SYNTHETICAL COMPARISON OF ENGLISH ADJECTIVES*

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1. INTRODUCTORY

The phonological and morphological processes involved in the comparison of English adjectives have hardly been offered more than casual accounts in the linguistic literature. As opposed to the semantic and syntactic aspects of the same phenomenon which have been fairly popular with linguists[1]. It appears, however, that a deeper insight into the former may shed some light on many questions concerning the morphology and phonology of English adjectives in general. The behaviour of adjectives with regard to comparison may say a lot about their word-formational and phonological structures.

The present paper concentrates on various grammatical conditions which adjectives must fulfil in order to compare. That is not to say that we shall miss any opportunity to present some other related problems which will arise in the course of our discussion and to consider them from the viewpoint of generative transformational grammar.

The synthetical as well as the periphrastic means of comparison of adjectives serve approximately the same purpose: they both express the fact that a certain object exhibits some quality to a degree greater than something else or does so to the greatest extent. Therefore, some grammatical constraints

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[1] Cf., for instance, Bolinger (1967), Lakoff (1970), Perlmutter and Ross (1970), Post (1981), Spitzbardt (1959), etc.

may be assumed to be the same for both types. It is then generally maintained that comparison affects qualitative adjectives only, and not relational ones. Compare, e.g.:

(1) qualitative adjectives

cold	colder	or	more cold
sincere	sincerer		more sincere

(2) relational adjectives

wooden	*more wooden (table)
cosmic	*more cosmic (ray)

The restriction obviously holds for relational adjectives used in their literal meanings. However, when used figuratively, they compare as readily as all qualitative adjectives. For instance, no ring can ever be **more silver* than another, but a blouse may be a *more* or *less silver* shade of colour. There is a considerable number of originally relational adjectives which now also function as purely qualitative ones. For example:

(3) nervous (originally: having to do with the nerves)
more nervous (person)

On the other hand, some qualitative adjectives describe "binary" features which either appear in an object or not, and can never display any intermediate degrees of intensity. Hence the adjectives should never form comparatives and superlatives. For example:

(4) whole	*more whole
only	*more only
main	*more main
same	*more same

Strang (1968:136) describes the phenomenon in the following way:

(5) Some adjectives have "gradable" meanings, others "absolute" meanings. A thing can, for example, be more or less big, and "big" is a gradable adjective ...; but "pure, real, right, perfect, equal, unique, white, black", etc., are, in their referents, incapable of such gradations".

Unlike those in (4), however, the adjectives mentioned by Strang are commonly compared. For instance:

(6) white	whiter	whitest
pure	purer	purest
right	more right	most right

Still, Strang seems right in saying that the above comparatives and superlatives are, in fact, "weaker in effect than the positive term":

(7) Unmodified, they mean the absolute of what they say; with "more", "most", or the inflections of comparison, they mean "more nearly pure, real", etc., "nearest of all to being pure, real", etc. ... (1968 : 136).

The restrictions on comparison mentioned so-far are of semantic nature. There are, however, other types of conditions which hold on the process in question. Note the following words:

(8) due	*more due
like	*more like

Neither of the above adjectives can compare, but they are peculiar in other ways, too. Strang remarks that *like*

(9) ... is nearly always predicative ... and functions often in predicates as much like a preposition as an adjective ("Do you think she is like her mother?") ...; it also has a pronoun-like use ("Like answers to like"), a coordinator-like use ..., and a noun-like use ("gardening and the like") ... (1968 : 136).

One can make an analogical comment with regard to *due*. Is it, then, the multifunctional nature or the shaky grammatical status of the words in (8) that inhibits them from taking comparison?

Consider now another set of adjectives generally incapable of forming comparatives and superlatives:

(10) asleep	averse	afire
awry	abed	aflame
afresh	agog	ajar

Members of the above group all begin with *a-* whose prefixal nature should raise no doubts in at least several cases. Whether the *a*-prefixation rule is still productive or not may be an open question. Anyway, we suppose that even its lexicalized products have retained their morphological complexity (i.e. their lexical representations contain a boundary separating the prefix from its bases). One could then assume that comparison is blocked in the case of *a*-derivatives. This, however, would suggest that comparison is governed by individual affixes.

Another possible explanation opens up for the "noncomparability" of the items in (10) if we note that the *a*-adjectives are (nearly) always predicative. Curiously enough, the same is characteristic of *due* and *like* (group (8)). In the light of this observation, a generalization offers itself that it is one and the same restriction operating in the case of both groups. It blocks the comparison of (primarily) predicative adjectives.

Note that the lexical specification of any adjective must contain information concerning its possible place in a sentence to prevent, for instance, an attributive use of a predicative adjective. The restriction would then refer to this information and would permit comparison in the case of adjectives whose essential position is "—N".

An even further-going conclusion may be drawn from Strang's observation that, in fact, *like* "is not felt as being fully a member of the adjective class" (1968:136). The question at issue seems to be whether the predicative adjectives mentioned above should not be regarded as a separate grammatical category or subcategory, rather than included among other adjectives.

Of the two kinds of comparison, synthetical comparison has a far smaller domain of application; it covers adjectives fulfilling specific phonological conditions. The usage of the periphrastic means of comparison, on the other hand, is much less restricted. Virtually all adjectives meeting the general requirements discussed above can form periphrastic comparatives and superlatives. Also those which can "inflect" for comparison are not inhibited from taking "more" and "most" instead. The few adjectives which can hardly ever compare periphrastically are the suppletive ones. Their comparatives and superlatives are formed on bases phonologically different from the respective positive degrees. The members of the group are:

(11)	good	bad
	far	old[2]

However, comparatives and superlatives of the above adjectives can hardly be viewed as products of synthetical comparison. Although they mostly end phonetically in [—ə(r)] and [—st] (e.g. *better* ['betə], *worst* ['wə:st]), they are clarly ready-made forms, rather than complex structures synchronically derived by means of the suffixes *-er* and *-est*.

As far as the synthetical comparison is concerned, the distribution of the comparative and the superlative suffixes is generally the same: adjectives which can take the former can also take the latter. However, the frequency of use of the forms obtained in this way varies. It happens, for instance, that superlatives in *-est* are found relatively often while the corresponding comparatives in *-er* are not. Or the other way round. However, the occasional "lack" of a form in the paradigm of an adjective should not obscure the clarity of the pattern. We assume that the missing forms are potentially correct. In order to set them apart from the actually used forms, they will be given in brackets in what follows.

2. PHONOLOGICAL CONDITIONING OF SYNTHETICAL COMPARISON OXYTONIC ADJECTIVES

As has been remarked, adjectives must satisfy certain phonological conditions before they can take the comparative suffix *-er* or the superlative suffix *-est*.

[2] *Old* has also regularly derived *older* and *oldest*. The regular and the irregular formations display slightly different meanings.

The conditions have been given various (mostly rough) formulations by different linguists. Let us recall one of them offered by Kuryłowicz:

(12) "The comparative in *er* is regular with adjectives stressed on the final syllable (e.g. *severer*), hence also with monosyllabic forms (*stronger*), but the periphrastic comp. in all other cases" (1964:15).

Monosyllabes, in fact, compare most readily. Note, for example:

(13)	big	bigger	biggest
	large	larger	largest
	wise	wiser	wisest

Synthetical comparatives and superlatives formed on monosyllabic adjectives are more handy than their periphrastic counterparts with *more* and *most*, and therefore are used more often. There are very few exceptions to this principle:

(14)	Swiss	*Swisser	but:	more Swiss
	Dutch	*Dutcher		more Dutch
(15)	taut	*tauter		more taut
	sage	*sager		more sage

As a matter of fact, the adjectives in (14) are submitted to a general restriction disallowing the derivation of *-er* and *-est* forms from "proper" adjectives. These are hardly ever compared anyway. Group (15), on the other hand, contains true exceptions.

In principle, synthetical comparison is met with adjectives consisting of at most two syllables (in surface terms). The oxytonic disyllables which may "inflect" for comparison are exemplified below:

(16) a)	austere	austerer	austerest
	polite	politer	politest
	divine	diviner	divinest
	concise	conciser	concisest
	devout	devouter	devoutest
	discreet	(discreeter)	discreetest
	sublime	sublimer	sublimest
	adroit	(adroiter)	adroitest
(16) b)	demure	demurer	demurest
	secure	securer	securest
	mature	maturer	maturest
	obscure	obscurer	obscurest

	acute	acuter	acutest
	astute	astuter	astutest
	profuse	profuser()	profusest
	minute	minuter	minutest
(17)	intense	intenser	intensest
	exact	exacter	exactest
	abrupt	abrupter	abruptest
	expert	(experter)	expertest
	intent	intenter	intentest
	august	(auguster)	augustest
	absurd	(absurder)	absurdest
	profound	profounder	profoundest

Generative transformational grammar whose framework is adopted in the present paper assumes that it is the phonological representation of a word which enters morphological processes. Therefore, a thorough analysis of the grammatical phenomena involved in comparison along the lines of GTG requires an examination of the underlying forms of adjectives. Let us start with the words included in (16a) and (16b) above. The following representations have been established according to the SPE principles[3]:

(18) a)	austere	(awstēr)	devout	(devūt)
	polite	(pəlīt)	discreet	(diskrēt)
	divine	(divīn)	sublime	(sublīm)
	etc.			
(18) b)	demure	(demure)	acute	(ækute)
	secure	(sekure)	astute	(æstute)
	mature	(mæture)	profuse	(profuse)
	etc.			

In spite of their apparent phonetic similarity, the words in (16a) and (16b) reveal considerable differences in respect of their phonological shapes. While the adjectives in (16a) are underlyingly disyllabic and all contain tense vowels in their final syllables, those in (16b) are trisyllabic. Within the SPE model of phonology the presence of final (e) conditions the conversion of (u) in the preceding syllable into [juw]. The derivation of [juw] goes through several intermediate stages, and, as a matter of fact, does not seem quite convincing. Therefore, numerous attempts have been made to offer a more plausible solution to the [juw] problem.

[3] The internal boundaries in the following words do not bear upon the present discussion. Therefore, they will be left out from the underlying representations in (18) as well as from those in (20).

Rubach (1981) suggests that the segment underlying [juw] be ($\bar{\Lambda}$). He postulates a rule inserting [j] in front of [$\bar{\Lambda}$], and subjects [$\bar{\Lambda}$] to the operation of his version of Vowel Shift which turns it to [ī]. Then rounding adjustment and diphthongization apply producing the required [juw]. Thus, the phonological derivation of the words in (16b), e.g. *demure* and *minute*, will proceed as follows:

(19) demure	minute	rules
(dem$\bar{\Lambda}$r)	(min$\bar{\Lambda}$t)	
—mj$\bar{\Lambda}$r	—nj$\bar{\Lambda}$t	j-preposing
—mjīr	—njīt	Vowel shift
—mjūr	—njūt	rounding adjustment
—mjūwr	—njūwt	diphthongization
—mjuə		other rules

If ($\bar{\Lambda}$) is accepted as the segment underlying the final vowel of the words in (16b), a generalization holds for the entire group (16): all its members end in a tense vowel followed by a single consonant. It must be remembered, however, that Rubach's suggestions are couched within a framework different from that of the SPE[4], and can hardly work outside of it. Moreover, as far as its complexity is concerned, Rubach's analysis seems nothing but a variation of the one offered in the SPE.

However, the proposal to derive stressed [juw] from an underlying tense vowel[5] describes more consideration. The words in (16b) behave exactly as those in (16a) as regards their ability of taking *-er* and *-est*. This uniformity of behaviour is likely to reflect a similarity of phonological structures. As the adjectives in (16a) are of the form (X[V, +tense]C[1]) (where X stands for one syllable), those in (16b) could be expected to have the same phonological shape. The assumption is further supported by the fact that the trisyllabic underlying structures proposed for the words in the SPE appear to bar them from "inflecting" for comparison.

Note that *adroit* has been included among the adjectives in (16a). There is not much evidence that [ɔi] may come from an underlying tense vowel, and the major reason for postulating a representation different from what is found on the surface is mostly a wish to exclude diphthongs from the inventory of

[4] Rubach adopts the theory of cyclic phonology whose essential assumption is that the application of phonological (cyclic) rules is dictated by the principle of Strict Cyclicity. The cyclic theory offers interesting solutions to many problems found in the standard theory. However, it also has its own difficulties. For detailed and illuminating reviews of Rubach's works on cyclic phonology see Gussmann 1985 and Szpyra (1985).

[5] Rubach's proposal is by no means the only one deriving [juw] from a [+voc, +tense] phonological segment. Hoard (1972), for instance, suggests /*i*/ as the source of [juw]. None of the solutions, however, seems fully convincing.

English underlying segments. However, the fact that *adroit* behaves as the other adjectives in (16a) might be interpreted as an argument in favour of assuming a [V, +tense] representation for the diphthong in question.

The adjectives included in group (17) end in two consonants preceded by a lax vowel. The vowel is tense only in the case of *profound*. However, its surface value may be due to the tensing effect of the cluster /nd/ which follows it.

Recall that $\bar{V}C^1$ and VC_2 have long been recognized in linguistics as so-called "strong clusters" or "heavy syllables", as opposed to "weak clusters" or "light syllables" consisting of a single short vowel followed by no more than one consonant. It has also been admitted in the SPE that many phonological rules of English (especially stress assigning rules) are sensitive to the distinction. Now we have encountered evidence that syllable weight also bears upon the morphological behaviour of words. The rules of *-er* and *-est* affixation are obviously operative in the case of disyllabic adjectives ending in a heavy syllable.

Observe that oxytonic adjectives ending in more than two consonants are exempt from comparison on semantic, rather than morphological grounds. Note, for example:

(20)	exempt	*more exempt
	defunct	*more defunct
	extinct	*more extinct

They are not numerous anyway, since English usually permits no more than two consonants morpheme-finally.

Exceptions to the general principle formulated above are some characteristic foreign words, such as *bizarre*, *antique* or *burlesque* which must be diacritically marked in the lexicon.

3. THE COMPARISON OF BARYTONIC ADJECTIVES

There are adjectives not included in Kuryłowicz's definition which are, however, commonly "inflected" for comparison. They consist of two or, at most, three syllables in surface terms, and bear initial stress. Many of them end in unstressed [—əu], [—ə(r)], [—l̩] and [—i]. (21) exemplifies those ending in [—əu]:

(21)	hollow	hollower	hollowest
	mellow	mellower	mellowest
	narrow	narrower	narrowest
	shallow	shallower	shallowest

The [—əu] termination of the above adjectives is derived from lax /ɔ/ in the SPE. The vowel is subject to final tensing and diphthongized to [ɔw]. Thus,

the words have the following forms at the underlying level:

(22)	hollow	/hɔlɔ/	narrow	/nærɔ/
	mellow	/melɔ/	shallow	/sælɔ/

Rubach (1981) argues that the value derived via tensing and diphthongization must be [ōw] rather than [ɔw], and therefore, the respective underlying segment should be /o/. However, his criticism seems to miss the point. The precise value acquired through tensing and diphthongization —[ōw] or [ɔw] — makes no difference, since a late phonetic rule must apply anyway to produce [əu]. Moreover, the inventory of English underlying vowels does not seem to need both /ɔ/ and /o/.

Groups (23) and (24) comprise synthetically comparable adjectives ending in [—ə(r)] and [—l̩], respectively:

(23)	bitter	bitterer	bitterest
	eager	eagerer	eagerest
	clever	cleverer	cleverest
	sober	soberer	soberest
	vulgar	vulgarer	vulgarest
	etc.		

(24)	able	abler	ablest
	feeble	feebler	feeblest
	noble	nobler	noblest
	purple	purpler	purplest
	subtle	subtler	subtlest
	etc.		

The attachment of the comparative or the superlative suffix has apparently different effects on the words in (23) and on those in (24): *-le* of the adjectives in (24) loses its syllabic value, whereas *-er* of the adjectives in (23) does not. However, /r/ and /l/ are both sonorants and both subject to the same rule of syllabification which reads:

$$(25)\ [+\text{sonor}] \longrightarrow [+\text{syll}]\ /\text{C}-\begin{cases}\text{C}\\ \neq\neq\end{cases}$$

If, then, the phonological environments of the sonorants were the same in the words of both groups, the terminations *-le* and *-er* should behave identically with respect to rule (25). That, is either both *-le* and *-er*, or neither *-le* nor *-er* should syllabify when followed by the suffix *-er* or *-est*. This is not the case. Evidently, /r/ at the end of the items in (23), unlike /l/ in those in (24), must be preceded by a vowel. It is vowel, not the sonorant, that is the nucleus of the final syllable. The vowel is /æ/ in the case of vulgar (cf. vulgarity), and /e/ elsewhere.

The phonological forms of the adjectives in (23) and (24) are then as illustrated in (26) and (27) respectively:

(26)	bitter	/bitter/	sober	/sɔber/
	eager	/ēger/	vulgar	/vulgær/
	etc.			
(27)	able	/ǣbl/	purple	/purp̩l/[6]
	feeble	/fēbl/	subtle	/sut̩l/
	etc.			

The adjectives ending in *-le* are monosyllables at the underlying level. It follows that they can compare synthetically, no matter what their final segment is.

What is usually left out of account is the fact that other adjectives ending in /l/ which doea not necessarily syllabify to [l] may also take synthetical comparison. They are the following:

(28) a)	cruel	crueler		cruelest	
	evil	eviler		evilest	
	civil	civiler		civilest	
	brittle	brittler	['britl̩ə]	brittlest	['britl̩ist]
	little	littler	['litl̩ə]	littlest	['litl̩ist]
b)	bashful	(bashfuller)		bashfullest	
	careful	(carefuller)		carefullest	
	doubtful	(doubtfuller)		doubtfullest	
	joyful	(joyfuller)		joyfullest	
	wilful	(wilfuller)		wilfullest	
	etc.				

The division into subgroups (a) and (b) has been made on the basis of the morphological structures of the words included in (28). Subgroup (a) comprises simplex adjectives, whereas (b) contains complex adjectives ending in the suffix *-ful*.

Brittle and *little* have not been included among the adjectives in (24) in spite of their phonetic and orthographic similarity, since final [l] in neither of them ever loses its syllabicity. Apparently, as in the case of *-er* adjectives, this results from the presence of an underlying vowel placed between the final

[6] The suggested monosyllabic representations of *purple* and *subtle* may raise doubts as the comparatives of the two adjectives may be pronounced with [l]. However, since their superlatives are always disyllabic (with nonsyllabic [l]), it is impossible to postulate representations with vowels between the final sonorant and the preceding consonants, as has been done in the case of *-er* adjectives. The deviant trisyllabic pronunciations must result from a misapplication of the rule of syllabification.

sonorant and the preceding obstruent. The vowel is unstressed and therefore considerably reduced, the sonorant taking over its syllabic function.

Thus, *brittle* and *little* as well as the other adjectives of their group are disyllabic at the underlying level:

(29)	cruel	/kruel/	brittle	/brittel/
	evil	/ēvil/	little	/littel/
	etc.			

However, striking observations may follow from the comparison of the morphological behaviour of a word from group (28a), *civil*, and a member of group (24), *able*:

(30) civil → civility
able → ability

In spite of the different underlying structures postulated for the adjectives, identical lax [i] procedes the liquid in both of them when the noun-forming suffix *-ity* follows. The same situation holds for some adjectives which have been included in (24) (e.g. *noble → nobility*). It can make one assume that /i/ must be present in the phonological forms of the words. This, however, runs against the observation made earlier that the members of group (24) are monosyllabic at the underlying level. Chomsky and Halle (SPE:160, n. 119) give an alternative explanation. They postulate an adjustment rule inserting [i] between a labial consonant and /l/ when followed by the suffix-*ity*. This sounds a plausible solution.

A large number of disyllabic adjectives which may compare synthetically end in [—i]. They are exemplified below:

(31) a)	baggy	baggier	baggiest
	creepy	creepier	creepiest
	earthy	earthier	earthiest
	stringy	stringier	stringiest
b)	angry	angrier	angriest
	hungry	hungrier	hungriest
	crinkly	crinklier	crinkliest
	crumbly	crumblier	crumbliest
c)	happy	happier	happiest
	silly	sillier	silliest
	shabby	shabbier	shabbiest
	swarthy	swarthier	swarthiest
(32)	deadly	deadlier	deadliest
	ghostly	ghostlier	ghostliest

likely	likelier	likeliest
beastly	beastlier	beastliest

Most of the members of group (31) and all the words included in (32) are evidently derivatives of very productive suffixes: *-y* and *-ly*, respectively. Let us find out if it is the particular suffixes that trigger comparison in the case of the above words, or whether some other factors are at work here.

As far as the adjectives in (31a) are concerned, Chomsky and Halle (1968) suggest that they are derived by means of the suffix /≠≠y/. There is, in fact, some evidence that the suffix must be carrying the word boundary. It triggers *g*-drop (cf. *stringy*) and blocks *th*-voicing (cf. *earthy*).

However, /≠≠y/ cannot derive the words in (31b). The attachment of a suffix carrying the word boundary should have resulted in the syllabification of /r/ in *angry* and *hungry*, and of /l/ in *crinkly* (from *crinkle*) and *crumbly* (from *crumble*). The natural way to handle these facts is to assume that the members of group (31b) are derived by means of a suffix different than the items in group (31a). As Chomsky and Halle have observed, the suffix must be "identical in its phonetic form but not in its effects", i.e. it must carry the morpheme boundary +. It has been postulated in the SPE that the latter suffix should be restricted to adjectives derived from abstract nouns. This suggestion, however, conflicts with linguistic facts. *Crinkle*, for instance, which takes the suffix with +, denotes nothing abstract.

Strauss (1982) suggests that the words of both groups are derivatives of the same suffix which, however, does not trigger the rule of sonorant syllabification. This follows from his claim that affixes, not boundaries, may govern the application of phonological rules. Consequently, in place of one rule of sonorant syllabification Strauss needs two: the cyclic one — morphologically conditioned (sensitive to specific affixes) and the postcyclic one — phonotactically conditioned. We are far from maintaining that the formulations of syllabification reached so far are fully satisfying. However, splitting a conspicuously uniform process into two appears a rather retrograde solution.

Another way out of the problem in question is to assume that the members of both (31a) and (31b) should indeed be regarded as derivatives of the same suffix. However, an allomorphy rule, more or less of the form presented below, would change the boundary in the case of bases ending in a liquid:

(33) $$\neq\neq \rightarrow +/\begin{bmatrix}+\text{sonor}\\+\text{cons}\\-\text{nasal}\end{bmatrix}-\text{y}$$

No counterevidence to our suggestion can be found. Adjectives like *holy*, *wily* or *airy* contain liquids in vocalic environments, hence they do not bear upon the discussion.

Note, however, the following words:

(34)	*noun*	*adjective*		
	pebble	pebbly	['pebli],	['pebli]
	bristle	bristly	['brisli],	['brisli]
	gristle	gristly	['grisli],	['grisli]

The adjectives above have variant pronounciations with (l) either syllabic or not. In fact, it may be argued that each of them actually stands for two adjectives: one derived by means of *-y* and the other — by means of *-ly*[7]. The attachment of the latter suffix should trigger syllabification, whereas the attachment of the former should not. Such an explanation would agree with our assumption concerning the suffix ≠≠/+y.

A problem arises with the adjective *worthy* which has an unaccountably voiced spirant (cf. *earthy* with voiceless [θ]). Apparently, it is an exception, and must be entered in the lexicon as containing the suffix with the boundary →.

Another adjective which has voiced [ð] preceding final *-y*, namely, *swarthy*, has been included in (31c). In the case of this word as well as of the other members of the group, the question is not exactly what suffix they contain, but if they should be assigned complex structures at all. The would-be morphemes *hap-*, *shab-* or *swarth-* (cannot be found anywhere outside the adjectives in question. It seems that even if we decide in favour of their bimorphemic treatment, as Strauss (1982) has done, the words must be entered in the lexicon and analysed by a redundancy rule, rather than derived by a productive WFR.

Thus, it turns out questionable if the adjectives in (31) may all be regarded as the derivatives of one suffix. It is then doubtful if the suffix may trigger the rules deriving synthetical comparatives and superlatives. The decisive factor must be the final sound [—i]. Chomsky and Halle are of the opinion that the sound is phonologically /y/, rather than /i/. If we accept this proposal, the items in (31) turn out to be underlyingly monosyllabic. This accounts for their readiness to form synthetical comparatives and superlatives. The assumption is further supported by the fact that when attached to disyllabic bases, the suffix *-y* produces adjectives which can also "inflect" for comparison:

(35) a)	spidery	spiderier	spideriest
	slippery	slipperier	slipperiest
	shivery	shiverier	shiveriest
	ornery	ornerier	orneriest

[7] Cf. the adjectives *earthy* and *earthly*, both derived from *earth* but by means of different suffixes.

b)	shadowy	shadowier	shadowiest
	finicky	finickier	finickiest
	fidgety	fidgetier	fidgetiest
	headachy	headachier	headachiest

Recall that adjectives of more than two syllables are generally barred from taking the comparative and the superlative suffixes. When we assume *-y* is underlyingly a glide, the above adjectives are only apparent exceptions to the principle, but confirm it at the level of phonology.

In (35) the adjectives whose bases end in liquids shave been separated from the rest. Note that they can safely be assumed to be derivatives of the suffix carrying +, just as those in (31b).

The preceding discussion has led us to the conclusion that many adjectives which may take synthetical comparison end in the glide /y/. Chomsky and Halle have suggested that this is also the segment appearing in the suffix *-ly* (cf. adjectives in (32)). Their proposal, however, lacks satisfying support. The suffix also attaches to disyllabic bases, but unlike the *-y* derivatives, none of the adjectives obtained in this way may form synthetical comparatives or superlatives. Therefore, we shall assume that the adjectives in (32) end in the vowel /i/, rather than the glide /y/.

Observe that both /i/ and /y/ as well as /ɔ/, /r/ and /l/, which appear at the end of the adjectives discussed previously, come within the class of sonorants. A couple of other disyllabic adjectives which may take *-er* and *-est* also end in sonorants, namely, [−m] and [−n]:

(36)	handsome	handsomer	handsomest
	wholesome	wholesomer	wholesomest
(37)	even	evener	evenest
	common	commoner	commonest
	open	opener	openest
	stubborn	stubborner	stubbornest
	rotten	(rottener)	rottenest
	barren	(barrener)	barrenest
	sudden	(suddener)	suddenest
	sullen	(sullener)	sullenest

However, the above groups are rather small. Most of adjectives ending in [−m] and [−n] resist synthetical comparison. Note, for example:

(38)	awesome	*awesomer
	bothersome	*bothersomer
	fearsome	*fearsomer
	fulsome	*fulsomer

	gruesome	*gruesomer
	loathsome	*loathsomer
(39)	sodden	*soddener
	swollen	*swollener
	solemn	*solemner
	wanton	*wantoner
	smitten	*smittener

Therefore, we conclude that (36) and (37) include exceptions, and generally only a nonnasal sonorant word-finally permits a disyllabic adjective to "inflect" for comparison.

To be sure, /ɔ/, /r/, /l/, /y/ and /i/ do not exhaust the inventory of English nonnasal resonants. However, we would like to claim that the others do not occur word-finally in disyllabic adjectives, due to Morpheme Structure Conditions or some accidental gaps in the language. Or, if they did, adjectives ending in them should be expected to take synthetical comparison.

Other barytonic adjectives which commonly form synthetical comparatives and superlatives are those ending in [-id]:

(40)	a)	placid	(placider)	placidest
		liquid	(liquider)	liquidest
		pallid	(pallider)	pallidest
		squalid	(squalider)	squalidest
		horrid	horrider	horridest
		stupid	stupider	stupidest
		solid	solider	solidest
		acid	acider	acidest
		morbid	morbider	morbidest
		tepid	(tepider)	tepidest
		wicked	wickeder	wickedest
	b)	ragged	raggeder	raggedest
		crooked	crookeder	crookedest
		jagged	jaggeder	jaggedest

The items in (40b) have been separated from those in (40a) on the grounds of their morphological structure. Compare the following words:

(41)	*adjective*	*verb*
	ragged	rag
	crooked	crook
	jagged	jag

Clearly, the above adjectives exhibit the form of regular participials, like *learned*,

aged or *blessed* (although there is a considerable semantic discrepancy between the verb *to rag* and the adjective ***ragged***). Since participials do not normally form synthetical comparatives and superlatives, the items in (40b) should probably be treated as mere exceptions. However, there is also a possibility that lexicalization and restructuring have operated in the case of these words. Then the sequence [-id] which they contain no longer functions as a suffix deriving participials. This would also explain why the semantic of *ragged* differs so much from that of the respective verb.

The adjective included in (40a) vary in respect of their morphological complexity. In several cases there is a good reason to believe that the sequence [-id] is an adjectival suffix. Note the words below:

(42)	*adjective*	*verb*	*noun*
	placid	placate	
	liquid	liquefy	liquor
	pallid		pallor
	squalid		squalor
	horrid	horrify	horror
	stupid	stupefy	stupor

However, in the case of some other words a bimorphenic analysis seems questionable. The supposed morphemes *sol-*, *ac-*, *morb-* or *tep-* are to be found nowhere outside the respective adjectives. Anyway, the suffix *-id* can hardly be regarded as productive. Hence its derivatives must be entered in the lexicon and analysed by a redundancy rule.

Siegel (1979:184 — 186) has argued in favour of postulating one adjectival suffix *-d* preceded by the formative boundary +, which can attach both to stems and to words. Thus, all the items in (40) as well as participials like *learned* would be derived by means of the suffix. This, however, should take us too far. Our impression is that a distinction should be made between the suffix appearing in the words in (40) and the one deriving participials. Most probably the two suffixes carry different types of boundary. We assume that (40) contains derivatives of the suffix /+id/.

Thus, the affixational rules deriving comparatives in *-er* and superlatives in *-est* may operate on adjectives of the form /X+id/ (where X stands for one syllable).

Here we face an embarrassing situation. In all the cases discussed previously it was the phonological form of adjectives (especially their final segments) that seemed to bear upon the *-er* and *-est* affixation rules. /+id/, on the other hand, apparently calls for a morphological condition to be imposed on the rules. In the light of this observation Cygan's (1975) suggestion that adjectives ending in *-id* should be analysed as underlying monosyllables seems worth considering.

Cygan is of the opinion that the *-id* termination of the adjectives in question contains the glide /y/, and not the vowel /i/. It undergoes syllabification in interconsonantal positions, and emerges as a vowel on the surface. To illustrate this point, consider the exemplary representations given below which have been established according to Cygan's suggestions. Since Cygan does not express his opinion as to whether *-id* should be regarded as a suffix in all the words in (40), we shall skip the boundaries.

(43)	florid	/flɔryd/	limpid	/limpyd/
	solid	/sɔlyd/	morbid	/mɔrbyd/

If we adopt this line of reasoning, it follows that all *-id* adjectives can take synthetical comparison as monosyllables.

Interesting and convenient for our purpose as it is, such an analysis involves some phonological problems. Note the heavy nonvocalic clusters (e.g. /mpyd/) which are assumed in the underlying representations above. Certainly, they cannot leave English phonotactic constraints unaffected. Moreover, since in at least several cases *-id* definitely functions as a suffix, the question arises if English may be assumed to have morphemes containing a sequence of nonvocalic segments without a single vowel.

An alternative solution to the *-id* problem has been rendered possible by the new theory of Metrical Phonology[8]. One of the notions introduced in this theory is that of extrametricality. Extrametrical elements are those which, while belonging to the underlying representations of words, are idiosyncratically marked with a feature which excludes them from the domain of certain rules. Apparently, the troublesome sequence *-id* is extrametrical for purposes of comparison, i.e. the rules attaching *-er* and *-est* leave it out of account. Since the remaining parts of the adjectives under examination are monosyllabic, the rules apply. Thus, we are able to say that with respect to comparison, group (40) constitutes a subdivision of (13).

Other adjectives which do not come under any of the groups examined so far and yet are commonly compared are enumerated below:

(44)	pleasant	pleasanter	pleasantest
	ancient	(ancienter)	ancientest
	awkward	(awkwarder)	awkwardest
	forward	forwarder	forwardest
	cunning	cunninger	cunningest
	ripping	(rippinger)	rippingest
	snobbish	snobbisher	snobbishest
	savage	savager	savagest
	decrepit	decrepiter	decrepitest

[8] See e.g. H. van der Hulst and N. Smith (1982).

Except for *decrepit* ,they all consist of two syllables. Since neither their morphological structures nor terminations reveal any definite regularities, we regard them as exceptions to the general rules.

Thus, the analysis carried out in the preceding paragraphs leads us to the conclusion that synthetical comparison is generally allowed in the case of:
(1) monosyllables (including adjectives ending in extrametrical *-id*),
(2) disyllables ending in a heavy syllable,
(3) disyllables ending in a nonnasal sonorant.

4. THE PHONOLOGICAL FORMS AND THE MORPHOLOGICAL STATUS OF *-ER* AND *-EST*

The comparative and the superlative suffixes which attach to adjectives are phonetically [—ə(r)] and [-ist]. Phonologically, they are both stress-neutral, and thus likely to carry the word boundary $\neq\neq$.

Note, however, the words below:

(45)	long	longer	['lɔŋgə]	longest	['lɔŋgist]
	strong	stronger	['strɔŋgə]	strongest	['strɔŋgist]
	young	younger	['jʌŋgə]	youngest	['jʌŋgist]

Chomsky and Halle (1968) use the above examples as evidence that the suffixes *-er* and *-est* must carry the boundary +, since they do not trigger the rule of final *g*-drop. Yet their conclusion is shattered by the following forms:

(46)	wrong	wronger	['rɔŋə]	wrongest	['rɔŋist]
	ripping	rippinger	['ripiŋə]	rippingest	['ripiŋist]
	cunning	cunninger	['kʌniŋə]	cunningest	['kʌniŋist]

Now we face the question: the behaviour of which group should we regard as regular?

Observe that the comparatives and superlatives in (45) are used very often, and thus are more likely to undergo lexicalization than those in (46). It also seems that *-er* and *-est* forms derived occasionally from other adjectives ending in [ŋ] are usually pronounced without [g]. Therefore, we decide in favour of the word boundary in front of *-er* and *-est*.

There remain, however, other things to explain. The comparative and the superlative suffixes do not trigger the syllabification of liquids:

(47)	simple	simpler	['simplə]	simplest	['simplist]
	noble	nobler	['nəublə]	noblest	['nəublist]
	gentle	gentler	['dʒentlə]	gentlest	['dʒentlist]
	sombre	sombrer	['sɔmbrə]	sombrest	['sɔmbrist]

Apparently, as with adjectival *-y*, the word boundary $\neq\neq$ preceding *-er* and *-est* changes to the formative boundary + when the suffixes attach to words ending in /l, r/.

As a matter of fact, the case may also be that syllabification rule (25) should be reformulated. Observe that we need two allomorphy rules to account for the behaviour of word-final liquids which apparently disobey rule (25). The inadequacy of the latter rule has already been pointed out by many linguists (see, e.g., Strauss (1982)) but — to our knowledge — no satisfying solution has been offered so far[9]. Since a detailed discussion of syllabification would leasd us far beyond the scope of the present paper, we restricted ourselves to presenting some facts only which an adequate rule of syllabification should account for.

Having decided on /$\neq\neq$er/ and /$\neq\neq$ist/ as the phonological representations of the comparative and the superlative suffixes, let us think about the place which *-er* and *-est* affixation rules occupy in the morphological component of English. Synthetical comparison has traditionally been regarded as an inflectional phenomenon, and not without reason. First, the semantics of *-er* and *-est* forms of adjectives is always compositional, i.e. every *Yer* adjective means "more *Y*", and every *Yest* adjective means "the most *Y*". Second, the rules of *-er* and *-est* suffixation, as all inflectional rules, never alter the syntactic category of their base words, i.e. they derive adjectives. Third, comparison is paradigmatic: the three terms of degree constitute the paradigm of an adjective.

However, inflected word-forms are supposed to enter no word-formational processes except for some inflectional ones. Still, as has been argued in Gussmann (in press), these are probably the comparative, rather than the positive, degrees of adjectives which serve as bases for the derivation of deadjectival verbs. This, in turn, is a strong argument in favour of the derivational character of *-er* and *-est* affixation rules. Note also that synthetical comparison is only a partial realization of comparison as such. It is then closely related to the periphrastic means of comparison which can apparently be realized only by some syntactic rules.

Hence deciding between the derivational or inflectional status of synthetical comparison is by no means a simple task, although definitely an important one, burdened with some theoretical consequences. It involves drawing a strict demarcation line between the derivational and the inflectional subcomponents of word formation while, as a matter of fact, even their location within the grammar is still a much discussed question.

In our opinion, however, only a lexicalist theory of word formation can account for the existence of a grammatical phenomenon which combines the characteristics of both derivation and inflection. On the other hand, it seems that

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[9] An extremely promising approach towards syllabification as well as some other phonological problems has recently been put forward in Donca Steriade (1982) where the theory of Autosegmental Phonology has been elaborated on.

some of the features usually ascribed to inflectional processes may also occur with some derivational ones. Thus, the meaning of the deadjectival verbs in *-ize* is always compositional: every verbs in *-ize* is always compositional: every verb of the form $[[X]_{Adj}.ize]_V$ means "to make something X". The suffix *-ist* can derive adjectives from adjectives: *racial → racialist opinions, national → nationalist groups*. There is, however, little evidence that regular inflectional formations could serve as bases for derivational processes.

These facts incline us to accept the derivational character of synthetical comparison. A thorough examination of other word-formational phenomena seems necessary to gather sufficient evidence, but it surpasses the scope of this paper. However, we believe that it would confirm our conclusions.

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