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A NOTE ON SYNALEPHA AND STRESS MAXIMA*

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1. INTRODUCTION

Generative metrics has supplied us with a systematic procedure for metrical analysis based upon determining for a given verse the abstract metrical pattern, the correspondence rules,[1] and how these rules have been utilized by the poet in specific lines of verse. In this paper I consider iambic pentameter verse in English and I examine the interaction of two correspondence rules; synalepha and the constraint against stress maxima appearing in W positions. Various possible definitions for stress maxima are considered: the Halle and Keyser one that looks only at syllables and stress, and alternative ones that look at position as well as syllables and stress. I point out several theoretically possible situations which could choose between these definitions. However, none of these situations arise in the verse I have examined. Thus the proper definition of stress maxima is still an open question, as is the larger question implicit in this choice of definitions as to whether the stress maxima constraint is a purely mathematical convention or a constraint against surface metrical situations which thwart all attempts to recognize underlying abstract patterns.

2. SYNALEPHA, STRESS MAXIMA, AND THE SM CONSTRAINT

One of the correspondence rules that Halle and Keyser (1971, among others)

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[1] Morris Halle (personal communication, December, 1974) is presently working on a refinement of the theory which recognizes another aspect of metrical analysis, the 'filter'. A filter differs from a correspondence rule in that it gives specific rules which do not deal with position (for example, how one determines whether a syllable is long or short), which may then be employed by the correspondence rules in determining the correspondence between abstract patterns and surface lines. For the purposes of this paper, it is not necessary to distinguish between the filter and the correspondence rules since only rules which relate abstract patterns to surface lines are examined, i.e. only correspondence rules.

proposed for iambic pentameter in English[2] is synalepha, defined in (1):[3]

(1) Synalepha is a metrical convention by which we may assign a sonorant sequence incorporating at most two vowels (immediately adjoining or separated by a sonorant consonant) within a line of verse to a single metrical position (S, W, or X).

In the vast majority of cases, synalepha assigns two unstressed or weakly stressed syllables to a single position, as in the Donne line from 'Holy Sonnet XIV':

(2) That I may rise, and stand, o'erthrow me and bend

W S W S W S W S W S

I have found no cases in which synalepha assigns two fully stressed syllables to a single position, although such cases are not excluded by the definition.[4] There are instances, however, in which synalepha pulls together an unstressed or weakly stressed syllable and a fully stressed syllable, as in the Chaucer line (*A.Kn.* 2922):

(3) Wylugh, elm, plane, assh, box, chasteyn, lynde, laurer,

W S W S W S W S W S

In many such cases, the fully stressed syllable is a stress maximum, where stress maximum is defined as in (4):[5]

[2]Surely synalepha is needed in other verse besides iambic pentameter and in other languages besides English. Here, however, we consider synalepha only as applied to English verse in iambic pentameter.

[3]Synalepha is applied optionally in English verse, thus not every sequence VCV, where C is a sonorant consonant, must be counted as one position. Furthermore, particular sonorant sequences that may be ignored may depend upon the particular poet. Also, some poets allow sequences involving nonsonorants, usually fricatives, such as in the Shelley line from 'Ode to the West Wind':

(i) Are driven like ghosts from an enchanter fleeing,

W S W S W S W S W S X

[4]Note, however, that in types of verse distinct from iambic pentameter, two fully stressed syllables may be assigned to a single metrical position by correspondence rules. Thus, for example, we find in English nursery rhymes that two fully stressed adjacent syllables within the same syntactic constituent occurring in a line of verse may be counted as one position:

(i) Ride a cock-horse to Banbury Cross

X X X X

See Halle and Keyser (1971: 145) for discussion.

Whether or not the definition of synalepha given in (1) should be modified accordingly because of this lack of examples is an open question which I will not attempt to answer here.

[5]For similar definitions of stress maxima, see Halle and Keyser (1971, among others). The fact that only major category words may have stress maxima is a distinction recently added to the theory by Morris Halle (personal communication, spring, 1974).

(4) A stress maximum is a fully stressed syllable of a major category word (Noun, Verb, Adjective, Adverb, Exclamation) occurring between two unstressed syllables in the same syntactic constituent within a line of verse.

An example of a stress maximum involved in synalepha is the Yeats line from 'After Long Silence':

(5) All other lovers being estranged or dead

W S W S W S W S W S

Halle and Keyser have claimed that stress maxima may not occupy W positions. Let us call this constraint on the distribution of stress maxima the SM Constraint.

3. THE PROBLEM

In this paper the interaction of synalepha and the SM Constraint is examined. It is shown that the definition of SM given in (4), which looks only at syllables and stress, excludes many more lines from being deemed metrical than does a definition that looks at position as well as syllables and stress. It is not clear whether all or any of the lines in question should be judged unmetrical.

3.1. Actual Applications

First note that stress maxima, being defined as in (4), can be determined independently of position, since only stress and syllables are mentioned in the definition. So in (6), a line from Gray's 'Elegy Written in a Country Churchyard', we can mark the four stress maxima by circling their stress marks before we even begin to assign positions:

(6) The curfew tolls the knell of parting day

However, one cannot determine whether or not synalepha, an optional convention in English verse, applies in a given line without considering the underlying positions. For example, consider the Yeats line from "The Folly of being Comforted":

(7) You'd know the folly of being comforted.

1 2 3 4 5 6 7 8 9 10 11

Keyser (1969) notes that the iambic pentameter line in English verse allows for a twelve position line where the last two positions are filled by unstressed syllables:

(8) W S W S W S W S W S (X) (X)

Thus the optional X positions in (8) can be filled by unstressed syllables, but never by stressed syllables. Looking at (7) we see that syllable 11 is unstressed, thus, according to the pattern in (8), it is possible that synalepha not be applied in this line. If synalepha were not applied here, (7) would be a realization of the underlying pattern:

(9) W S W S W S W S W S X

However, if we begin assigning one position to each syllable of (7) from left to right, we find that syllable 7 will violate the SM Constraint:

(10) *You'd know the folly of being comforted

1 2 3 4 5 6 7

W S W S W S W

So we look for environments for synalepha, and find that syllables 5 and 6 offer a proper environment. Assuming synalepha there, we can now assign the syllables to positions in the following way, judging the line to be perfectly metrical:

(11) You'd know the folly of being comforted

1 2 3 4 5 6 7 8 9 10 11

W S W S W S W S W S

In (11) we see that synalepha must apply in syllables 5 and 6 in order to avoid violations of the SM Constraint. Only upon seeing which syllables correspond to which positions in a given metrical analysis of line (7) could we judge which was the proper analysis. We can likewise find lines in which synalepha cannot apply, even though possible environments for it may appear in the line. Thus in (12), the Gray line from 'Elegy Written in a Country Churchyard', there are three environments for synalepha, yet each of the 10 syllables in the line must be assigned to a unique position:

(12) And all the air a solemn stillness holds

1 2 3 4 5 6 7 8 9 10

3.2. Theoretical Problems

In the examples in 3.1. the application of synalepha and its interaction with the SM Constraint present no particular problem for the analyst. However, there are instances in which the application of synalepha leaves us with a sequence of stressed and unstressed syllables assigned to positions in such a way that it is not clear

whether or not the SM Constraint is (or should be) violated. All such situations crucially involve stress maxima. Looking back to the presently accepted definition of stress maxima given in (4), we see that only stress and syllables enter into the determination of a stress maximum. Thus all the circled syllables in the schema below are stress maxima. (Note that not all stress maxima in these examples are circled. Only those of particular interest here have been circled.) The triangle under two syllables signifies that synalepha must apply to these syllables in order to make the rest of the line scan properly. In the *b* examples below I have given examples of lines containing the abstract sequences seen in the *a* examples. All these lines are examples constructed specifically for the purposes of this paper; they are not actual lines taken from the body of English verse. In these examples # signifies the beginning or end of a line of verse and + signifies the beginning or end of a syntactic constituent.[6]

(13) *a.* ˘ ˘ ⊘ ˘

S W S

b. Decisively dramatic but swift was he

WSW S W S W S W S

(14) *a.* ˘ ⊘ ˘ ˘

S W S

b. Not allowing the reporter what he asked for

W S W S WS W S WS X

(15) *a.* # ˘ ⊘ ˘

W S

b. # Dramatic but swift he tolled the knell of night

W S W S W S W S W S

[6]Note that iambic pentameter lines end in a realized S position followed by two optional positions that may be filled by unstressed syllables only (see the discussion preceding (8) in the text above). Thus the hypothetical schema (i) cannot ever occur in this verse:

(i) ˘ ⊘ ˘ #

S W

(16) *a.* + ˘ ⊘ ˘
W S

b. He tolled the knell of night; dramatic but swift
W S W S W S W S W S

(17) *a.* ˘ ⊘ ˘ +
S W

b. Not allowing, not forbidding, not condoning
W S W S W S W S W S X

(18) *a.* ´ ˘ ⊘ ˘
S W S

b. That young dramatic reporter saved the day
W S W S WS W S W S

(19) *a.* ˘ ⊘ ˘ ´
S W S

b. Not allowing bears to toll the knell of night
W S W S W S W S W S

(20) *a.* ´ ˘ ⊘ ˘
S W S

b. Allowing bears to commit the crime of bells
W S W S W S W S W S W S

(21) *a.* ˘ ⊘ ˘ ´
S W S

b. Asked if young dramatic bears would toll the knell
W S W S W S W S W S W S

(22) *a.* ´ ˘ ⊘ ˘ ´
S W S

b. Allowing young dramatic bears to toll the knell
W S W S W S W S W S W S

In all the above cases, the circled syllable is a stress maximum assigned to a W position. The SM Constraint rules out the above lines as unmetrical.

If we examine these environments closely, however, the claim that the circled syllables above are stress maxima and that the SM Constraint therefore rejects these lines may be disturbing. After all, the typical sequence that the SM Constraint rejects is that shown in (23):

(23) ˘ ⊘ ˘
S W S

Calling (23) an unmetrical sequence is appealing, since such a sequence of stressed and unstressed syllables is precisely the opposite of the most simple realization of the abstract metrical pattern (that is, the realization in which each S is filled by a stressed syllable and each W by an unstressed one). In fact, (23), if it occurred in an iambic poem, would have a distinctly and disruptively trochaic sound to it.[7] Thus, the appeal of the SM Constraint is that it rejects sequences that, by being the exact opposite of the most simple realization of the abstract metrical pattern, thwart our attempts to recognize that pattern.

The examples in (13) through (22), however, differ from (23) in that we have more than one syllable assigned to a position. In all these examples a stressed syllable flanked by unstressed syllables is assigned to a W position. However, this stressed syllable does not *fill* the W position in examples (13) through (19), and the unstressed syllables do not *fill* one or both of the flanking S positions in examples (20) through (22).[8] Thus, in these lines we do not find a sequence of stressed and

[7] Likewise, in a trochaic line it would have the effect of an iamb 'stuck' in the middle.

[8] One could continue to make up even more complicated schema in which the fully stressed syllable does not fill a position and one of the flanking syllables also does not fill a position, although it is assigned to a position distinct from that of the stressed syllable. For example,

(i) ´ ˘ ⊘ ˘
S W

(ii) ˘ ⊘ ˘ ´
W S

The possibilities are mindboggling. However, just as the schema seen in (13) through (22) are not employed in actual verse, neither are (i) and (ii), as far as I know.

unstressed syllables that are the exact opposite of the most simple realization of the underlying abstract pattern. Do these lines in fact 'offend' in the same way as this line from a Keat's sonnet?

(24) *How many bards gild the lapses of time

W S W S W S W S W S

In my examination of English verse in iambic pentameter I have found no lines that must be analyzed as in (13) through (22), although there are many lines that may be so analyzed. An interesting example is found in Shakespeare's line from *Midsummer Night's Dream* (5.1.57):

(25) And his love Thisby; very tragicall mirth.

1 2 3 4 5 6 7 8 9 10 11

W S W S W S WSW S

(25) is analyzed here as an example of the schema seen in (20) above. If this were the only possible analysis of the line, and if the line were judged to be metrical, then the definition given in (4) of stress maxima cannot be correct. However, it may be possible to claim that in Shakespeare the ending -icall can be assigned to one position. Consider, for example, this line from *Antony and Cleopatra* (3.1.31):[9]

(26) That magicall word of Warre we have effected

1 2 3 4 5 6 7 8 9 10 11 12 13

W S W S W S W S W S X

Syllables 2 and 5 are stress maxima, and therefore must be assigned to S positions. Thus, if this line is metrical, syllables 3 and 4 must be assigned to one position. However, some versions of this line have *magic* instead of *magicall,* removing the need to claim that *-icall* can be assigned to one position. There is also the possibility in line (25) that *And his* can be assigned to one position by a rule similar to that found in Chaucer[10] which allows an unstressed monosyllable and a preceding unstressed syllable to be assigned to one position. Whether such a rule can be justified for Shakespeare is not clear to me. But even if such a rule exists, then (25) still presents us with a problem in that in such an analysis syllable 11, which is fully stressed, falls on a final W and there are only four S positions realized in the line:

[9]Whether *Warre* is a one syllable word in Shakespeare or a two syllable one (as I have assumed here) is not crucial. If *Warre* is a one syllable word, then it is assigned to an S and *we* is assigned to the following W.

[10]See Halle and Keyser (1966) for discussion of such a rule in Chaucer.

(27) *And his love Thisby; very tragicall mirth.

W S W S W S WS W

Since I know of no evidence that a final S can be unfilled in a line (other than an obviously truncated line which has lost more positions than just the final S), the analysis in (27) is unacceptable. Thus (25) is an example of the kind of line we are looking for as long as *icall*[11] cannot be assigned to one position.

All other cases I have found of the schema in (13) through (22) involve similarly complex conditions. I have found no clear examples of lines that must be analyzed as examples of these schema.

If the constructed lines in the *b* examples of (13) through (22) are judged unmetrical, Halle and Keyser's definition of stress maxima should remain as is. But if these lines are judged metrical, then a revision of the definition is in order. If only examples (13) through (19) are deemed metrical, but (20) through (22) are not, then a stressed syllable (flanked by unstressed ones) must *fill* a position in order to qualify as a stress maximum: that is, it cannot share a position with another syllable. If only (20) through (22) are deemed metrical, but (13) through (19) are not, then the unstressed syllables flanking a fully stressed syllable must *fill* positions in order for that stressed syllable to be a stress maximum. If all the examples are deemed metrical, then at least one of the above conditions must hold in order for a stressed syllable to be a stress maximum.[12]

Without attested examples, this issue cannot be settled. If upon a thorough examination of the body of English verse in iambic pentameter, one finds no clear examples of the situations outlined here, the definition given in (4) should remain as it is, since it is perfectly adequate to handle the cases that do arise. If, however, the crucial lines can be found, and if these lines are not jarring, but rather appear to be metrical, then a revision of the definition along the lines outlined above is in order.

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[11]It is interesting to note that the suffixes *ic* and *ical* present problems in English phonology. See Chomsky and Halle (1968: 86–88, among others) for discussion.

[12]And if the schema in footnote 8 above are deemed metrical, then both of these conditions must hold. That is, the stressed syllable must fill a position and the flanking unstressed syllables must fill the flanking positions.

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