## Nigel Fabb and Morris Halle (2008), Meter in Poetry

Paul Kiparsky
Stanford University
kiparsky@csli.stanford.edu
Linguistics Department, Stanford University, CA. 94305-2150

July 19, 2009

Review (4872 words)

The publication of this joint book by the founder of generative metrics and a distinguished literary linguist is a major event.<sup>1</sup> F&H take a fresh look at much familiar material, and introduce an eye-opening collection of metrical systems from world literature into the theoretical discourse. The complex analyses are clearly presented, and illustrated with detailed derivations. A guest chapter by Carlos Piera offers an insightful survey of Southern Romance metrics.

Like almost all versions of generative metrics, F&H adopt the three-way distinction between what Jakobson called VERSE DESIGN, VERSE INSTANCE, and DELIVERY INSTANCE.<sup>2</sup> F&H's theory maps abstract grid patterns onto the linguistically determined properties of texts. In that sense, it is a kind of template-matching theory. The mapping imposes constraints on the distribution of texts, which define their metrical form. Recitation may or may not reflect meter, according to conventional stylized norms, but the meter of a text itself is invariant, however it is pronounced or sung.

Where F&H differ from everyone else is in denying the centrality of rhythm in meter, and characterizing the abstract templates and their relationship to the text by a combination of constraints and processes modeled on Halle/Idsardi-style metrical phonology.

F&H say that lineation and length restrictions are the primary property of verse, and rhythm is epiphenomenal, "a property of the way a sequence of words is read or performed" (p. 242). This seems inconsistent with their use of bracketed grids to characterize metrical patterns and stress, for bracketed grids represent — indeed are *designed* to represent — rhythm as periodic alternation of prominence at a hierarchy of levels. F&H's point is probably that metrical rhythm and textual rhythm are not necessarily articulated in recitation, since meters constrain texts, not performance.

The thesis of the primacy of lineation leads F&H to suggest that rhythm arises as a by-product of counting syllables to fix the length of lines. Traditional doctrine conversely derives lineation and line length from constraints on the hierarchical rhythmic structure that meter imposes on texts (Chen 1980, Kiparsky 2006).<sup>3</sup> An argument for the latter view is that it explains the conventional character of lineation. Any place where an obligatory major prosodic break in the verse design divides equivalent units may be a line break, by convenience or tradition. F&H themselves illustrate this point nicely by splitting the half-lines of Arabic verse into separate "lines" forming a "couplet",<sup>4</sup> likewise Sanskrit ślokas (p. 222). 4343 ballad quatrains can be printed as fourteener distichs and vice versa, and similarly 3343 quatrains are interchangeable with poulter's measure. Some editions of the *Kalevala* print its 8-syllable parallel couplets as single 16-syllable lines, and nobody minds.<sup>5</sup>

<sup>&</sup>lt;sup>1</sup>Thanks to Kristin Hanson and Ivan Sag for commenting on a draft of this review.

<sup>&</sup>lt;sup>2</sup>The most notable dissenters are Hayes & McEachern 1998, who equate the metrical form of folk verse with the rhythm of its musical performance.

<sup>&</sup>lt;sup>3</sup>Syllables or moras are grouped into feet, and binary groupings at successive levels form dipodies, hemistichs (cola), lines, distichs, quatrains, and so on (there is no consistent terminology for the intermediate levels). Odd-numbered units at a given level, such as dactyls, trimeters etc., are formed when one branch is unary (generalized catalexis). Thus, a tetrameter is a complete colon, and a trimeter is a colon whose second branch is unary.

<sup>&</sup>lt;sup>4</sup>There may be empirical issues lurking here. F&H's lineation complicates the treatment of those Arabic meters whose two hemistichs differ, where they would have to say that odd and even "lines" obey different rules. But it might simplify the treatment of exceptional *taṣrī* lines, which have metrically identical and rhyming hemistichs.

<sup>&</sup>lt;sup>5</sup>Purely syllable-counting meters would require some non-metrical means of length control, which neither theory provides. French may have such meters (Duffell 1999), but F&H treat them as iambic, as does Hanson 1996. A possible case of pure counting rhythm is New Guinean *tom yaya kange*, where lines consist of a fixed number of words (Rumsey 2007, to appear). This supports the parametric theory which allows metrical positions to be occupied by phonological words (Hanson & Kiparsky 1996), but falsifies their claim that prominence is linguistically marked,

Another argument for the primacy of rhythm is that meters constrain only those categories that are prominence-defining in language. For example, meters may require that syllables in certain positions must be stressed or heavy, never that they must have onsets. The idea that meter regulates rhythmic patterns of prominence explains this, for (as we know independently from phonology) onsets are not prominence-bearing.

More interestingly, consider empty positions (catalexis). Quatrains typically combine four-and three-foot lines in 4343, 4443, or 3343 patterns, not in 3434 or 3334 patterns. The short lines can be perceived as metrical realizations of four-foot lines with a missing final beat. In songs and other isochronous performance styles, they are typically realized by lengthening the last word, producing a saliency effect characteristic of terminal elements (Kiparsky 2006). F&H's theory cannot explain the perception of 4343 and 4443 stanzas, and the preference for them, in this way, because it doesn't assign gridmarks to empty positions.

The second leading idea of the book is that the abstract templates are constructed by a bottom-up parsing procedure, from the smallest groupings to the biggest, and that template-to-text mapping is governed by a combination of rules and well-formedness conditions. Iterative ordered rules apply from the bottom up to construct bracketed columns of asterisks — metrical grids — that represent hierarchies of prominence, much as stress is assigned in phonology. These are periodic (modulo prior bracket insertion and asterisk deletion). The grid is mapped onto a representation of the relevant properties of the text (in some normalized pronunciation) by operations on grids. These operations implement well-formedness conditions on the text.

For each level in each meter, parameters determine the direction of scansion, the orientation of the parentheses, whether intervals are binary or ternary, and whether the parse begins at the edge, or one or two asterisks in. Additional "riders" specify whether the resulting groups can be, or must be, incomplete at one edge, and whether some syllables can or must remain ungrouped. Before grid construction begins, brackets may be inserted by rules sensitive to weight, linear context, or alliteration. At any point in the derivation, rules may delete asterisks and parentheses, apparently at any gridlevel, in contexts defined either hierarchically by asterisks and parentheses, or linearly by the weight or stress of neighboring syllables. These deletion processes allow groupings of any length to be formed.

The well-formedness conditions on output of bracket insertion, grid construction, and aster-isk/parenthesis deletion may specify, for any gridlevel, the weight of the head, of all its syllables, or of the leftmost or rightmost one, and depend on whether it is ungrouped, part of a branching group, located in odd- or even-numbered lines, or preceded by one or more light or heavy syllables that are ungrouped, or part of the same group. They may be restricted to apply at most or at least once per line or gridlevel. The conditions also specify the location of caesuras.

This intricate theory is developed with precision, but with little justification. Alternatives, such as the constraint-based template-matching approaches explored in Dresher & Friedberg 2006, are ignored.<sup>6</sup> Piera's chapter apart, even the analyses themselves are supported only by theory-internal arguments. The daunting task of assessing the theory is left to the reader.

My own efforts to do so have turned up only lost generalizations, and no compensating advances — no principles of metrical organization, no insights about a meter or body of verse, no

for the rhythm apparently comes only from a chanted melody. — If F&H are right, some Hebrew psalms have approximate syllable counts, apparently as side effects of hidden numerological meanings, or in picture poems.

<sup>&</sup>lt;sup>6</sup>Oddly, F&H devote some space to ridiculing classical metrics for giving a name to every possible foot. They seem unaware that completeness is the whole point of this purely descriptive terminology.

analyses of particular poems, which cannot be, or already have been, expressed as well or better in formally cleaner and more perspicuous constraint-based approaches.

Hybrid systems of rules and constraints have the major disadvantage that they lead to difficulties with managing their interaction, and to undesirable duplication. Similar problems in phonology have caused them to be generally abandoned there. F&H's theory shares these weaknesses. For example, their asterisk deletion rules that convert light syllables into non-heads duplicate conditions that require light syllables to be non-heads. Formal advantages aside, modeling mismatches between the abstract rhythmic pattern and its instantiations by correspondence conditions reveals analogies between meter and music which can illuminate the esthetic interest of rhythmic complexity ("tension", or G.M. Hopkins' "counterpoint"). In contrast, it is not so clear where the artistry of asterisk deletion and the beauty of bracket insertion might lie.

The two issues — the role of rhythm in meter, and the nature of the template-to-text mapping — are connected. Constraint-governed approaches cannot manipulate representations. To avoid arbitrariness, they require that abstract metrical rhythm and inherent linguistic rhythm should both be built on authentic prosodic units — moras, syllables, basic feet such as moraic trochees or quantitative iambs — organized into patterns of prosodic prominence (represented by bracketed metrical grids in much recent work). Because the templates have an inherently linguistic interpretation, they can be generated by phonological principles, such as the ranked OT constraints independently motivated in phonology (Golston and Riad 2000).

Empirical arguments for constraint-governed template matching and against F&H's bottom-up parsing approach come mostly from meters where the parsing of lower-level grid structure needs access to higher-level grid structure. These are represented in this book by Hopkins' Sprung Rhythm and by classical Arabic, Sanskrit, and Greek verse. F&H handle top-down effects by readjustment rules which insert brackets, exclude syllables from the grid, and delete unwanted asterisks. These rules cope only with part of the problem, and only in arbitrary ways, as I will now argue for Arabic and Sprung Rhythm.

Arabic verse is built from feet containing a Strong (S) position (the *watid* "Peg") and one or (in most meters) two Weak (W) positions (each a *sabab* "Cord"). Pegs are quantitative iambs ( $\neg$ ). Cords are fixed as heavy ( $\neg$ ), light ( $\neg$ ), or anceps ( $\times$ ). For example, *xafīf* meter is amphibrachic (WSW). In each foot, the first Cord is anceps, and the second is heavy. Descriptively, then, the basic foot is  $\times \neg$ —. *Xafīf* is also one of five "circle 4" meters whose Peg is inverted from iambic  $\neg$  to trochaic  $\neg$  in alternate feet (anaclasis, "syncopation"). (1a) shows a three-foot *xafīf* hemistich, or "line", with positions numbered for convenience. (1b) shows F&H rendition of it (p. 196).

(1) a. 
$$\stackrel{1}{\times} \stackrel{2}{\circ} \stackrel{3}{\circ} \stackrel{4}{\circ} \stackrel{5}{\times} \stackrel{6}{\circ} \stackrel{7}{\circ} \stackrel{8}{\circ} \stackrel{9}{\circ} \stackrel{10}{\circ} \stackrel{11}{\circ} \stackrel{12}{\circ}$$
  
b.  $\stackrel{1}{\times} \stackrel{2}{\circ} \stackrel{3}{\circ} \stackrel{4}{\times} \stackrel{5}{\times} \stackrel{6}{\circ} \stackrel{7}{\circ} \stackrel{8}{\times} \stackrel{9}{\times} \stackrel{10}{\circ} \stackrel{11}{\circ} \stackrel{12}{\circ} \stackrel{12}{\times}$ 

(1b) departs from (1a) in two ways. It incorrectly assigns positions 4, 8, and 12 indifferent weight, and it moves the groupings (F&H's euphemism for feet) one position rightwards, by deleting the leftmost syllable's projection (notated as  $\Delta$ ). The remainder is parsed from gridlevel 0 to gridlevel 4. At each gridlevel, the parse starts from the left edge, inserts a left parenthesis, and forms binary groups. Gridlevel 0 is right-headed, the others are left-headed (the head is what projects to the next level).

<sup>&</sup>lt;sup>7</sup>Caution: under (27) *xafīf* is mislabeled as "long *ramal*", and long *ramal* as "*xafīf*", and it shows the 12-syllable form of long *ramal*, not the 11-syllable (catalectic) form treated on p. 191.

In F&H's analysis, meters that have an additional syllable at the beginning always fall one syllable short at the end. All complete (i.e. non-catalectic) varieties of amphibrachic meter (xafif, ramal,  $mad\bar{\iota}d$ ) have this unexplained property for F&H.

The regular iambic Peg in positions 2-3 and 10-11 is ensured by condition (3).

(3) A syllable projecting to Gridline 2 must be heavy, and if it is part of a branching Gridline 0 group, it must be preceded by a light syllable.

But because of trochaic inversion, the light syllable in position 7 violates (3). This is repaired by readjustment rule (4).

(4) If the syllable projecting to the head of the verse [i.e. to Gridline 4] is light, delete the Gridline projection of that syllable. (p. 193)

But (4) can't apply to the syllable in position 7 in (2) because it is *not* the head of the verse. So F&H *make* it the head by the (otherwise unmotivated) rule (5).

(5) Delete the Gridline 2 projection of the head of a verse if followed by another asterisk on Gridline 3.

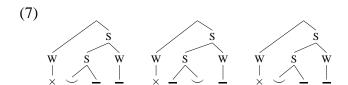
(5) shifts the head position from 3 to its level 2 right-hand gridmate 7, whose gridline 0 asterisk is then deleted by (4). So the derivation of (2) continues like this:

F&H neglect the weight of Cords in all meters, so their rules massively overgenerate,<sup>8</sup> a point obscured by their ambiguous use of the symbol 'x'. In positions 1, 5, and 9 of (1b) 'x' denotes an anceps, i.e. a syllable which may be heavy or light in any foot in any line of the same poem. In positions 4, 8, 12, it denotes a syllable which must be heavy (Stoetzer 1986: 166). Elsewhere it

<sup>&</sup>lt;sup>8</sup>They also undergenerate: only the trisyllabic ( $\times \times -$ ) feet of *mutadārik* are mentioned (p. 202); not the disyllabic (-) feet which occur in all positions in this meter, violating condition (3) (Wright 1951, Stoetzer 1986: 108).

stands for positions which are heavy or light in different variants of the meter, but must have the same weight throughout a poem, e.g. position 6 in  $taw\bar{t}l$  (p. 199, cf. Stoetzer 1986: 152-154).

Prince 1989 discovered a rule for the weight of Cords: in any foot, the Cord in a branching position is heavy, and the other may be light, except in *rajaz*, where neither Cord is restricted. It works for amphibrachs too, given the structure that Prince's theory imposes on them. Here it is, showing the *xafīf* trimeter with inversion in foot 2:



So why does F&H's analysis move the feet rightwards, disregard the weight of Cords, and make inversion so tortuous? These omissions and complications turn out to be rigorously theory-driven. That makes them interesting: if they are wrong, so is the theory.

The reason why F&H shift the feet is that they allow only left-headed and right-headed groupings. Their workaround for amphibrachic lines is to treat them as dactylic lines (SWW) which begin with an extra unparsed syllable, and correspondingly lack a syllable at the end.

Second, their theory depends heavily on linear (left/right) context. It does not provide a structural distinction between the two Cord positions across meters, or allow the ictus to be a quantitative iamb. So Prince's rule is not available, and the weight of Cords is accordingly ignored.

Third, bottom-up gridlevel construction cannot distinguish odd- and even-numbered feet, because there are no higher-level asterisks yet. So they are parsed alike, and inversion is done by later asterisk-deletion, as described above.

As often, an appealingly simple and intuitive idea (meter as iterative bottom-up parsing) is undermined by an appallingly complex apparatus of auxiliary devices needed to make it work, even for the partial data that it covers.

Where Arabic pushes quantitative meter to the limit, Gerard Manley Hopkins' Sprung Rhythm does so for accentual meter. Based on *The Windhover*, F&H portray Sprung Rhythm as an extraloose variety of iambic LOOSE METER (contrary to Hopkins' own claim that it is "as strict as the other rhythm"). They define a loose meter as one that obeys (8).

- (8) a. Insert a R[ight] parenthesis on Gridline 0 after an asterisk projecting from a maximum.
  - b. A syllable bearing the word stress is a maximum, except when it is immediately preceded or followed in the same line by a syllable carrying greater stress. (p. 68)

Sprung Rhythm supposedly allows the extra freedom of leaving syllables unprojected (p. 85-86).

The heads of gridline 0 are projected to gridline 1, where they correspond to ictus (Strong) positions. But F&H's (8) works only for lines with simple alternating rhythm (*I caught this morning morning's minion, king-(dom)*. It fails with Sprung Rhythm's characteristic stress clashes and long lapses. Consider the last line, shown in (9) (underlining shows ictuses, corresponding to F&H's level 2 heads, and the accent marks are from Hopkins' MSS via Ludwig 1972).

<sup>&</sup>lt;sup>9</sup>In traditional terms, this confuses  $zih\bar{a}f$  (optional correspondence conditions) with 'illah (variation in metrical constraints).

## (9) Fall, gall themselves, and gásh góld-vermilion.

Fall is a stress maximum by (8b), so (8a) should put a right parenthesis after it, giving one ictus too many. On the other hand, gásh, marked by Hopkins as an ictus, is not a stress maximum, according to F&H, so it shouldn't undergo (8a). Their three other definitions of "stress maximum" do even worse. Leaving syllables unprojected doesn't improve things either.

So F&H (p. 85, 87, 89) maintain that Hopkins is "inconsistent in his use of the definition of maximum [i.e. of (8b)], switching from one definition to another within a text" (actually they would have to say "within a line"), and that he turns syllables arbitrarily into stress maxima where needed, sometimes by writing an accent on them, sometimes not, as in *big wind* (l. 6). In effect, they blame Hopkins for violating their own wrong rules, and for using a purely graphic device to evade them, inconsistently at that. That's imputing a lot to a poet so obsessed with metrical minutiae.

In fact, Hopkins' meter is not based on stress maxima at all (Kiparsky 1989, see Duffell 2008: 191-193 for a succinct summary). And his accents, written "in doubtful cases only", don't *create* ictuses, they *mark* them "where the reader is likely to mistake", as he explains. The only inconsistencies are in F&H's application of their own rules.<sup>10</sup>

Hopkins' Sprung Rhythm is defined as follows: (A) Strong positions have exactly a moraic trochee or a heavy syllable.<sup>11</sup> (B) Weak positions have at most one moraic trochee (i.e. they can be empty, or contain just a moraic trochee, or a number of unstressed syllables),<sup>12</sup> (C) A prosodic break may be preceded by an extrametrical Weak position, what Hopkins calls an OUTRIDE, and sometimes marks by '\_\_ ' in his MSS (Hanson & Kiparsky 1996).<sup>13</sup> The indicated scansion of (9) is the only one that satisfies (A) and (B).

The poem's line 5 has both a clash and a long lapse. F&H parse it like this:

Here their rule (8) should take effect on the second *off*, wrongly turning the line into a hexameter. What has gone wrong here is that *-cy* is assigned to a Strong position (projected to gridline 1). This is impossible, as rule (A) implies. Sprung Rhythm (unlike iambic meters) categorically excludes unstressed light syllables in Strong positions (Kiparsky 1989: 319 ff.). This is what Hopkins means when he says that Sprung Rhythm requires "great attention to quantity". In (11), the last two syllables of *ecstasy* form an outride. So the correct scansion is:

<sup>&</sup>lt;sup>10</sup>See also line 9, where *pride* should get a right parenthesis by (8), turning the pentameter into hexameter, and the gridlevel 1 asterisks are misplaced.

<sup>&</sup>lt;sup>11</sup>Therefore no short syllable, such as *level*, *steady*, *Barbara*, *the*, can by itself fill a Strong position in Sprung Rhythm. A consequence is that ictuses may be *resolved* moraic trochees: a stressed short syllable followed in the same word by an unstressed syllable is in every way equivalent to a stressed monosyllables, e.g. *level*, *steady*.

<sup>&</sup>lt;sup>12</sup>Function words are considered unstressed, so several of them can be placed in Weak positions, but because of (B) they cannot share it with a stressed syllable.

<sup>&</sup>lt;sup>13</sup>All this is clear from an attentive reading of Hopkins' own explanations of Sprung Rhythm. He states accurately that they are "not counted in the nominal scanning" (i.e. in the verse design), but have the value of "half a foot" in the text (in verse instances), and that they are used for rhythmic variety in all meters, not just in Sprung Rhythm but in such otherwise "tedious" meters as the Alexandrine.

## (11) In his ecstasy! then off, off forth on swing

The reason bottom-up directional parsing doesn't work for Sprung Rhythm is that its clashes and lapses are *locally ambiguous*. Sprung Rhythm is so strict that the ambiguities are almost always resolved at the level of the line, even without Hopkins' helpful scansion marks. For example, rule (A) licenses unstressed closed syllables in Strong positions, even next to a stronger stress. But in bottom-up approaches the context that motivates this parse is unavailable until the parse is complete.

The first hemistich of (12a) has four Strong positions, but just two stress maxima, by any of F&H's definitions. Conversely, the pentameter (12b) has six or seven stress maxima instead of five. The readjustment rules required to fix the parse it would, I think, necessarily overgenerate. On the other hand (A)-(C) allows *only* the scansions shown in (12) by underlining, and these agree exactly with Hopkins' own scansion marks.<sup>14</sup>

F&H's misanalysis of Sprung Rhythm is principled, and therefore instructive. It is a direct consequence of bottom-up parsing, and of the rejection of the moraic theory of syllable structure and syllable weight (Hayes 1995).<sup>15</sup>

In fact, F&H's analysis of most quantitative meters suffers from the lack of moras. For example, they cannot say that Greek hexameters are made of feet (strictly speaking dipods) containing two moraic trochees, the first of which must be a prominent (heavy) syllable, with obligatory catalexis of line-final light syllables.<sup>16</sup>

Like Sprung Rhythm, Old English poetry achieves exciting rhythmic clashes and lapses, but on the basis of a very different metrical system. F&H model it by reviving the treatment of Keyser 1969 and Halle and Keyser 1971, unfortunately without fixing the vast overgeneration that critics complained about at the time (e.g. Sledd 1969). The core claim is that only syllables bearing main word stress count. All others are "unprojected". This makes micro-lines like (13a) and monster lines like (13b) identical at gridlevel 0, and predicts that they are all metrical.

<sup>&</sup>lt;sup>14</sup>His ' • ' marks a "pause or dwell on a syllable, which need not however have the metrical stress".

<sup>&</sup>lt;sup>15</sup>Moras are used only for Sanskrit  $\bar{A}ry\bar{a}$  meter, where there really is no conceivable alternative (p. 233).

<sup>&</sup>lt;sup>16</sup>Hanson & Kiparsky 1996. F&H require four crucially ordered rules and four conditions for hexameter. The rules are: (1) The rightmost syllable of the verse is not projected to Gridline 0 [replaced by  $\Delta$ ]. (2) On gridline 0 insert a L parenthesis to the right of an asterisk which projects from a light syllable, if that light syllable is to the right of a light syllable. (3) Delete the Gridline 0 asterisk which projects from the first syllable in a sequence of two or more syllables. (4) Gridline 0: starting just at the L edge, insert a R parenthesis, form binary groups, heads L. The conditions are: (a) The last (rightmost) group must be incomplete. (b) Ungrouped asterisks are not permitted at gridline 0. (c) Syllables projecting to Gridline 2 must be heavy. (d) On Gridline 0 an asterisk projecting from a light syllable must be followed by a right parenthesis which, in turn, is followed by a left parenthesis (p. 169-172). This is supposed to explain why the fifth foot must be a spondee, but its doesn't, for the "explanation" depends on the first rule, a stipulation as they note (p. 166). The placement of the caesura requires yet another battery of rules (p. 174-175), which I omit here for reasons of space. They should be compared with Prince's elegant formulation: "the caesura may not fall at the center of the line and must fall no more than one metrical position from the center".

- (13) a. eorl eald | eft com 'an old earl came again' (construct)
  - b. beah be he his suhtergefædera sibbegedriht | ne ymbsyrede on bære medubence 'even though he did not plot against his uncle's and nephew's clansmen on the meadbench' (construct)

In fact such lines are uncontroversially unmetrical in Old English, as in all early Germanic verse. (See Russom 1987, 1998 and Getty 2002 for the relevant generalizations and interesting generative analyses.) It seems that F&H's theory has again betrayed them. It forbids multiple long lapses between consecutive primary stresses, as in (13b), falsely forcing all non-primary stresses to be invisible in the scansion of Old English verse.

To summarize: the strengths of this book are the clear exposition, and the application of a carefully worked out, phonologically grounded theory to interesting material representing the whole typological spectrum. It is a model of breadth and formal precision. The results are disappointing. The scansions are often wildly wrong, and so are the characterizations of the meters. But because they are dictated by the theory in a principled way, their very failure takes us a step forward. F&H have put the bottom-up parsing approach meticulously through its paces, and in effect succeeded in falsifying it, leaving the various constraint-based theories to fight it out. F&H have not drawn this conclusion, perhaps because of their resolute solipsism. In spite of formulating their theory with admirable rigor and abundant examples, they don't defend it, or give evidence for the analyses it predicts, or mention generalizations that they cannot handle, or seriously engage earlier works, not even more accurate and insightful ones, including even their own. Still, far from discrediting generative metrics, this book invites further work that emulates its coverage and explicitness, but meet higher standards of scholarship and argumentation.

## **Bibliography**

CHEN, M. 1980. The primacy of rhythm in verse. *Journal of Chinese Linguistics* 8:15-41.

DRESHER, B. ELAN AND NILA FRIEDBERG (eds.) 2006. Formal approaches to poetry. London: Queen Mary and Westfield College.

DUFFELL, MARTIN J. 1999. *Modern metrical theory and the Verso de arte mayor*. Mouton de Gruyter.

DUFFELL, MARTIN J. 2008. A new history of English metre. London: Maney Publishing.

GETTY, MICHAEL. 2002. The metre of Beowulf. A Constraint-Based Approach

GOLSTON, CHRIS AND TOMAS RIAD. 2000. The phonology of Classical Greek meter. *Linguistics* 38: 99-167.

HANSON, KRISTIN. 1996. From Dante to Pinsky: a theoretical perspective on the history of the modern English iambic pentameter. *Rivista di Linguistica* 9: 53-97.

HANSON, KRISTIN AND PAUL KIPARSKY. 1996. A theory of metrical choice. *Language* 72: 287-335.

HAYES, BRUCE. 1995. *Metrical stress theory: principles and case studies*. Chicago: University of Chicago Press.

HAYES, BRUCE, AND MARGARET MACEACHERN. 1998. Quatrain form in English folk verse. *Language* 74: 473-507.

KEYSER, SAMUEL JAY. 1969. Old English prosody. College English 30: 331-356.

- KIPARSKY, PAUL. 1989. Sprung rhythm. In Paul Kiparsky and Gilbert Youmans (eds.), *Phonetics and phonology, vol. 1: Rhythm and meter*, pp. 305-340. San Diego: Academic Press.
- KIPARSKY, PAUL. 2006. A modular metrics for folk verse. In B. Elan Dresher and Nila Friedberg (eds.) *Formal approaches to poetry*, 7-49. Mouton.
- LUDWIG, HANS-WERNER. 1972. Barbarous in beauty. Studien zum Vers in Gerard Manley Hopkins' Sonetten. München: W. Fink.
- PRINCE, ALAN. 1989. Metrical forms. In Paul Kiparsky and Gilbert Youmans (eds.), *Phonetics and phonology, vol. 1: Rhythm and meter*, pp. 45-80. San Diego: Academic Press.
- RUMSEY, ALAN. 2007. Musical, poetic, and linguistic form in *Tom Yaya* sung narratives from Papua New Guinea. *Anthropological Linguistics* 49: 235-282.
- RUMSEY, ALAN. In press. A metrical system that defies description by ordinary means. In John Bowden and Nikolaus Himmelmann (edd.) *A journey through Austronesian and Papuan Linguistic and Cultural Space: Papers in honour of Andrew K. Pawley.* Canberra, Pacific Linguistics.
- SLEDD, JAMES. 1969. Old English prosody: A demurrer. College English 31: 71-74.
- RUSSOM, GEOFFREY. 1998. Beowulf and Old Germanic metre. Cambridge: CUP.
- RUSSOM, GEOFFREY. 1987. English meter and linguistic theory. Cambridge: CUP.
- STOETZER, WILHELMUS. 1986. Theory and practice in Arabic metrics. Leiden.
- WRIGHT, W. 1951. A grammar of the Arabic language.<sup>3</sup> Cambridge: University Press.