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boys and only 1 girl, the proportions seem a matter of contingency. It would be normal to have an announcement in the paper which said, "A music class of boys and girls will be started next week. . ." but decidedly odd to have one which read, "A music class for boys and a girl (/girls and a boy) will be started next week. . ." Of course, some eccentric institution *could* establish such a class intentionally, but in those circumstances, I think (2b) would probably become a more "normal" sentence for the people who were associated with that rather special environment.

It is interesting to compare this case with that of (3):

- (3) a. Which plane do you like the engine in?  
b. Which plane do you like the engines in?

Both (3a) and (3b) are possible, and this is presumably because it is normal for certain types of planes to have only one engine, and for others to have more than one.

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#### LEXICAL PRODUCTIVITY VERSUS SYNTACTIC GENERATIVITY\*

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In a recent article on English compound-formation processes, Roeper and Siegel (1978; henceforth RS) claim that competition between the outputs of the lexical compounding rules and the independently needed syntactic rules can and will arise, and that in such an instance, the syntax will prevail. Their example is the nonexistence of adverb-noun compounds like \**beautifully-dancer* or \*(*the*) *beautifully-dancing*, which their rules predict should occur. RS note (pp. 221-223) that these gaps are filled by semantically equivalent adjective-noun sequences independently generable by the syntax, i.e. *beautiful dancer*, *beautiful dancing*. Furthermore, they suggest (pp. 223-224) that such a conflict between syntactic generativity and lexical productivity is *naturally* resolved in favor of the syntax, because syntactic rules are by their very nature exceptionless, whereas "the lexicon can limit productivity with respect to any lexical class or semantic, morphological, or idiosyncratic feature". They conclude, therefore, that "it is only the lexicon that could 'block' the production of the compounds in question", i.e. that syntactic generativity will prevail.

\* Some of the observations herein are to be found in my dissertation (Joseph (1978)). Thanks are due to the Izaak Walton Killam Scholarship Committee of the University of Alberta for a Postdoctoral Fellowship which enabled me to put these thoughts into a more coherent form.

#### SQUIBS AND DISCUSSION

It is possible, however, to question the details of their analysis as well as their conclusion. In particular, it is not clear that the issue of "competition" is really relevant to the example they set forth, nor is it always the case that in clear cases of competition, syntactic generativity always prevails over lexical productivity.

It has been suggested<sup>1</sup> that adverbs, such as *beautifully* in the examples above, should be systematically excluded from compounding processes in general. Although there are apparent compound adjectival phrases consisting of adverb + adjective, e.g. *slowly burning* or *well written*, no set of phonological or semantic facts stands in the way of taking them to be syntactically generated phrases and not true compounds. With adverbs therefore eliminated from adjectival compounding, it is reasonable to suppose that they should not participate in *any* compounding process, including nominal compound formation. With such an exclusion, the issue of why *\*beautifully-dancer* is blocked would never arise.

Furthermore, some examples from English<sup>2</sup> suggest the opposite of RS's conclusion regarding the dominance of the syntax over the lexicon. For example, a compound like *school-house* coexists with a semantically equivalent syntactically produced NP like *a house which is a school*; similarly, syntactically generated phrases like *made by hand* or *made by machine* do not preclude the existence of compounds like *hand-made* or *machine-made*. Thus, other facts from English cast doubt on RS's conclusion.

At this point, though, an objection can be raised. The English compounds *school-house*, *hand-made*, etc., used to argue against the dominance of the syntax over the lexicon, are not of a fully productive type. Thus, parallel to *school-house*, there is no compound *\*office-house* (cf. *a house which is an office*), nor is there a compound *\*heat-made* parallel to *hand-made* (cf. *made by heat*). Since these compound-types are not necessarily productive formations, it is possible that they may be individual lexical items, entered as wholes in the lexicon. If so, no competition with the syntax should arise, for these compound-types are not lexically *produced*. This means that it would be best to test RS's claims with lexical compounding processes that seem fully productive. Some developments in the history of Greek regarding the syntactic rule of Object Raising, analogous to English *Tough* Movement, and related lexical compounding processes provide better evidence regarding these claims.

<sup>1</sup> For example, by an anonymous reviewer of this note, to whom thanks are due.

<sup>2</sup> Thanks are due to two anonymous reviewers for bringing these English examples to my attention.

From Ancient Greek through early Medieval Greek, one can find sentences generated by Object Raising (henceforth OR).<sup>3</sup> Some representative examples include (1) and (2):

- (1) hrēiteroi            polemízein ēsan  
easier/NOM.PL fight/INF were/3PL  
hoi Akhaioi  
the-Achaean/NOM  
'The Achaeans were easier to fight (against).'  
(Il. 18.258)
- (2) tragoudōusin tò paránomon horōsai  
sing-of/3PL the-illegal/NTR see/INF  
mustérion  
rite/NTR  
'They sing of the rite (which is) illegal to see.'  
(Spanos 26 (12th cent.))

Ancient Greek also had a productive compounding process which produced adjectives with the meaning of an underlying OR sentence.<sup>4,5</sup> These adjectives consisted of the prefixes *dus-* 'hard' or *eu-* 'easy' plus the verbal adjective in *-tos*,<sup>6</sup> for example:

- (3) dúsbatos    'hard to pass over' (cf. *baínō* 'go (over)')  
dúsgnōstos    'hard to recognize' (cf. *gignōskō* 'know')  
duseklutos    'hard to undo' (cf. *eklúō* 'undo')  
duseúretos    'hard to find out' (cf. *heurískō* 'find (out)')  
dúskritos    'hard to discern' (cf. *krínō* 'discern')
- (4) euapátetos    'easy to cheat' (cf. *apatáō* 'cheat')  
eueúretos    'easy to find' (cf. *heurískō* 'find (out)')  
eúpistos    'easy to believe' (cf. *pisteúō* 'believe')  
eústreptos    'easy to turn' (cf. *stréphō* 'turn')

The uniform OR semantics of these compounds (i.e. 'X is *duseúretos*' = 'X is *khalepós* ('hard') *heuriskein* (INF)'), their regular form, and their clear connection with related verbal forms together suggest the productivity of this compound type.

<sup>3</sup> Arguments that these sentences in fact represent Object Raising are given in Joseph (1978, chapter 4).

<sup>4</sup> This is not to say that these compounds necessarily were derived in any sense of the word from underlying complete sentences.

<sup>5</sup> Wasow (1977) has proposed that lexical rules must be local, so that it might be thought that this process cannot be a lexical rule because it is not "clause-bounded". However, Ard (1978) suggests that Wasow's proposal cannot be maintained, interestingly enough, on the basis of the historical development of certain lexical rules in English.

<sup>6</sup> In view of the fact that verbal adjectives in *-tos* were generally passive in meaning, these compounds may result from a lexical Passive-plus-Subject-to-Subject Raising "derivation". However, that would in no way affect the claim that these have the meaning of underlying OR sentences, for the same deep structure source would be needed in either case.

The coexistence of a syntactic OR rule and this apparently productive compounding process in Ancient Greek in itself suggests that clashes of lexical productivity with syntactic generativity are not always resolved in favor of the syntax. However, in view of the lack of a "transparent" relationship between these compounds and the syntactic OR construction, since the first compound member (e.g. the prefix *dus-*) and the independent OR triggers (e.g. *khalepós* 'hard, difficult') do not match, one might want to claim that they had a lexical derivation totally unrelated to OR in any way; there would presumably then be no cause for the "blocking" of the lexically produced adjectives by the syntax. However, certain developments in the later history of Greek make it impossible to maintain this proposal.

By Medieval Greek, OR in its simplest syntactic form, as in (1) and (2), was on the wane, due in part to the widespread replacement of the infinitive, as in the complement of OR sentences, by finite verbs.<sup>7</sup> From late Medieval Greek on into Modern Greek, an OR construction with a finite complement clause is found, in which a pronominal copy of the raised nominal occurs in the clause out of which the nominal is raised. The earliest example of Copy OR occurs in a 1578 chronicle (whereas the latest non-Copy OR examples date from approximately the fifteenth century):

- (5) *ēton huperthaumásio tò érgo ná tò*  
 was/3SG very-wondrous the-work, PRT it/ACC  
*eblépe tinás*  
 saw/3SG someone/NOM  
 'The work was especially wondrous for people to see.' (lit. "...that people might see it.")  
 (Monembasias p. 42)

This type continues into Modern Greek as well:

- (6) *tá angliká íne dískola*  
 the-English/NTR.PL are difficult/NTR.PL  
*ná tá/\*φ katalávo*  
 them/NTR understand/ISG  
 'English is difficult for me to understand.'

Thus in the late Medieval period, the syntactic expression of the semantic content of OR sentences was changing.

The interesting development in this regard is that at approximately the same time as syntactic OR was changing, the compounding process with *dus-* and *eu-* was "renewed" in a more transparent derivational form. The productive form of these compounds came to have not *dus-* and *eu-* as their first

<sup>7</sup> For details concerning the loss of the infinitive in Greek, see Hesseling (1892), Burguière (1960), and Joseph (1978, chapter 2).

members, but rather the stems of the lexical adjectives for 'hard' and 'easy', *dúskolos* and *eúkolos* (Mod. Gr. *ḗskolos/éfkolos*), respectively.<sup>8</sup> This renewed type has a much clearer relation with OR trigger adjectives, and thus appears to preserve in the language a simple means for the expression of OR semantics. The transparency of derivation serves to emphasize the connection with OR.

An early example of this formation is *duskoloeúreton* 'hard to find', from a fourteenth-century version of *Digenis Akritas* (ed. Trapp (1971), l. 3423). This more transparent compounding process became productive,<sup>9</sup> and is still so to some extent in Modern Greek. Dictionaries, e.g., *Dēmétrakos* (1950) and *Stamatákos* (1953), include a large number of these compounds. For example, among others:

- |     |                          |                   |                               |
|-----|--------------------------|-------------------|-------------------------------|
| (7) | <i>ḗskolovástaxtos</i>   | 'hard to hold'    | (cf. <i>vastázo</i> 'carry')  |
|     | <i>ḗskolóvretos</i>      | 'hard to find'    | (cf. <i>vrísko</i> 'find')    |
|     | <i>ḗskoloyátreftos</i>   | 'hard to heal'    | (cf. <i>yatrévo</i> 'heal')   |
|     | <i>ḗskoloḗiávatos</i>    | 'hard to cross'   | (cf. <i>ḗiavéno</i> 'cross')  |
| (8) | <i>efkolóspastos</i>     | 'easy to break'   | (cf. <i>spázo</i> 'break')    |
|     | <i>efkoloánaftos</i>     | 'easy to ignite'  | (cf. <i>anávo</i> 'light')    |
|     | <i>efkolo(e)ksígitos</i> | 'easy to explain' | (cf. <i>eksígó</i> 'explain') |
|     | <i>efkolosíktos</i>      | 'easy to lift'    | (cf. <i>sikóno</i> 'lift')    |

Also, native speakers produce and understand compounds of this type not listed in standard dictionaries; for example:

- |     |                      |                  |                              |
|-----|----------------------|------------------|------------------------------|
| (9) | <i>ḗskoloórȳotos</i> | 'hard to plough' | (cf. <i>orȳono</i> 'plough') |
|     | <i>efkolofóretos</i> | 'hard to wear'   | (cf. <i>foráo</i> 'wear')    |

Despite the clash that arose in the expression of OR semantics and the clear transparency of the new compounding process (so that the claim that a clear connection with syntactic OR sentences did not exist would be hard to maintain), both the syntactic and the lexical modes of expression stayed in the language—there is no blocking of the lexical mode by the syntactic mode.<sup>10</sup>

<sup>8</sup> *Dúskolos* in Ancient Greek meant 'hard to satisfy with food; peevish; discontented' and *eúkolos* meant 'of good digestion; contented, easy; good-natured'. Only later in the history of Greek did they become generalized in the meanings 'hard' and 'easy', respectively.

<sup>9</sup> Transparent compound adjectives of this type are found in Ancient Greek also, but they are extremely rare. The only good example is *duskolókamptos* 'hard to bend' from Aristophanes's *Clouds*, l. 971.

<sup>10</sup> In fact, if anything, lexical productivity is winning out in this case, for syntactic OR sentences are not especially frequent in Modern Greek—although speakers understand, accept, and even produce such sentences spontaneously on occasion, they generally opt for a paraphrase involving no Raising at all. For example:

- |     |    |            |                |           |                                     |
|-----|----|------------|----------------|-----------|-------------------------------------|
| (i) | a. | <i>íne</i> | <i>dískolo</i> | <i>ná</i> | <i>katalávo</i>                     |
|     |    |            |                |           | <i>is/3SG NTR.SG understand/1SG</i> |

SQUIBS AND DISCUSSION

Thus, these facts from Greek suggest that the interplay between lexical productivity and syntactic generativity is more complex than the simple "blocking" procedure suggested by RS. It appears that the lexicon may at times compensate for "deficiencies" that arise in the syntax, and so the relationship between the two may be more one of "harmony and cooperation" than "competition". In any case, the rise of transparent OR compounds correlating with the fall of the simplest form of syntactic OR surely cannot be accidental. The ultimate theory of word formation and lexical compounding, it would seem, would have to be able to account for diachronic developments such as this correlation in a natural fashion. These facts, therefore, cast doubt on RS's conclusions regarding clashes between the lexicon and the syntax. Moreover, they show that historical evidence can be relevant and even crucial to the evaluation of proposals concerning word formation and the lexicon.

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- 
- tá angliká  
the-English/NTR.PL  
'It is hard for me to understand English.'
- b. tó ná katalávo tá angliká ine dískolo  
the/NTR.SG NTR.SG  
'For me to understand English is hard.'

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ON THE SYNTAX AND  
SEMANTICS OF EARLY  
QUESTIONS

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Labov and Labov (1978) posit that there is a different underlying structure in the earliest grammar of their child for WHY questions than there is for other WH questions. The data given in support of the claim that the child in fact has two (or more) different rules for different kinds of WH questions seem convincing, but little is said about how or why the child should have initially acquired these distinct rules. I would like to suggest here that WHY questions form a separate natural semantic class from other WH questions and that that fact explains why the initial rules of a very young child for WHY questions should be distinct from those for other WH questions.

Labov and Labov present evidence and argument to the effect that their child did not start out deriving WHAT, WHERE, and HOW questions by the process of applying question word movement and inversion of subject and first VP word to the corresponding active sentences, as one supposes most normal adults do, but rather had, initially, special phrase structure rules for these kinds of questions, roughly:

- (1) a.  $Q_{\text{WHAT}} \rightarrow \text{what(s)} + \text{NP}$   
 b.  $Q_{\text{WHERE}} \rightarrow \text{where(s)} + \text{NP}$   
 c.  $Q_{\text{HOW}} \rightarrow \text{how 'bout} + \text{NP}$

The direct evidence for this is that the observed sentences in (2) were among the earliest questions using these question words and representative of the very early corpus:

- (2) a. Where the boy?  
 b. What's this?  
 c. How 'bout these?

Further evidence that these were the original rules for the child comes from comparison of sentences using these question words and those using WHY. In the first place, early WHY questions did not have the same form. The very earliest WHY questions were simply one-word utterances, and the first WHY