

SOME PROBLEMS IN THE DESCRIPTION OF ENGLISH ACCENTUATION*

D. TERENCE LANGENDOEN

0. This work owes its inspiration and form to conversations and correspondence with John R. Ross, while he was working on early drafts of what is now Ross (1972). Sections 1 and 2 deal with revisions of the main stress rule (MSR) and alternating stress rule (ASR) of English as formulated in Chomsky and Halle (1968) (henceforth SPE), and with the relation of the ASR to a rule with similar effects which operates in compounds, the rhythmic rule (RR). In Section 3, a rule is proposed which stresses certain syllables which precede a primary stressed syllable, the stress spread rule (SSR), and a complementary rule which destresses those same syllables in rapid speech, the stress elimination rule (SER). Section 4 discusses the various destressing rules which have been proposed so far, one due to James Fidelholtz, two that were pointed out to me by Ross, and the SER. It can be shown that there are two very general destressing rules (which can perhaps be combined into one rule) which do the work of the previously discussed four rules. Finally, in Section 5, a very simple statement of the MSR for English is considered, and partially justified.

1. According to SPE, the last syllable of a noun regularly receives primary stress only if it contains an underlying tense vowel. Thus we have: *march*, *parade*, *valét*, *carrière*, *canoé*; but *Égypte*, *désert*, *robot*, *city*. The accentuation of nouns such as *eclipse*, *cement*, *dessert*, *marionette* is handled by postulating an underlying final *-e*, which is deleted. If necessary, as in the case of *marionette*, the stressed vowel is assumed to be followed by a geminate cluster which is later simplified.

The tertiary stress on the ultima in deverbal nouns like *torture* is accounted for by positing that this word is analyzed $[[\text{torment}]v]_N$, that it receives final stress on the first cycle by the MSR for verbs, and that this stress

* This is a slightly altered version of a paper that appeared originally in *Ohio State University Working Papers in Linguistics* 3, 1968, 122-142. That version was sponsored in part by the National Science Foundation through Grant 534.1 from the Office of Science Information Service to the Information Science Research Center, The Ohio State University.

is reassigned to the first syllable by the MSR applying on the second cycle (case "c" of the MSR, SPE 99, which considers a stressed final syllable in nouns and adjectives as part of the environment of the MSR.)

Ross (1972) suggests a reanalysis of these facts which allows nouns to receive final stress by the MSR in a larger number of cases than is allowed in the SPE account. According to his analysis, all the nouns cited in the previous paragraph receive final stress by the MSR—there is no need for any vanishing final *e* to handle the facts of stress assignment. The ASR applies after the MSR to shift the stress in nouns like *torture*.¹

By and large, words must be lexically marked for the ASR, although there is some regularity which can be exploited (this matter is given some attention also in Section 4). Disyllables whose ultima contains a tense vowel or diphthong generally do not undergo it, for example *sardine* (the tertiary stress on the initial syllable of this word is discussed in Section 3), *Kuwait*, *Detroit*, *Chinoise*, *boudoir*, *Louise*; but *combine*, *écru*, *détour*, *sirloin*. Conversely those disyllabic words which do not contain a final tense vowel or diphthong generally do, thus *torture*, *convert*, *mustang*, *assè*, *monarch*; but *Corvette*, *Ceylon*, *eclipse* (although *eclipse* does occur dialectally). Trisyllabic nouns marked as undergoing ASR include *Oregon* (the alternate form *Óregon* (the symbol ° designates weak stress and vowel reduction) is obtained by an additional rule which destresses certain tertiary final syllables; similarly *adjective*, which is underlyingly /æd=jekt+iv/ — compare *adjectival*), *alphabet*, *ampersand*, *Bolshevik*, *Horowitz*; those marked as not undergoing it include *macaroon* (here the initial tertiary stress is supplied by a rule which, in long words, places secondary (later reduced to tertiary) stresses on those syllables which would get primary stress if the word were to end on the syllable preceding the one which actually gets primary stress; compare such forms as *Adirondack*, *electrostatic*, *Monongahela*)², *suffragette*, *karangaroo*, *Timbuktu* (the symbol ∨ designates a quaternary stress which protects the quality of the vowel so stressed from reduction; just how that stress is assigned is discussed in Section 3.1), *Istanbul*, *lingerie*, *avant-garde*, *bourgeoisie*, *Tel-Aviv*, *San José*, *liaison*, *chimpanzee* (the variants *liaison*, *chimpanzee* are obtained by applying the ASR to move the primary stress to the penult).

¹ The exact formulation of the ASR is difficult to arrive at. Basically, it locates the primary stress one, two, or possibly three syllables away from a stressed ultima, or (in Ross' account) stressed penult if the final syllable ends in *i*, *ʏ*, *ʏl*, and possibly *u*. This version eliminates entirely the need for case "c" of the MSR as formulated in SPE.

² This rule can be subsumed under the ASR in a relatively straightforward way which I do not pursue here.

2. In addition to the ASR, there is another rule which has the effect of moving the main stress in a word to an earlier syllable; this rule however works only in compounds, and has roughly the effect;

\...^.../ → ^...^.../

where the dots symbolize possible more weakly stressed syllables. The primary stress is in the second word of the compound, the tertiary and secondary ones are in the first. This is the rhythm rule (RR)—a similar rule for German is discussed in Kiparsky (1966). The effect of RR can be seen in such expressions as *Chínèse lánquage* (cf. *Chínèse*), *sárdíne sándwích* (cf. *sárdíne*), *Nèw-Yòrk Gíants* (cf. *Nèw Yòrk*), *Tímbùktù índústriálist* (cf. *Tímbùktù*), *mácaroón íce cream* (cf. *mácaroón*), *Tènnesseè Érníe* (cf. *Tènnesseè*), etc. In some cases, the rule is optional; for me either *Détroít Líons* or *Détroít Líons* is acceptable (as is *Détroít Líons*, for which see Section 3). Similarly, either *Còrvette státion wagon* or *Còrvette státion wagon* (cf. *Còrvette*); either *Týròne Pówer* or *Týròne Pówer* (cf. *Týròne*); either *Márlène Deézt* or *Márlène Deézt* (cf. *Márlène*).

In still other cases, the rule is inapplicable; thus I accept only *Louíse Túcker*, and not **Loúise Túcker* (cf. *Louíse*); only *Éláine Mórison*, and not **Éláine Mórison* (cf. *Éláine*). That the ASR and RR are intimately related can be seen from the following implications: if a word is subject to ASR it necessarily undergoes RR (more precisely, the application of the ASR prior to the phrase cycle has obviated the need for RR on the cycle for phrases); conversely, if a word cannot undergo RR, it cannot undergo ASR either (cf. *Louíse* and *Éláine*). Words which are not subject to ASR may or may not undergo RR, and in some cases RR is optional.

In the above discussion only disyllabic nouns were considered. In nouns of three or more syllables in which the MSR assigns primary stress to the ultima, RR always appears to be at least optionally applicable, even to those to which ASR cannot apply. Thus I obtain, besides the examples already given, *Jápanèse fisherman* (cf. *Jápanèse*); both *Kálamazòò zoó* and *Kálamazòò zoó*; (cf. *Kálamazòò*); both *chímpánzèè còlony* and *chímpánzèè còlony* (cf. *chímpánzèè*); both *língeriè sálesman* and *língeriè sálesman*.

Despite the obvious relatedness of ASR and RR, they are not to be considered the same rule, for if they were to be so considered (the verion known as ASR applying to words and that known as RR to compounds), it would not be possible to provide coherent lexical representations for the classes of nouns including *alphabet* (ASR obligatory, RR vacuous), *sardine* (ASR inapplicable, RR obligatory), *Tyrone* (ASR inapplicable, RR optional), and *Louise* (ASR and RR both inapplicable) respectively. Moreover, RR is applicable to many nouns to which the application of ASR is excluded

(i.e. ASR is not simply inapplicable because of a lexical mark to that effect), for example *Còlorádo*. ASR cannot apply to this word for the simple reason that the primary stress is on the penult rather than the ultima; however RR is applicable to this word, as in *Còlorádo Démocrat*. Many similar examples could be given.

3.0. We turn now to the problem of accounting for the tertiary stress on the initial syllable of words like *sárdíne*. As Ross observes, an initial syllable of a word may receive a tertiary stress if it is a strong syllable (in the sense of SPE) and if the second syllable of the word has primary stress. Thus besides *sárdíne*, we have *bándáma*, *Árléne*, *Áfghánistan*, *sèctárian*, *súccèss*, *èléctric*, *ò'clòck*, *fátálisty*, *tònálisty*, *hùmídisty*, *leùkémíá*, *còòperate*, *psýchòlogy*, *foùndátion*, *àutònomy*, *náive*, *cháòtic*, *átýpícal*, *Bòstónían*, etc.; but *bánána*, *dlóne*, *súscèptible*, *ánémíá*, *cápácity*, etc.³

There are speakers of American English for whom these are the only possible pronunciations of these words, but there are other speakers who, in fast speech, tolerate weak stress and consequent vowel reduction in the initial syllable of many words of the first group. For such a weakening to take place, the word must be a relatively familiar one, and if of known foreign origin, reasonably Anglicized. The weakening is most common in words whose first syllable contains a lax vowel followed by a consonant cluster which is not introduced by an occlusive or which is not unusual in some way. It is also common in words in which the initial syllable contains one of the tense vowels *A*, *E*, or *O* (in the sense of SPE) followed by a single consonant. Examples include: *Cámbódíá*, *ènthúsiásm*, *còmpòse*, *cántánkerous*, *Mòngòlián*, *últériór*, *Sýlvéster*, *òrthògráphy* (initial [ɔ], however, reduces only if followed by [r]); the pronunciations *Bòstónían*, *àutònomy* would be very unusual), *pártáke*, *Vírgíniá*, *mýstérious*, *áscòrbíc*, *Ísraèlí*, *áthlétíc* (the fact that *áthlétíc* is also possible suggests that we are here dealing with an initial strong syllable), *díphthéria*; *èléctric*, *Détroít*, *fátálisty*, *tònálisty*.

³ There are a number of apparent counterexamples; words with a stressed, apparently weak initial syllable preceding a stressed syllable, but in these the initial vowel is *æ* followed by a labial consonant: *tábú*, *snáfú*, *cáfè*, *trápèze*, *Hàmítíc* (cf. *Sèmitíc*). This suggests that such vowels should be regarded as tense for purposes of stress assignment, for which one has additional support in words like *Álabáma*, *Bíáfra*, etc.

If we consider, however, such words as *ràgòú* [rægú], *tátòó* [tætú], *táblèáú* [tæbló:] we observe that *æ* may be regarded as tense provided there is a rounded vowel in the following syllable and that no palatal intervenes. When followed by *n*, *æ* may also be the representative of tense *a* (not SPE *A*, but the stressed vowel of *father*), as in *bánána*, *Mòntána* (cf. *Neváda*). In *Hànoi* [hænóy] the *æ* may be considered tense either because it is followed by *n*, or because the vowel of the following syllable is rounded.

Monosyllabic prefixes also tend to receive a tertiary stress, even if the first syllable of the word is weak: *ínúsual*, *disárm*, *ínért*, etc.

is needed to assign quaternary stress on the third syllable, anticipating the tertiary stress on the fourth. The need for both extensions (applicability to non-initial syllables and applicability to syllables preceding non-primary stresses) is apparent for examples like *èlèctròstátic* (one can also get *èlèctròstátic*, of course, in fast speech).

4.0. In Section 3 we found that there is an optional rule, SER, for destressing certain syllables which receive stress from the SSR, and that the statement of the conditions of the applicability of SER is tied up primarily with the phonological structure of the potentially affected syllable. One way of stating those conditions, which is perhaps the most elegant of all, involves altering the notion of weak and strong syllables from that of a binary distinction, as in SPE, to that of a scale or hierarchy of syllable strength, in which syllables ending in a lax vowel are weakest of all (this may be indicated by the specification [0 Strong]), those ending in a lax vowel plus a non-occlusive are [1 Strong], as are those which end in a non-diphthongal mid or high tense vowel, those which end in a lax vowel plus an occlusive are [2 Strong], while those which end in a diphthong or low tense vowel are [3 Strong]. We then say that SSR assigns a stress to all syllables marked [α Strong], $\alpha > 0$, while SER freely eliminates stress from syllables marked [1 Strong], less freely from those marked [2 Strong], and rarely, if ever, from those marked [3 Strong]. While this formulation is still incorrect in detail (it fails, for example, to handle the facts regarding *u* noted in Section 3, and it treats tense *e* and *o* alike, which is probably wrong), it nevertheless captures the basic facts regarding SSR and SER.

We now examine three other destressing rules in English to see to what extent the hierarchy of syllable strength is relevant to the statement of those rules. Those rules are:

(1) a rule which destresses an ultima following a primary stressed weak (i.e. [0 Strong]) penult. We call this rule Fidelholtz's law (FL) after its discoverer (cf. SPE, 146). The rule accounts for the pronunciation of *Árab* [é:rəb] and the non-existence of **Árab* [érəb], but (dialectally) *Árab* [é:rəb]. The derivation of *Arab* proceeds as follows:

Arab
0 1 MSR
1 2 ASR
1 0 FL

(2) a rule which destresses the penult of a trisyllabic word when the first syllable has primary stress; we call this rule, the 10XR (read "ten XR"),

from its effect in such words as *índústry*; (see also Langendoen and Bever (1973)):

industry
0 1 MSR
1 2 ASR
1 0 10XR

(the final syllable counts as "X").

(3) a rule which destresses an ultima after ASR has applied; we already commented on this rule in Section 1 in connection with such words as *Óregôn*, *adjective*. We call this the ultima destressing rule (UDR); notice that UDR applies to certain disyllabic words to which FL cannot apply, for example *óctàve*, the derivation of which is as follows:

octave
0 1 MSR
1 2 ASR
1 0 UDR

4.1. Unlike SER, FL is generally obligatory, and it appears to have few true exceptions among words ending in a consonant. Some apparent exceptions, such as *ássèt*, *áddict*, *sýnàpse*, do not meet the conditions of FL, which requires that the word to which it applies contains no internal boundaries other than SPE +. Since these words contain the SPE boundary = between the Latin or Greek prefix and stem, FL is inapplicable to them. A similar explanation might be feasible for a word like *léssòr*, which is often pronounced with the accentuation as indicated (and according to standard dictionaries of English, must be).

Some genuine exceptions to FL, for me at least, include *Híckòk*, *húbbùb*, *híccùp* (*híccùp* is also possible), *pótàsh* [pátəš], *háshísh*. All these examples, it will be noted, consist of final syllables which begin and end with obstruents, and presumably the reason for their exceptionality is to be found there.

There are, apparently, only a very few exceptions to FL involving final syllables ending in two consonants, which might be thought of as surprising since such syllables would probably count as stronger than those which end in a single consonant. The explanation, presumably, is that a larger proportion of disyllabic words which end in a consonant cluster do not undergo ASR; that is, the primary stress is more likely to be retained on the ultima of such words. Some exceptions to FL among such words that I have found are *fáscísm*, *mónàrch*, *áddàx*, and *ádułt* (ASR is optional in the latter; if it is not applied we obtain *ádułt*).

FL is inapplicable to words whose ultima ends in a vowel or diphthong. By a general rule, that vowel, if not reduced, must be tense, and the only final vowel which stands in phonological alternation with a reduced vowel is [o], as in *féllōw* ~ *fěllōw* [félɔ̃]. While one might wish to consider this a matter for FL to handle, I feel this alternation is probably more appropriately handled by a special rule which involves just final [o]. Not all such vowels freely reduce, compare *béllōw*, (we do not obtain *běllōw*); and notice that the same alternation is found in words which are outside the domain of FL to begin with because the penult is strong, for example *wíndōw* ~ *wíndōw* [wíndɔ̃] and *potátō* ~ *potátō* [poté:tɔ̃].

There are virtually no examples in English of words containing a primary stressed weak penult and an ultima containing a long vowel or diphthong followed by a consonant, which is to say that ASR is inapplicable (or practically so) to words of the form $C_0\check{V}C_0\check{V}C_1$. This suggests that ASR is sensitive, to some extent at least, to the relative strengths of the syllables involved: the stressed syllable and the syllable to be stressed; if the latter is very weak compared with the former, ASR is not applicable. One example of this sort which I have managed to come up with is *háshish* [hæ̀ʃi:ʃ], which is also strange because it contains a tense vowel tautosyllabic with a following š. As already noted, this word is an exception to FL too.⁹

4.2. In this section we take up the 10XR and show among other things that it is a special case of the SER. An excellent source of examples which illustrate the need for 10XR are words in -y, such as *índūstry* (a derivation of which is given in Section 5.0 above), *Lómbárdy*, and *cúckōldry*. That the rule is sometimes inapplicable can be seen from examples like *áutòpsý* and *bíòpsý*; a fact which I believe can be only explained by noting that the syllable in question is high on the hierarchy of strength. Moreover, I believe it is the case that the 10XR rule is generally optional in those examples to which it is applicable, a consequence of the fact that the affected syllable is never a weak syllable.

An important question which has yet to be raised is how stress is assigned to the penult of trisyllabic words in the first place, and the related question of how to account for whatever stress there is on the ultima in such words as *índūstry*. If we compare the accentual pattern of this word with that of *Álgèrnòn* or *Válèntine*, we find that it is essentially the same; that is, we

⁹ Another example, possibly, is *Hítte*. It might be argued that this word genuinely does contain a medial geminate, however, in light of the fact that it is more likely to be pronounced with a fully aspirated alveolar stop rather than a flap, which is the expected result of a posttonic medial *t*. *Sápphíre*, *gráphíte*, and *cáffeíne* are not examples of this sort, since the initial vowel is tense (see also footnote 3 for discussion of tense *æ* before labials). The same is true of *Ráphaèl*, *Sámuèl* when pronounced as disyllabic words.

can represent it thus: *índūstry*. Now the derivation of the accentuation of, say, *Valentine* is as follows:

Valentine

0 0 1 MSR

1 0 2 ASR

1 0 3 Stress-adjustment rule (SAR; cf. SPE, p. 94)

1 4 3 SSR

1 0 3 SER or 10XR

Notice that the destressing of the penult in *Valentine* can be handled either by the SER or the 10XR, and since the former is a more general rule than the latter, we can view the 10XR rule as simply a special case of the SER, provided the derivation of the accentuation of words like *industry* proceeds along the same lines as that of *Valentine*, i.e. as follows:

industry

0 0 1 MSR

1 0 2 ASR

1 0 3 SAR

1 4 3 SSR

1 0 3 SER

If this is correct, then the accentuation of such words as *autopsy* and *biopsy* should be: **áutòpsý*, **bíòpsý*; and not as given above (i.e. *áutòpsý*, *bíòpsý*). Therefore a rule whose effect is:

$$\check{V}C_1 \check{V} \# \rightarrow \check{V}C_1 \check{V} \#$$

must be added to the grammar (we call this the 4-3 switching rule (4-3SR)).

There are further reasons for assuming that the MSR assigns primary stress to the ultima of such words as *industry*—such an assignment furthermore is automatic if the vowel contained in it is given as tense; i.e. SPE E. First of all there are doublets such as *Gálileè* ~ *Gálileé*, which shows that some words ending in *E* need not have the ASR applied to them at all. The suffix spelled -ee provides numerous examples of this sort, for example *èmplòyeé* ~ *èmplóyeè*,¹⁰ and there is also, of course, our old friend *chìmpánzeé* ~ *chìmpánzeè*.

¹⁰ It will be noted that the ASR assigns main stress to the first syllable of trisyllabic words in -y regardless of the strength of the penult (*Epòxy* is not a counterexample, since the final y in it is not the suffix -y), whereas it assigns main stress to strong penults of trisyllabic words in -ee, for example *ádrèsseé* (I have no explanation for the quaternary stress on the penult of this word, unless it is assumed that the syllable division in this word follows the morphological division — an attractive hypothesis, or at least one which is more attractive than one which assumes there to be a geminate s present).

Another argument has to do with the history of words in final *E*. Many if not most of them have entered the English language via French. It strikes me as quite reasonable that when, say, *majesty* became Anglicized, that the ASR was applied to a form accentuated as *mājěstý* yielding *májěstý* and ultimately *májěstý*. There is, on the other hand, no reason to assume that the word was ever accentuated with primary stress on the penult: **mājěstý*; and therefore I conclude that there is no reason to posit a derivation of this word in which primary stress is ever assigned to the penult.

If we examine words of four or more syllables, we observe that SER does not generally apply if the syllable to be affected is preceded by an unstressed syllable. Consider, for example, the words *secrētārý*, *órhódóxy*. The derivation of these words proceeds as follows:¹¹

<i>secretary</i>	<i>orthodoxy</i>	
0 0 0 1	0 0 0 1	MSR
1 0 0 2	1 0 0 2	ASR
1 0 0 3	1 0 0 3	SAR
1 0 4 3	1 0 4 3	SSR
1 0 3 4	1 0 3 4	4-3SR

4.3. In this section I show that FL is a special case of the UDR. Recall that FL states that an ultima is destressed after a primary stressed weak penult. The UDR, on the other hand, states that an ultima is destressed after a stressed strong penult or after an unstressed penult whatever its strength. Obviously the effect of the two rules is the same, and since the environments are in complementary distribution, we can conclude that the two rules are really one, unless it can be shown that some other rule must intervene between the two destressing rules, or that one is subject to a host of conditions that the other is not.

I know of no rule that must intervene between FL and UDR, so given my present knowledge, I see no objection to collapsing the rules on ordering grounds. Moreover, the sorts of words to which the UDR is not applicable are essentially the same sorts to which FL is not applicable, e.g. *mólàl* (cf. on the one hand *léssòr* and, on the other, *mólâr*—*mólal* was a deliberate coinage); *áardvark*, *tórmènt* (cf. *ádùlt* and *pótènt*); *Ádíròndáck*, *Bághdád* (cf. *pótásh* and *sórdíd*); and *mángrovè* (cf. *Hittite*). The only sorts of examples to which UDR is not applicable and to which FL generally is are certain words ending in short *æ* or *o* (phonetic [a]) followed by *n*, for example

¹¹ In British English, however, SER is applicable to *secretary*, resulting in *secrētārý*, but not to *orthodoxy*. The reason is that SER is applicable in British English to syllables preceded by an unstressed syllable only if their strength is less than 2, the same restriction which holds on SER in other contexts in both British and American English.

nýlòn, *Dárvòn*, *Téflòn*, *sámpàn*. Even among such words, many can be found to which UDR is applicable, e.g. *Sátàn* (cf. *satanic*), *másòn* (cf. *masonic*). As with FL, UDR is less likely to be applicable the stronger the ultima, but for ultimas of medium strength, individual lexical items will have to be marked to indicate whether or not the rule applies.¹²

When the penult is unstressed, or is weakly stressed by the SSR, then the UDR is less likely to apply. This observation parallels one made above concerning the SER, namely its inapplicability in American English when the affected syllable is preceded by an unstressed one, and its restricted applicability in British English depending on the strength of the affected syllable. We have already given examples of this sort in Section 1, namely *Oregon* and *adjective*; UDR is optionally applicable to the first and obligatorily applicable to the second. Moreover, a rule changing the underlying *I* of the ultima of *adjective* to *i* must be applied. Notice that there are in fact two variants of this word, depending upon whether SER has or has not been applied, namely *ádjective* and *ádjective*. The derivation of this word is as follows:

<i>adjective</i>	
0 0 1	MSR
1 0 2	ASR
1 0 3	SAR
1 4 3	SSR
1 0/4 3	SER (optional)
1 0/4 0	UDR

Notice that SER must apply before UDR. Similar examples are provided by *tálistmån* ~ *tálistmån* and *ómbüdsman* ~ *ómbüdsman*.

When the penult is unstressed or stressed by the SAR, the applicability of UDR depends upon two factors: the strength of the ultima and the presence of formative boundaries preceding the ultima. In the absence of such boundaries, we find that UDR is generally applicable (sometimes optionally) to [1 Strong] syllables, e.g. *párågòn* ~ *párågòn*, *pártisån*; often applicable to [2 Strong] ones; cf. *bólshévik* ~ *bólshévik*; inapplicable to [3 Strong] ones, e.g., *pórcúpine*, *cántàloupe*.

An intervening formative boundary can sometimes interfere with the operation of UDR; compare *Switzérlánd* with *Swázilánd*. The retention of

¹² The analysis given above in Section 4.0 of the two pronunciations of *Arab* [æ:ræb] and [é:ræb] is wrong. It is not the case that the second pronunciation is due simply to the tensing of the first vowel so that the quality and tertiary stress of the (supposedly) lax ultima is retained. Rather, the second pronunciation represents a tensing of both vowels of the word; the [æ] of [é:ræb] is the tense *æ* before labials that is discussed in footnote 3.

the tertiary stress on the ultima of the latter shows it to be still analyzed as a compound.

4.4. We summarize this discussion of the destressing rules in English as follows: there are two general rules of destressing syllables in English, SER, which destresses syllables preceding stressed syllables, and UDR, which destresses final syllables. If it were not for the fact that there is a need to order these rules with respect to each other (cf. Section 4.3), it would be possible to collapse these rules into one general one; and perhaps it is possible to get around the ordering problem by having the rule apply to successive syllables in a word from beginning to end. I shall not pursue the matter further here, however.

5. The MSR for English can be rather dramatically simplified if the foregoing account of the various destressing rules and of the ASR is correct. The rule would be to assign primary stress to the last syllable in a word whose strength is greater than zero, and if there are none, to the first syllable or the antepenult, whichever is the nearer to the end of the word. In particular, the MSR will assign primary stress to any ultima which ends in a consonant.

This formulation is not quite correct, however. Consider words of 3 or more syllables, such as *umbrella*, *vendetta*, etc. in which both the penult and ultima are weak, but in which the penult nevertheless receives primary stress. On the basis of these examples, we find that we will have to allow the MSR to assign primary stress to weak penults in certain marked lexical items of three or more syllables. Now consider examples like *penicillin*, *Armageddon*, *stilétto*, *Kentucky*, *colóssus*, *solícit*, *flagéllum*, etc. If it is decided to place primary stress on the final syllables of these words, by the MSR (since the ultimas are not weak) then the ASR will be responsible for assigning the main stress to the weak penult. It would seem to me to be preferable, if at all possible, to keep the ASR out of the business of having to assign stress to weak penults, and to handle this matter solely by the MSR. In other words, we propose to allow the MSR to disregard CERTAIN strong ultimas ending in *E*, *O*, *Vn*, *Vs*, *Vt*, and *Vm*. I say certain ones, because, of course, the MSR must assign main stress to others which do end in the designated segments, for example *èmplöyee*, *Thòreaú*, *Àgàmémnòn*, *mòráss*, *àlphàbèt*, and *strátàgèm*. It is possible that there are other final syllable types which can be ignored by the MSR, but I have no clear examples of any.¹³

¹³ Thus one is tempted to include *Vk* on the basis of examples like *Habákkuk* and *Pequánmòck*, but these are not clear-cut because the penults in these examples can be construed as containing tense *æ* (cf. footnote 3).

Admittedly, this radical simplification of the MSR entails some complication of the ASR, but it seems to me that the present version of the rules of English accentuation, when compared with those of SPE, lies in the direction of truth.¹⁴

REFERENCES

- CHOMSKY, NOAM and MORRIS HALLE (1968) *The Sound Pattern of English*. New York: Harper and Row.
- KIPARSKY, PAUL (1966) "Über den deutschen Akzent." *Studia Grammatica* 7.
- LANGENDOEN, D. TERENCE and THOMAS, G. BEVER (1973) "Can a not unhappy person be called a not sad one?" In Anderson, S. and P. Kiparsky, eds. *Festschrift for Morris Halle*. New York: Holt, Rinehart and Winston.
- ROSS, JOHN R. (1972) "A reanalysis of English word stress, Part I." In Brame, M. K., ed. *Contributions to Generative Phonology*. Austin: University of Texas Press.
- TRAGER, GEORGE L. and HENRY LEE SMITH (1951) *An Outline of English Structure*. Norman, Okla.: Battenburg Press.

¹⁴ In the present account, the MSR pays no attention to parts of speech; the ASR is however sensitive to whether a particular word is a noun, verb, adjective, preposition or whatever. For example, in the absence of any occurrences of internal boundaries, the ASR will be inapplicable to any verb ending in *ri*, for example *désért* but it will be applicable to some such nouns, for example *désert* (but not all, cf. *dessért*).