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Book review

Meter in Poetry. Nigel Fabb, Morris Halle, Cambridge University Press, Cambridge (2008). (With a chapter on Southern Romance meters by Carlos Piera), p. 312, Price: $130, ISBN: 9780521885645

The field of metrics is, sadly, a fragmented one, conducted without benefit of an established scholarly association or journal. Rather few scholars work in metrics, and those do are divided between linguistics and language departments. Such institutional barriers make it harder to work out a general theory of meter that would have meaningful things to say both about the individual metrical systems and human metrical competence in general.

From this perspective it is laudable that Fabb and Halle have aimed at a theory of meter meant to be of universal scope, and tried to cover a sufficient range of metrical traditions to give their claim some plausibility. Their book treats metrical systems in English (three chapters, covering various genres), Old English, French, Ancient Greek, Sanskrit, Latvian, Chinese, Classical Arabic, two Arabic vernaculars, and Biblical Hebrew. In addition, a chapter written by Carlos Piera covers Spanish and other Romance meters using the framework of the book.

I will first give some general background on the research tradition, generative metrics, from which the work in the book arises, next cover some of the main themes of what Fabb and Halle (hereafter FH) are proposing, and conclude with an assessment of what I think is the right audience for the book.

1. Background

Generative metrics originated with two seminal works, Halle and Keyser (1969, 1971). These laid out a conception of how metrics works that guided much later research in the field. Halle and Keyser proposed that a meter should be construed as an abstract object with which the elements of phonological representation are placed in correspondence. The legal correspondences are defined by a metrical grammar consisting of a set of constraints. The constraints specify the conditions under which a particular phonological representation forms a legal phonological embodiment of the meter, i.e. is a metrical line. The constraints can require that certain metrically strong positions be filled by stressed syllables, that W positions be filled by stressless syllables, and so on. Below, a verse by Shakespeare[1] is shown aligned to WSWSWSWSWS, the template for iambic pentameter.

(1)	Shall	I	com-	pare	thee	to	a	sum-	mer's	day?
	|	|	|	|	|	|	|	|	|	|
	W	S	W	S	W	S	W	S	W	S

Halle and Keyser also suggested that constraints have two functions: some of them specify the conditions required for metricality, while others, applying to a superset of the representations to which the first set apply, specify when a line is metrically complex or "tense". This distinction fits well with the experience of a reader of iambic pentameter, who perceives some lines such as (1) as metrically simple, others (say, *Pluck the keen teeth from the fierce tiger's jaws*[2]) as metrically difficult.

As the field evolved in response to Halle and Keyser's work, an important further advance (e.g. Kiparsky, 1977; Chen, 1980; Piera, 1980; Prince, 1989) was to construe the meter not just as a sequence of positions, but as a hierarchical constituent structure articulated into strong and weak elements (S and W) at all levels. Thus, for instance, Piera suggested that iambic pentameter normally has a structure in which the metrical positions are grouped into feet and the feet are

[1] *Sonnets* 18.1.
[2] Shakespeare's *Sonnets*, 19.3.

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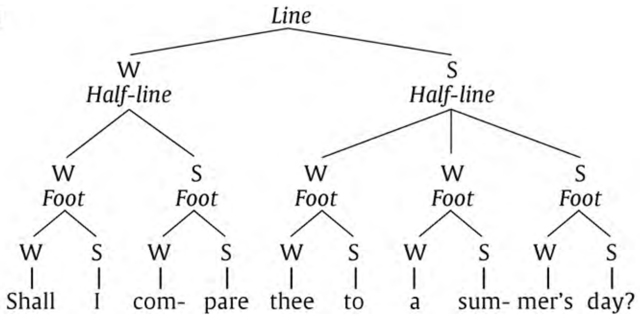
grouped into half-lines of four and six positions, respectively. One possible representation of Piera's idea is given in (2); I have added traditional constituent labels and used the pattern to scan line (1).

(2)



The introduction of hierarchical structure (drawn from ideas of traditional metrics) made possible major improvement in metrical grammars. For instance, hierarchical structures allow us to describe dipodic meters (Attridge, 1982; Prince, 1989) in which there is rhythmic alternation on two levels at once. Many metrical traditions involve an echoing of the metrical bracketing in the phrasal bracketing of the syllables (Oras, 1960; Tarlinskaja, 1984; Hayes and Kaun, 1996). The use of bracketing also made possible a sharper characterization of the stress-based constraints, notably with the discovery by Kiparsky (1977) of metrical constraints that penalizes particular stress matches when they simultaneously involve a mismatch of bracketing.

Overall, the history of generative metrics starting with Halle and Keyser's work has demonstrated the fruitfulness of their original conception, as research gradually reveals the richness of the linguistic and metrical principles that poets use in the construction of verse.

2. Some central claims of FH's work

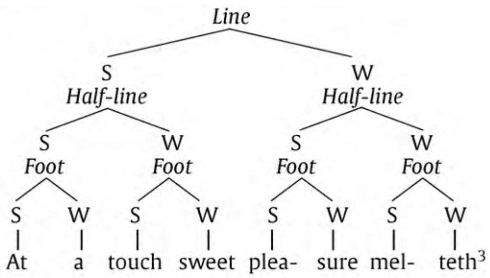
FH's new book is partly a continuation of this research tradition, but also diverges from it in a number of ways, covered below.

2.1. Rules and derivations vs. constraints

First, and most originally, FH attempt to move the basis of metrical analysis away from constraints and towards rules. On Halle's part, this reflects a repeated willingness to swim against the tide. When Halle and Keyser's work was new, formal analysis in linguistics was dominated by rules, and the idea that a component of the grammar could consist entirely of constraints was quite novel. Today, with constraint-based theories playing a major role in every area of grammatical analysis, FH are again showing intellectual independence by developing a rule-based theory.

FH's rules create the hierarchical bracketing structure for verse. The notation that they adopt for depicting this hierarchical structure is not the tree structure seen above but rather one using grid marks and brackets, based on the proposal for metrical stress theory developed by Idsardi (1992). For example, the structure assumed by FH for a line of trochaic tetrameter is given below, first with Piera-style trees then using FH's grid:[3]

(3) a.



b.
```
At   a   touch  sweet  plea-  sure  mel-  teth
(*   *   (*     *      (*     *     (*    *(
(*       *             (*           * (
(*                     * (
*
```

[3] John Keats, *Fancy*, line 3.

The trees may be translated, roughly, back and forth from the bracketed grids using familiar procedures (see, e.g., Liberman and Prince, 1977); both structures depict the relative prominence of metrical positions and the intended bracketing into (what tradition has called) half-lines and feet. What is special about FH's procedure is that the meter is not a template; rather it is built up from the syllables of the line itself by a sequence of rules (p. 22), going from bottom to top. The first rule forms four binary groups (disyllabic feet) from consecutive syllable pairs going from left to right, indicating their trochaic prominence by assigning an asterisk on the next level:

(4)	At	a	touch	sweet	plea-	sure	mel-	teth
	(*	*	(*	*	(*	*	(*	* (
	*		*		*		*	

Similar rules then create the superordinate structures. Rule application stops only when there is a line with just one single asterisk, so no more grouping is possible.

FH lay out a rather narrow set of possible rule schemata that can be used for parsing: rules can create binary or ternary groups; they can assign prominence to the leftmost or rightmost element within a group, and they can adopt various additional options (such as skipping one unit) at the beginning and end of a line.

Ultimately, we need to decide whether the line is a legal instantiation of the meter. For this reason, the FH theory is not constraint-free. At the end of the derivation, the system inspects the structure created to see if its properties are legal, and at this point, constraints do get applied.

While the format of rules in FH's theory is tightly constrained, I would judge that the theory allows languages to vary a great deal in their constraints. For instance, the theory allows constraints that require that strong positions be filled by a heavy syllable (p. 164), but also constraints that require that *weak* positions be filled by a heavy (p. 229). Individual constraints can be fairly complex, for example "The syllable that projects to Gridline 1 must be followed by a light syllable, if both belong to the same Gridline 0 group." (p. 166) or "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. 172). This is not an objection in itself, since these constraints, after all, are doing real work in the analysis. However, the sheer variety of possible constraints makes it hard to assess the restrictiveness of the overall theory. If there is a second edition of this book, I hope the authors will include in it a computation of the *output typology* of their theory, expressing in full the expressive capacity of the theory (thus corresponding to the "factorial typologies" computed within Optimality Theory; Prince and Smolensky, 1993/2004, Ch. 6). The examination of such a typology would be helpful for the purpose of evaluating the theory's restrictiveness.

2.2. Deep, not surface lawfulness

Often, rule-based and constraint-based systems make very similar predictions. For instance, FH's rules that parse syllables into lines could be recapitulated by constraints similar to those previously used in constraint-based frameworks to define possible metrical patterns, viz.: (i) metrical constituents must be either binary or ternary; (ii) metrical constituents on the same level must have parallel internal structure; (iii) metrical constituents have a single prominent head.[4] So how is it possible to argue for rule-based vs. constraint-based approaches in metrics?

FH's answer echoes another theoretical urtext of which Halle is a coauthor, namely *The Sound Pattern of English* (Chomsky and Halle, 1968). In the conception of *SPE*, orderliness and systematicity in phonology is found primarily at a abstract, underlying level of structure, and is subsequently obscured by the action of rules. For example, the absence of long vowels and diphthongs before [ŋ] in English follows in the *SPE* analysis from setting up surface [ŋ] as underlying /ng/; thus, this phonotactic restriction is a consequence of the more general limitation of long vowels before consonant clusters (*[aɪŋ], paralleling *[aɪmp]).

The view that lawfulness is characteristic primarily of deep representations came into question not long after *SPE* was published (Kisseberth, 1970), and ultimately theories emerged in which *surface* orderliness emerged as the dominant trait of phonological systems; indeed in Optimality Theory, the Rich Base principle (Prince and Smolensky, 1993/2004, Ch. 9) states that constraints on underlying form do not exist at all. FH's move toward a rule-based, derivational theory of metrics thus might plausibly be related to the skepticism Halle has voiced (Bromberger and Halle, 1989; Halle, 1995) concerning surface-oriented, constraint-based frameworks. Not surprisingly, Halle's counterarguments have emphasized examples like the /ng/ case just given.

So, does metrics includes instances where the data pattern is orderly in underlying form but not at the surface? Let us consider one such possible case. For Tennyson's poem *Hendacasyllabics*, FH's rules first parse the syllables into a grid like the following; essentially iambic pentameter with an obligatory final extrametrical syllable.

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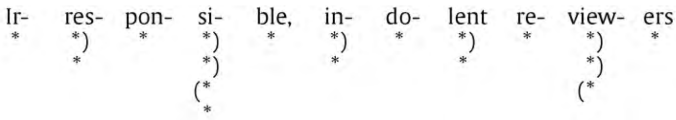
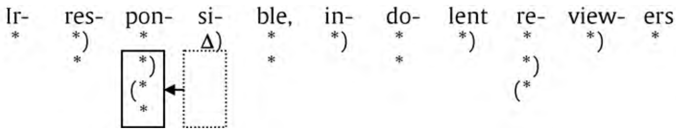
[4] For versions of (i) see Piera (1980, 74–75), Lerdahl and Jackendoff (1983, 69); for (ii) see Lerdahl and Jackendoff (1983, 75), Prince (1989, 55); for (iii) see Piera (1980, 93).

(5)


The parsing out of this grid is only the first stage of the derivation. FH next apply a rule which (quite strikingly) attacks the very *strongest* position of the grid, removing its terminal asterisk and forcing the rest of the column to migrate in a way that preserves constituency:

(6)


It can be seen that the resulting output structure produces a better match for the stress on –*spon*-, and this is true for the comparable position in most of the other lines of the poem.

Yet I have doubts that this output structure is the correct one. The first foot remains iambic, indicating a meter that actively prefers clash. The approach predicts that Tennyson would have found lines like *Inane pedantry, indolent reviewers* to be metrically optimal. But the poem has no lines of this type, and more generally I know of no real-life metrical tradition with a clash-preferring meter.

Beyond this, the poem at hand is a highly ambiguous form of evidence. It seems to have been written as an experiment in writing English verse using a Latin meter; specifically, the Phalaecian hendecasyllable (Ellis, 1889). Tennyson's poem actually scans reasonably well to this Latin meter, observing the classical principles. Two lines are given below[5]:

(7)

–	–	–	˘	˘	–	˘	–	˘	–	⏓
Hard,	*hard,*	*hard*	*i.s*	*i.t*	*on*	*ly*	*not*	*to*	*tum*	*ble*
hɑːd	hɑːd	hɑː	dɪ	zɪ	təʊn	lɪ	nɒt	tə	tʌm	bəl
So	*fan*	*tas*	*ti*	*ca.l*	*is*	*the*	*dain*	*ty*	*me*	*tre*
səʊ	fæn	tæs	tɪ	kə	lɪz	ðə	deɪn	tɪ	miː	tə

Tennyson's verse uses the same criterion of syllable weight ([CVː], [CVC] vs. [CV̆]) and same use of cross-word-boundary syllabification as Latin verse. Moreover, line 17, which begins *O blatant magazines*, makes no sense at all under FH's grid, but makes sense under the quantitative interpretation, since the second syllable of *blatant*, though stressless, is patently heavy.

The rule that delinks and migrates an asterisk column, which is used in various roles throughout the book, gives rise to another question: whether the notion of "strongest grid column" that it relies on can be defended with independent evidence. Notably, in pentameter verse it seems reasonable to say that it is the last, not the second foot that is strongest. For example, in much Romance verse it is the strong position of the last foot that is obligatorily filled by stress, and for English verse the tenth position is virtually always the one that is most frequently filled with stress in corpus counts (Tarlinskaja, 1976, 279). Thus, a tension can be seen between FH's use of the "strongest position" concept—namely, as defining the site of special rule application—and more traditional concepts that relate more intuitively to metrical strength.

2.3. *Metrics is simple*

Author Fabb's (1997) textbook for metrical beginners contains a rather striking passage: one single constraint is proposed to govern metricality in English iambic pentameters,[6] whereupon the author cheers the weary student with the words "that's basically it" (p. 41). This get-it-done-quickly approach also prevails in FH's book. FH tend to zero in on a particular aspect of metrical system and emphasize it over others that may have been emphasized by other scholars in the past. Thus, their section on Chinese regulated verse does not take up the issues of syntactic bracketing matches (Chen, 1980) or phrasal stress mismatches (Duanmu, 2004); and the discussion of Ancient Greek does not take on the difficult issues involving the relationship of word-internal metrical structure and the system of bridges and caesuras addressed by Devine and Stephens (1994). Some other such cases are discussed in section 3.

2.4. *Metrics is not gradient*

FH generally attempt to analyze only those aspects of meter that are exceptionless; the study of metrical configurations that are only strongly underrepresented statistically in the data are eschewed. Thus, in English iambic pentameter, they

[5] Full scansion at http://www.linguistics.ucla.edu/people/hayes/fabbhalle.

[6] Final version from Fabb (1997,47): "A weak position in the metrical template must not be matched with a strong syllable within a [polysyllabic] word [except] when that syllable is at the beginning of a phonological phrase."

narrow the analysis down to a single constraint (p. 47), held to be essentially exceptionless.[7] The abandonment of gradient analysis is a striking departure for Halle, whose earlier work with Keyser provided an explicit framework for the analysis of gradience in metrics.

FH's non-gradient approach can be assessed in two ways. First, there really should exist non-gradient cases; i.e. constraints that are so close to exception-free that any existing exceptions could be attributed to slips of the poet's pen or errors of historical transmission. Second, we can ask if a gradience-free theory is sufficient in scope; i.e. fully responsible to the data.

I would agree that there are *some* inviolable constraints in metrics, but they are surprisingly hard to find. It is quite often that counterexamples get found to constraints originally proposed as inviolable (see, for instance, Tarlinskaja, 2006). In the present case, the single constraint that FH propose as the basis of English iambic pentameter actually is violated with fair frequency in the verse of two famous English iambic pentameter poets, John Milton and Gerard Manley Hopkins. An example line is Milton's *Universal reproach, far worse to bear*.[8] Such cases were pointed out by Kiparsky (1975, 606; 1977, 201–203), who uses them to argue against "stress maximum" conditions of the kind FH adopt.

Consider next the second criterion, that of analytic scope. One argument for gradient constraints that I find persuasive comes from Gilbert Youmans's extensive studies (1982, 1983, 1989) of inverted word order in the verse of Shakespeare and Milton. It appears from Youmans's work that virtually all cases of inverted word order in these poets are metrically motivated. Crucially, Shakespeare and Milton used marked word orders not only to avoid unmetricality (as HF or others might define it), but also to avoid the violation of constraints that merely assign greater metrical complexity.

Another reason to favor gradient analysis is that it imposes more severe empirical tests on our theorizing. A nice example is found in Halle and Keyser (1971, 154), who analyzed data (reproduced in FH, p. 266) concerning the frequency of line types in *Beowulf*. The earlier work by Halle and Keyser passes a rather severe test, namely that it is able to predict these frequencies using only a small number of gradient principles.[9] FH's later reanalysis of the same data only succeeds in establishing the set of well-formed line types, without distinguishing among them. Clearly the *Beowulf* data pattern is closely structured, and the Halle/Keyser analysis is capturing this structuring in a way that the FH analysis is not.

Fabb (2001, 2002, 2006) has laid out a scheme whereby absolute unmetricality results from a grammar, whereas degrees of metrical complexity are attributed to a system of pragmatics, in which phonological material is employed to suggest the poet's intent in writing a particular meter. Such a scheme provides a framework in which metrists might plausibly zero in on the inviolable aspects of a meter. However, I suspect that many metrists will feel that in one sense, it is neither here nor there what component of the human cognitive system gradient metrics resides in: in the end, the working metrist wants to arrive at a full and explicit characterization of the data pattern. Moreover, splitting the metrics into categorical and gradient portions is likely to come at a severe cost in generality: the very same metrical principles that are fully strict for one poet often turn out to hold only gradiently for another. To give two examples among many: (a) While Milton allows lexical inversions not following a phrase break as a rare option, Shakespeare forbids them entirely; (b) while most English poets strongly prefer a stress in the last S position of a line, poets in Romance languages insist on having one. Thus, the "pragmatic" component of metrics, if it exists, is likely to resemble the "grammatical" component very closely in its substance.

3. FH's work and metrics in general

Summing up: this work is an exploration of some quite specific mechanisms for metrical analysis, most specifically the rule schema for parsing syllables into grids and the further rules that adjust grids by delinking and shifting grid columns. The consistency with which this line is pursued is a real virtue of the book.

This said, I feel that this single-minded consistency has its drawbacks as well. FH generally do not try to argue for their proposals in light of alternatives from the existing generative metrics research literature—including Halle's own earlier work.[10] This comparison is left as an exercise for the reader.

More generally, I think that generative metrics needs, in addition to "new directions" work such as this book, some effort to synthesize and build on the research of the past few decades, which included much interesting and fruitful work. Some of the best papers are now several decades old, yet have not been systematically assessed or followed up on. Thus, FH's book does add to the list of contending theories, but by and large it will not assist the ponderings of the metrist who wants to reach some understanding of "where we are now".

To help keep the fires lit, I would like to mention what I think are among the most intriguing observations and proposals of past decades that are deserving of further scrutiny and theoretical development.

[7] The constraint is a bit different from the single constraint of Fabb (1997): it forbids placing the stressed syllable of a polysyllabic word in weak metrical position when it is flanked by stressless syllables. In other words, it makes no reference to phrase boundaries, but rather combines a "no mismatch in polysyllables" condition (Kiparsky, 1975) with a "stress maximum" condition (Halle and Keyser, 1971).

[8] *Paradise Lost* 6.34.

[9] Halle and Keyser checked their predictions only qualitatively (predictions of relative frequency), but it is straightforward to implement their analysis as a three-constraint maxent grammar in the style of Goldwater and Johnson (2003). I find that the predictions of this grammar agree rather fairly well (r = .926) with Halle and Keyser's corpus frequencies; see http://www.linguistics.ucla.edu/people/hayes/fabbhalle.

[10] FB do offer a theory-comparison section (section 1.6), but it addresses traditional descriptive metrics (citing Paul Fussell and Northrop Frye), not FB's own generativist colleagues.

(a) *Sensitivity of metrical constraints to word boundaries and to phonological phrasing*, notably Kiparsky's (1977) proposal that some constraints ban simultaneous mismatches of stress and bracketing. Such constraints may involve a gradient effect Hayes (1983, 1989): the higher the level of the prosodic phrasing, the stronger the Kiparskian constraint is enforced. A different bracketing-related constraint from Kiparsky (1977, section 5) remains a puzzle to this day, since it has the effect of banning stressed syllables in strong metrical positions.
(b) The study of *asymmetry in metrical templates*, particularly the "longest last" pattern seen in asymmetrical meters (see Piera, 1980; Hayes, 1988 for an overview). A related point of interest is the systematic evolution away from "longest last" often found over the careers of individual poets and traditions (Oras, 1960; Tarlinskaja, 1983, 1987).[11]
(c) Certain special issues arise in the study of *sung and chanted verse*, a topic discussed in FH 326-39. These include the question of how many structures are being juggled by the poet at once: there is clearly a phonological representation and a musical grid, but is there also an underlying meter, inherent to the text? See Schuh (1994), Kiparsky (2006), and Dell and Elmedlaoui (2008). Sung verse also raises the possibility of *durational* metrical constraints that involve the matching of syllable types to the number of grid positions they fill; see Hayes and Kaun (1996) and Halle (1999, submitted for publication).
(d) Many verse traditions involve *structures above the level of the line*, e.g. couplets and quatrains. Often these structures are highlighted by the patterning of truncated lines, a topic studied and analyzed in Burling (1966), Attridge (1982), Hayes and MacEachern (1998), and Kiparsky (2005, 2006).
(e) *Paraphonology*. Kiparsky (1977, section 11) suggests that poets often use a system of phonological rules that are specific to poetry. These rules reduce syllable count through glide formation and other forms of hiatus resolution. A particular interest of paraphonology is that it can be used in establishing scansion, but is not necessarily embodied in the pronunciations used by readers of poetry. FH reject paraphonology (section 2.7), instead proposing that the elided syllables are simply not projected to the grid—the same mechanism that they use for extrametrical syllables, for the Tennyson example given above, and for resolution in classical meters (p. 158). But this broad approach misses the patent similarity, remarked on by Kiparsky, of paraphonology to ordinary phonological rules—indeed, paraphonology can even involve feeding rule order, a matter that would be quite awkward to handle in FB's system.[12]
(f) The role of *syllable quantity in stress-based meters*. An interesting case of this is Kiparsky's (1989) discovery of syllable quantity effects in the sprung rhythm of Gerard Manley Hopkins.[13] Syllable quantity also seems to matter in poetry where ternary and binary intervals are freely mixed; Hanson (1992) strikingly shows that English meters of this type tend to restrict the weak syllables of ternary intervals to light syllables. Other cases include Old English (Russom, 1998) and Finnish iambic-anapestic meter (Hanson and Kiparsky, 1996).

In sum, while I found FH's book stimulating, it does not serve as a summary or synthesis of its field. Scholars new to generative metrics would be well advised to do some background reading before taking on the challenging proposals presented in this work.

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[11] The "longest last" principle for pentameters is not easy to state in FH's rule-based approach, as it requires complementary parameter settings: ternary-first if right-to-left, binary-first if left-to-right. What seems to matter is the output, not how you get there.
[12] Specifically, in English paraphonological hiatus resolution is often fed by paraphonological consonant deletion, either of /h/ or of voiced nonsibilant fricatives. In Shakespeare's verse the latter form of consonant deletion feeds Kiparsky's "PR1" (1977, 240), which drops stressless vowels in hiatus with the preceding vowel, as with *heaven* and *either*: /ˈhɛvən, ˈiÞər/ → [ˈhɛən, ˈiðər] → [ˈhɛn, ˈir]. Both words can be scanned monosyllabic in Shakespeare.
[13] FH do treat sprung rhythm, but do not cite Kiparsky's paper; from my own acquaintance with these data I would judge that any analysis of sprung rhythm that did not include quantity would be insufficiently restrictive.

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