A FURTHER NOTE ON ITERATION

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1.0 In a recent paper, Kuiper (1976) examines and rejects the possibility that one or the other of two rules in the base can generate repeated adjectives and adverbs like these:

1) You stupid, stupid girl
2) The problem is weird, weird, weird
3) You must lie perfectly, perfectly still
4) She is a very, very, very, very, well-developed secretary.

> (Kuiper's examples 1 - 4 also)

The first of the rules he considers would generate nodes in co-ordinate structures as many times as they must be repeated, and the second would generate NPs embedded in NPs. Neither, he argues, could generate such sentences in appropriate ways because the acceptability of particular repetitions depends on factors which arise in the course of transformational derivations or after lexical insertion and thus cannot be stated in the base. He concludes that surface structure rules will be needed to handle the phenomena, but is doubtful whether they can be treated in a unified way.

2.0 In this note I shall argue against this last claim, holding that we can find at least two unifying factors which allow us to give a straightforward account of the data, in which most of the rules are indeed concerned with surface structures, but which treats repetition as basically due to semantic factors. The connexion between the two fields by-passes completely the syntactic field on which Kuiper concentrates.

2.1 He does not look beyond purely formal syntactic terms when he describes the distribution of the repeated lexemes: repetition "occurs with adjectives in both attributive and predicative positions (but subject to further constraints mentioned

later);...it occurs with intensifiers and adverb modifiers in adjective phrases, ... it does not occur with adverbs functioning as heads of adverb phrases in any of the two characteristic positions that adverbs may function in, except initially under heavy juncture." (83, where further examples illustrate the last point.)[1] When they are presented in these terms, the phenomena seem already to be quite diverse, and it is only considerably later (pp. 87-88) that Kuiper notices the single factor that is common to them all, "only gradable adjectives... will take iteration." By this we must understand iteration within a single uninterrupted intonation contour (examples of which will be sketched below); the following examples of repetition, in which the adjectives are not gradable,[2] cannot be spoken with such a contour:

    5) The contractors laid a concrete – concrete – runway
    6) He is an evangelical – evangelical – parson. (see Kuiper's (36))

These may be uttered acceptably only with the fractured intonation which I have tried to punctuate, indicating that contrastive stress is being laid very heavily on the adjective, or that the speaker wishes to ensure that the hearer has heard correctly.

2.2 The contrast between gradability and non-gradability is a factor whose importance cannot be comprehended in the framework that Kuiper works with, which is basically that of Chomsky's E.S.T.;[3] Kuiper makes this statement: "Since gradability ··· is a semantic fact, neither of the two proffered solutions is able to capture this constraint since syntactic rules cannot be sensitive to [such] facts." (p. 88). This is strictly true in my account too, and the rules I shall ultimately propose are not syntactic; but what is unfortunate in Kuiper's approach is that the syntactic bias leads him to see this as simply a fact to be "captured", and dismissed when it cannot be. For it is much more than that. Repetition of gradable lexemes has the function of intensifying degree, or envisaging this graphically, of indicating a more extreme point on their scale.

2.3 Such repetiton of gradable lexemes is one means of expressing intensity, but not the most basic. Two simpler means are the use of intensifiers like *very*, and of word-stress together with a rising intonation and increased tension of the vocal cords. The functions of these are at least in some degree distinguishable. *Very* alone, without any specific intonation pattern, simply marks a position on a scale of gradability as a cognitive function, without indicating any subjective attitude

of the speaker. The stress intensification does invoke such a factor, as well as marking degree. *Very* can receive such stress itself, and this I take to be evidence that the stress is the mark of a separate function.

I believe that iteration is more like the second means of intensification, as it is almost universally associated with such stress: iterated adjectives or adverbs are normally stressed at least as strongly as single emphatic elements. I therefore propose to regard it as a realization of a further degree of intensification, particularly appropriate to the further, non-conceptual factors that are borne by stress: the incantatory contour possible when stress and articulatory tension are spread over the extended span of the repeated words is suited to something which may be as strong as fascination or awe.

The means of indicating degree may be related schematically as in the table below:

7)   CONTEXTUAL OR SUBJECTIVE FACTORS →

            He was an old man

DEGREE	a very old man	an óld man
↓	a very very old man	an óld óld man
		a véry (véry) old man

Henceforth I shall refer to the nonsubjective and subjective scales as INTENSITY and EMPHASIS respectively, and propose that the two have different structural representations, for reasons I shall go into shortly. Only the first is generated in the branching structure of the base; emphasis, which is indicated by stress, is to be represented in a purely lexical way and is associated with the marking of word stress in the phonological component, at a 'late' stage in the operation of the grammar. And in view of the phonological and functional similarities between stress alone and stress with iteration, I argue that both should be handled together - that certain degrees of emphasis,[4] and thus of stress, may trigger copying rules which repeat phonological material, subject to contextual and rhythmic factors such as those which Kuiper has outlined. These are not syntactic - the syntactic factors among those which Kuiper notes, such as the distinction between attributive and predicative positions of adjectives, are, I shall argue, relevant because they affect other aspects of sentence intonation patterns to which the specific phonological features of iteration must conform or which they must at least not destroy. Because of this, neither syntactic branching structures nor coordination are required - we may postulate that the iterated nodes are connected by a simple sister-adjunction.

2.4 The structural distinction I have proposed is not obvious from cursory consideration of the data but it is, I believe, necessary if we are to account for the semantic facts. Even from the brief introduction here it might, for example, seem possible to hold that the difference between intensification with *very* and that which employs stress is a matter which can be accounted for by factorization into components of cognitive and subjective elements. And if this were so, then it would be more natural to propose a common structural origin.

But this is a mistaken analysis. With the second means, stress, and iteration which I have linked with it, degree and emphasis are presented together as a whole, in a way which can be explained by considering the presuppositions involved. A simple statement that, say, a box is 'very big' with neutral intonation, etc., presupposes that both speaker and hearer can agree on the scale against which it is being measured. The contrary statement that it is 'not very big,' again made with neutral intonation, denies the predication 'very big' as though this were a simple indication of an area of the scale and the normal rules for the negation of gradable qualities applied: the box is understood to be considerably less than mean size on the assumed scale, and probably quite small, just as the statement that the climate of a country is 'not warm' implies that it is cool or even cold, and not that it is actually hot. The pre-supposed scale is not questioned, and negation of a predicate which has reference to it indicates the corresponding opposite region.

In contrast, a statement that the box is 'not big' does not merely revoke a position on a scale, it also casts doubt on the way the scale has been applied or assumed to apply. The standard of judgment against which the box has been declared big, or is expected to be big, is being pronounced to be inappropriate, and no single direction for the revision may be inferred from such a statement in isolation; according to context, it may be judged that the box is either middling in size or small, on the one hand, or enormous, on the other. Contexts in which a statement that something is 'not big, big' are harder to obtain, but it seems that when this is possible the same thing is happening. Conversely, in a statement that the box is 'bíg' or 'bíg, bíg' a scale is not presupposed but is being established or re-established at the same time as the position on it is indicated.

The analysis and representation of what I have called pre-supposition, and the second phenomenon, are too complex to go into any further here, but I think that enough has been said now to support a claim that if the function of *very* is to serve as an indicator against this scale, and the branching structure

in which we assume it appears in the base is appropriate to this, then stress or emphasis is not the same structurally. The former belongs to a system in the lexicon: *very* contrasts with such other qualifiers as *quite*, *barely* and several more. Like *very*, none of these other lexemes affects the dynamics of the inter-personal communication as stress does; the (re-) establishment of a new or different scale which we have just seen is more akin to the double assertion, of the lexical item together with the promotion of the presupposed scale to become part of the assertoric content itself, than it is to qualification, so that if, as I have supposed, the latter is the function of the branching structure associated with *very*, then such a structure is not needed here.

In any case, the proposal that has just been dismissed would return us to exactly the same kind of complexities that Kuiper's paper presents but cannot deal with in any illuminating way. There is no restriction on the environments in which a single *very* may occur with adjectives and adverbs of positive degree (i.e. excluding comparatives and superlatives). But Kuiper has demonstrated amply that the constraints that are imposed on iteration cannot be stated in the base, and the phonological factors which my approach uncovers and unifies would therefore have to be presented again as filters in the phonological components of the grammar. But they will still miss a generalization: in the next section I shall argue that there is a clear relationship between the rhythmic structure of words and the number of times that they may be iterated acceptably. This may be expressed directly if we realize the abstract features of semantic stress in the phonological rules in such a way that we can map lexemes onto them as many times as is appropriate to their syllabic rhythm or structure. Filters would capture such a relationship inexplicitly in an ad hoc manner, as I shall show in section 4.

3.0 The intrinsic ordering of the various components enables us now to generate the correct distributions of the repeated lexemes. Lexical entries are complexes of semantic and phonological material, and the latter remains in abstract form until the phonological component of the grammar begins to operate, after the syntactic transformations have assigned each lexeme its final position, and derivational morphs have been concatenated in their appropriate positions.[5] Word stress will be assigned by rule at this stage (or, in the case of irregularities, by exception statements), so that vowel neutralizations which are consequent on stress may be effected in the phonological cycle. The rules for semantic stress cannot be applied before those governing word-stress are, and so semantic

stress must remain in abstract form until the rules for the latter apply. Since we have argued that reduplication is associated with this kind of stress, the features which control it in the appropriate circumstances will also be retained in abstract form until the full contexts of the lexemes they apply to are given. In short, we can attempt to formalize reduplication rules which are sensitive to the various factors that Kuiper notes: the rhythmic patterns of words, and the relevant features of position in phrases or sentences.

3.1 Kuiper suggests (87) that words of three syllables are normally the longest that may reiterate, and that strong initial stress in polysyllables contributes to the felicity of their iteration. He notes that the latter constraint seems to be stronger than the former.

In my judgment, disyllabic words are the longest that English reiterates with almost complete freedom, although the influence of the second factor, rhythm, is already noticeable, as I indicate in examples (12) to (15) below:

8) What a cunning, cunning fox it was
9) He is a stubborn, stubborn man
10) The policy was decided by a foolish, foolish minister
11) This is a brutal, brutal government
12) ?The huntsmen were tricked by an alert, alert fox
13) ?It seemed to us that she was a relaxed, relaxed woman
14) ?This was made by an éxpèrt, éxpèrt craftsman
15) ?He was too broken in spirit to appeal against this uñjúst, uñjúst decision.

The marginal infelicity of the last two indicates that the entire rhythmic pattern of the word is important: *expert* has a strong initial stress, but also a strong secondary stress on its second syllable, and the reverse pattern occurs in *unjust*. The further observation that a word with a lighter first syllable, *absurd*, is more acceptable than those of similar rhythm in (12) and (13) is probably to be explained by extra-linguistic and cultural factors: it is a word of quite intense condemnation or ridicule in some idiolects, as in:

16) They came up with some absurd, absurd proposals.

Other adjectives of the same type are also exceptions among words of their length and rhythm, as comparison of sentences (21-23) with the first four examples of three-syllable adjectives with various rhythms shows:

17) ?He is a bullying, bullying speaker in the house

18) ?The dress was sewn with exquisite, exquisite workmanship
19) ?They could not make out the indistinct, indistinct characters
20) ?They ought to ban such unwholesome, unwholesome films
21) I've never seen such pathetic, pathetic acting before
22) He's just won a fantastic, fantastic race
23) What a terribly, terribly shocking thing to happen.
                                      (Kuiper's (43))

Although Kuiper leaves two examples [(his nos (44-45) which I repeat below as (24-25))] with four syllables unmarked, I cannot accept them easily, nor the others with them, although I can accept *extraordinary* at the end more readily; this is longer still but is of the same type as *absurd*, etc.

24) ??What a dissipated, dissipated existence
25) ??That's a singularly, singularly unexciting book
26) ??Every applicant had an inquisitorial, inquisitorial interview
27) ??He soon showed he was an incompetent, incompetent driver
28) Such an extraordinary, extraordinary man!

These last disagreements are significant as they illustrate the way in which any rules that can be set up must accommodate individual variation from speaker to speaker. What is important is that the order of length be consistent in each (in my case: two syllables, acceptable, with some reservations based on rhythm; three, questionable; and four, excluded), and that exceptions like *absurd* be explicable in a way that is consistent with the function of the process as a whole.

3.2 Another factor which affects the acceptability of iteration is position. All the examples that have been discussed so far have iterated modifiers before their heads, mainly attributive adjectives. In this position reduplication is the only kind of repetition - consider:

29) *He is an old, old, old man.

To understand why this example is less natural than the reduplications we saw before, I think it is sufficient to notice that both stress and the tension of the vocal cords increase with each successive instance of the repeated element; but in attributive position such rises must be followed by a fall to neutral stress and normal tension of the vocal cords, after which the normal sentence intonation must be resumed. The more often a word is repeated, the more abrupt the fall will become,

and thus greater disruption is caused to the sentence intonation.

A pattern that has not been noted so far, which is found in some exceptional cases where multiple repetition is acceptable, supports this claim. Noun phrases like that in (30) can be uttered in contexts like the telling of stories to children, and must have a rising and falling stress and tension, with the intonation shown:

30) And when he was an o̅ld, o̅ld, o̅ld, o̅ld, o̅ld ma̅n,...

Here the peak of the stress and intonation contour does not occur on the last instance of the repeated word but on the one before, and so there are two more words in the phrase to provide steps downward to the level stress and intonation on *man* and the continuation of the sentence. This is also the kind of contour that is found in repetitions of *very*, which may always be an exception to the constraints we have proposed:

31) He was a ve̅ry, ve̅ry, ve̅ry, ve̅ry o̅ld ma̅n by then _

32) Achilles must have had to run ve̅ry, ve̅ry, ve̅ry, ve̅ry,
$\begin{Bmatrix} \text{fa̅st} \\ \text{quickly} \end{Bmatrix}$ inde̅ed to overtake the tortoise.

The last instance of *very* in an NP will always be followed by the adjective it intensifies, which bears the intermediate stress before the head noun; adverbs will usually be at least disyllabic (*quickly*, etc.), allowing 'space' for the stress and pitch to fall in steps, and when they are not, like *fast* in the example, there seems to be a very strong preference for a word like *indeed* to follow them.[6]

3.3 In sentence-final position (specifically, with predicative adjectives),[7] the preferred number of occurrences is three, not two; stress and tension increase as before:

33) The centre of Arabia is dry, dry, dry.

The limitation is still quite severe, and may be explained by referring to factors very like those we have just seen. There is no need now to accommodate the rising stress and tension to a succeeding sentence pattern, but nevertheless in this position the stress (and intonation) contour of an English declarative sentence is usually falling fairly sharply, so that it is still not desirable to finish at a level too high above the normal end-point, and only one further item in the series is acceptable. Additional repetition is possible, no longer with the

single rising contour of (33), but with a contour identical to that of the multiply-repeated attributive structures like (29), falling again from a peak on the ante-penultimate through two steps to a lower stress tension, and pitch on the final instance:

34) The centre of Arabia is dry, dry, dry, dry, dry.

3.4 These observations about the limit and the conditions in which it may be broken apply strictly only to monosyllabic words, but the explanation given suggests that it is not the number of instances that is important, but that the way the syllables fit under the contours is laid out quite strictly in advance. The different distributions of longer words confirms this. Words of two syllables may occur either two or three times, but when there are three instances a single rising pattern like that of (33) is difficult to sustain, and rhythm affects our judgment as before:

35) His comments were stupid, stupid (stupid)

36) You must be relaxed, relaxed (relaxed).

The stress and intonation I have shown here, with a peak on the *second* instance now and a fall spread over the two syllables of the last word,[8] is even more strongly indicated for the next example with two more even stresses in the word:[9]

37) The verdict was unjust, unjust (unjust).

Normally, adjectives and adverbs of three or more syllables go over completely to the second pattern, and normally retract the stress peak to the first instance:

38) They don't realize it is infectious, infectious

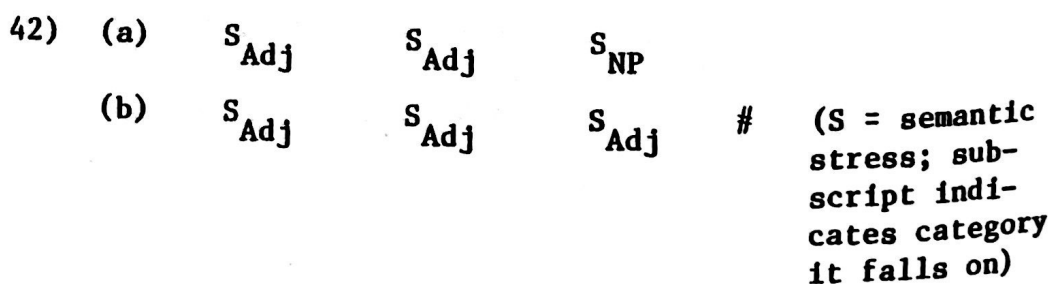or 39) They don't realize it is infectious, infectious.

4.0 Two ways of generating the required iterations in their contexts are possible and must be investigated. The first that I shall consider is a rule which copies lexical items in the phonological component if they are marked for EMPH, in such a way that it is sensitive to the final position of the constituent in the surface string. The rule would be of the form:

$$40)\quad \begin{bmatrix} \text{Lex(eme)} \\ \text{+gradable} \\ \text{+EMPH} \end{bmatrix} \rightarrow \begin{cases} \begin{bmatrix} \text{Lex} \\ \text{+STRESS} \end{bmatrix} + \begin{bmatrix} \text{Lex} \\ \text{+STRESS} \end{bmatrix} \Big/ \underline{\quad\quad} \text{NP} \\ \begin{bmatrix} \text{Lex} \\ \text{+STRESS} \end{bmatrix} + \begin{bmatrix} \text{Lex} \\ \text{+STRESS} \end{bmatrix} + \begin{bmatrix} \text{Lex} \\ \text{+STRESS} \end{bmatrix} \Big/ \underline{\quad\quad} \# \end{cases}$$

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The structure generated on the right hand side would be:

41)

$$\text{Adj (or Adv)}$$

$$\begin{bmatrix} \text{Lex} \\ \text{+STRESS} \end{bmatrix} \qquad \begin{bmatrix} \text{Lex} \\ \text{+STRESS} \end{bmatrix} \qquad , \qquad \begin{bmatrix} \text{Lex} \\ \text{+STRESS} \end{bmatrix}$$
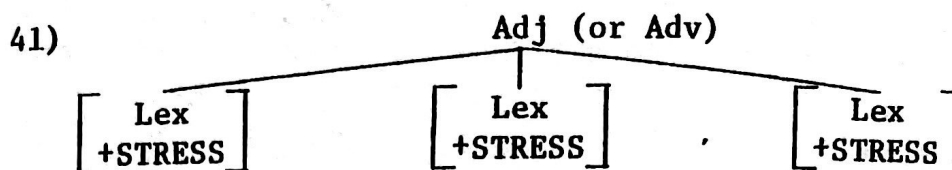
Although such a rule, generating such branching structures as phonological material rather than in the base, is already an innovation, I do not think that it goes far enough. It is an advance to be able to handle the contextual restrictions which the methods investigated by Kuiper founder on, but this is only one part of the problem, as we have seen in earlier sections: it is not merely the position of the lexemes that affects the acceptability of particular iterations, but the rhythmic struc- ture of the words. If we concentrate on the contextual con- straint alone as the rule presented above does, the latter function must be left to filters - and the rules assigning the overall contours will remain to be formulated. This would be both unduly complex, and atomistic, missing possible generaliz- ations of interrelationships. It would be far better if our rules could capture other points which we have seen that the data suggest: that the relationship between iteration and word rhythm depends upon the convertability of semantic stress (i.e. INTENSITY) with word stress, and perhaps tempo. We should try to formulate rules which will generate an entire contour in outline and then fit the iterated elements beneath it. In this way, we may also hope to capture the connexion between the first contour as it occurs in attributive positions and in sentence-final position, by regarding the head NP of the former as part of the contour, thus:

42)   (a) S_{Adj} S_{Adj} S_{NP}

       (b) S_{Adj} S_{Adj} S_{Adj} #   (S = semantic stress; sub- script indi- cates category it falls on)

Further, we may try to express the observation that the second contour is a continuation and 'accommodation' of the first.

4.1 Hence the second rule. It too is triggered by the same feature, (emphatic) STRESS, and generates the contour of phono- logical stress (and vocal cord tension) directly, as a target or template for the later parts of the rule, which control the number of iterations by means of statements of equivalence between the original, abstract stress and stresses within

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words. First, some notational points must be stated:

S = semantic stress
s = strong word-stress, or secondary stress in certain
    cases, e.g. in *unjust* and *ill-informed*
w = weak word-stress

Primes indicate the degree of glottal tension (and accompanying pitch); the greater the number, the greater the stress.

43)

(a)
$$\begin{bmatrix} \text{lexical entry,} \\ \text{in form of surface} \\ \text{phonological string} \\ +\text{EMPH} \end{bmatrix} \rightarrow \left\{ \begin{matrix} \begin{bmatrix} \text{lex} \\ S'+S'' \end{bmatrix} / \underline{\hspace{2em}} \text{NP} \\ \begin{bmatrix} \text{lex} \\ S'+S''+S''' \end{bmatrix} / \underline{\hspace{2em}} \# \end{matrix} \right.$$

(b)
$$\begin{bmatrix} \text{lexical entry,} \\ \text{in same form as} \\ \text{above} \\ \quad +\text{EMPH} \\ \quad +(\text{representation} \\ \quad \text{of factors} \\ \quad \text{appropriate to} \\ \quad \text{incantatory} \\ \quad \text{contour}) \end{bmatrix} \rightarrow \begin{bmatrix} \text{lex} \\ S'+S''+\ldots+S^n+S''+S' \end{bmatrix}$$

The rules will operate on the output of the rules which spell out the final phonetic matrices of words; and word-stress will have been assigned as well. EMPH is converted into abstract features of semantic stress, in sequences whose length is determined by context in part (a), which we have mainly dealt with; part (b) is intended to generate the expanded iterations of examples like (34), where incantation realizes some other factor I cannot analyze clearly.

I propose that in the generation of sequences of iterated words, the surface lexeme is copied onto the sequences of S's by rules which embody convertability constraints sensitive to the word rhythm, thus:

44) (i)
$$\begin{bmatrix} \text{lex} \\ \left\{ \begin{matrix} s \\ sw \\ ?ws \end{matrix} \right\} \\ S \quad S \quad S \end{bmatrix} \rightarrow \begin{bmatrix} \text{lex} \quad \text{lex} \quad \text{lex} \\ | \quad\quad | \quad\quad | \\ | \quad\quad | \quad\quad | \\ S \quad\quad S \quad\quad S \end{bmatrix}$$

(ii)
$$\begin{bmatrix} \text{lex} \\ \left\{ \begin{matrix} ws \\ wsw \end{matrix} \right\} \\ S \quad S \quad S \end{bmatrix} \rightarrow \begin{bmatrix} \overbrace{\text{lex} \quad \text{lex}} \\ S \quad\quad S \quad\quad S \end{bmatrix}$$

$$(iii) \quad \begin{bmatrix} lex \\ \{ (w)wsw(w) \} \\ S \quad S \quad S \end{bmatrix} \rightarrow \begin{bmatrix} lex \\ \overbrace{}^{} \\ S \qquad S \qquad S \end{bmatrix}$$

(Note: Curly brackets ‿, ⁀, are intended to indicate that Ss are distributed over words according to the pattern of their stresses. We may envisage S as representing a unit of intensity of the glottis and articulatory organs which has a temporal component.)

The first three sub-rules are appropriate to S-final position. Before NPs, I envisage the following variants:

$$(iv) \quad \begin{bmatrix} lex \\ \left\{ \begin{matrix} s \\ sw \\ ?ws \end{matrix} \right\} \\ S \quad S \end{bmatrix} \rightarrow \begin{bmatrix} lex \quad lex \\ | \qquad | \\ | \qquad | \\ S \qquad S \end{bmatrix}$$

and (v), which collapses the operation of (ii) and (iii)

$$(v) \quad \begin{bmatrix} lex \\ \left\{ \begin{matrix} ws \\ wsw \\ (w)wsw(w) \end{matrix} \right\} \\ S \qquad S \end{bmatrix} \rightarrow \begin{bmatrix} lex \\ | \\ S \quad S \end{bmatrix}$$

5.0 The argument of this note may be summed up in the following points:

(i) The unifying factor which allows us to explain iteration is that it is limited to gradable adjectives and adverbs and functions as a type of intensification.

(ii) Like stress, it must be realized in the phonological component.

(iii) The distributions which Kuiper observes are explained if we propose that there are rules which match word-rhythm to a rising pitch and tension contour that has two positional variants, attributive and S-final.

(iv) A second type of contour, rising and then falling, occurs and is normal with polysyllabic words in S-final position.

(v) As the last point suggests, the two are not to be distinguished sharply. The limits on iteration in the first contour are imposed by the requirement that the phonological unit it constitutes must not disrupt the intonation pattern of the whole sentences in which it occurs. The initial, rising, stage of the second contour is very similar to the first, and it can accommodate a longer sequence of iterated words (in appropriate contexts) or longer words, because after the peak the transition to the sentence intonation or sentence-final fall is spread over further steps.

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NOTES

[1] Kuiper's last statement is not true of my own dialect, to which all
my judgments must necessarily relate, although for most of my argu-
ments a point that I make in the main text (at the end of section
3.1), is important (Chris Corne, who read and commented on this
paper in draft, agrees with the tendency of my judgments, though
not with every specific one; Ross Clark, who also read it, has com-
mented only on the structure of the argument, finding most iter-
ation not natural in his dialect; I wish to thank them both here).
I find it acceptable to say:
    (i) Come over here quickly, quickly!
    (ii) You have done the job perfectly, perfectly!
uttering both with unbroken intonation rather than the fracture that
characterizes the repetition of ungradable lexemes like those in
examples (5) and (6) below. It seems that Kuiper excludes this case
because he implicitly regards a single rising intonation as a cri-
terion for iteration of the kind he discusses. However, later in
this paper I shall argue that this is only one of two contours that
must be considered and that the selection of one or the other is
conditioned by the rhythm of the iterated lexeme. Adverbs in *-ly*
fall into the class to which the second, rising and falling contour
is appropriate, in sentence-final position. But monosyllabic ad-
verbs may iterate in the same way as monosyllabic adjectives:
    (iii) Then it's imperative that you run fast, fast, fast.
A necessary restriction on internal iteration, illustrated by:
    (iv) *So they $\begin{Bmatrix} \text{certainly, certainly} \\ \text{probably, probably} \end{Bmatrix}$ went at once,
may be handled by allowing iteration only in NPs or in sentence-
initial or final position, the latter "regardless of how deeply em-
bedded the S is in which they appear." (Kuiper 1977:85)

[2] For gradable adjectives and adverbs, see Lyons 1968:463-7, and 1977:
271-80.

[3] For Chomsky's Extended Standard Theory see Chomsky 1972.

[4] If iteration is a realization of intense or extreme degree, we may explain another observation which cannot be captured in the rules Kuiper considers and dismisses: "Comparative and superlative forms of adjectives cannot be iterated." (1977:86) Comparative adjectives relate degree to an explicit standard (recoverable from context if not from actual surface structures, as in (v) "Bring me something better!"), and extreme 'absolute' position on a scale does not enter into the interpretation. When it is necessary to indicate extreme distance from the explicit reference-point another means is used, "much better," in which *much* obeys the rules I set up later for monosyllabic modifiers (*much* is an adverb; thus we must extend the set boundaries wider than adjectives: cf. also, "lots bigger.") before their heads, as in "much, much better" or "much, much, much, much better."

[5] This point is not affected by such debates as that between Extended Standard Theory and Generative Semantics. In many languages word stress is assigned after the inflections have been assigned; this can only be after all syntactic transformations have operated. Although my rules have been set up to handle iteration in my own kind of dialect of English, it seems reasonable to predict that somewhat similar rules may be required not only for other dialects, but even for other languages.

[6] Obviously "indeed" belongs to a small range of rhetorical polite or educated registers. I can't think of any other colloquial alternatives, but in the most colloquial speech the place of intensifiers of the kinds we are discussing may be taken over by expletive adjectives. If these are comparable functionally to other intensifiers, they raise an interesting problem: why do they not re-iterate? Cf. (vi) "*They must have been bloody, bloody old tyres if that happened!" I suspect that the reason for this lies in the way expletives work; the intensity of the taboo they break (when it is still felt - "bloody" is in fact quite weak now) affects the degree they express but is weakened by the familiarity of repetition. However, it has been pointed out to me that this is not quite correct, in that in many varieties of New Zealand speech the effect of iteration may be achieved by cumulative expletive intensifiers:
    (vi) This damn shitting car won't go,
or
    (vii) This damn bloody fucking shit of a heap of a car won't start.
It seems that by varying the expletives in this way the weakening effect of repetition is avoided: a new taboo is broken on each instance. Furthermore, simple repetition *is* possible with a characteristic sharp increase in the stress of the second instance that seems to work in a way which bears out this explanation:
    (ix) This fucking, FUCKING car won't go

(also,
     (x) This fucking, SHITTING car won't go).
Here the extra stress on the second expletive seems to gain its
effect by indicating that the taboo is recognized and at the same
time is consciously and deliberately defied and broken again.

7 I.e., at the end of a surface, and thus phonological, sentence (cf.
note 1 above, and also Kuiper, p. 85).

8 Iterated disyllabic adverbs in *-ly-* belong here - see examples (i)
and (ii) in note 1 above.

9 The same reasons which explain why words with the same rhythm as
unjust iterate less freely than other disyllabic adjectives also
explain why compound adjectives like *fast-growing* or *ill-informed* do
not iterate (see Kuiper, p. 86): they contain two full word
stresses, not equal in weight but, nevertheless, still less adapt-
able to the contours of iteration than the primary and secondary
stress in *unjust*.