easy to please*. Extensions from this pattern by analogy, etc. are limited; thus, we have *These clothes washed easily* but not **John pleased easily* (or even **John pleases easily*).

The other adverbal concept mentioned for Dyirbal 'do what shouldn't be done' is dealt with by modals in English. This suggests that syntactic orientation is a semantic

property of modals, too. This, in fact, appears to be the case. However, this could only be dealt with in terms of a full discussion of modals, as difficult an area as any in the grammar of English, and one into which it does not behoove this paper to venture.

In summary, then, we have discussed two quite different topics in English. Verbs (*finish/cease, begin/start,* and so on) that have well-defined syntactic behavior, which can be described by means of rules of a conventional type. And topic-manner constructions, like *This jug pours well, These cars sell well,* about which very little can be said syntactically. By analogy with Dyirbal, we have suggested that these are two different manifestations of the same (probably universal) semantic phenomenon - modification of a verb by an adverbal of a certain set, with a choice of syntactic orientations.

NOTES

[1]And how much identity is required of the verb nodes depends upon how much is semantically common to the (subject and) object NP(s). Thus, peas and potatoes are both vegetables and can undergo similar sets of actions. However, there is little in common to peas and belfries, so that we would expect *John has finished the peas and Fred the belfry* to have a measure of ambiguity that is the multiple of the ambiguity of *John has finished the peas* and the ambiguity of *Fred has finished the belfry*.

[2]Notice that the main verb cannot naturally delete with *stop* and *cease*, but for different reasons in the two cases. In the case of *stop,* there is interference from the causative form of the homonymous item *stop;* thus, *He stopped the peas* would be understood as *He stopped the motion of the peas,* e.g., he stopped them rolling off the table (this is the same verb as *He stopped the night in Buffalo*). *Cease* cannot delete a following main verb since it is a relatively uncommon verb, and the less common lexical items have far narrower possibilities of syntactic, semantic, and morphological extension and behavior than do the more frequent ones (this is a matter that must be taken on trust by the reader for the time being, since this is clearly not the place to go into it in detail).

[3]That is, any verb that is likely to occur with *rain* in its dictionary/encyclopedia entry. This excludes verbs of motion, for instance. Thus *It is raining* is a paraphrase of *Rain is falling* but not of *Rain is coming*. Note that the natural set of verbs that behave in this way does not include *fog*. We can say *Fog is coming* but there is no *fog* sentence similar to *It is raining* (something like *The mirror is fogging up* is quite different).

[4]This and other sections of the paper have some similarity to the discussions in Fillmore (1968).

[5]Instead of talking of subject and object orientation, we could instead have referred to subject orientation and predicate (equals verb plus object) orientation. This would simplify the treatment of intransitive verbs, for example, which have not in fact been discussed in the paper. The decision concerning whether we refer to object or to predicate orientation seems a minor one; the arguments on each side will not be given here. In either case the extension to intransitives is relatively simple and is here left to the reader.