7. Old English Feet

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1. Introduction

In this chapter I show that the *Beowulf* poet carefully avoids lines whose halves are identical in terms of stressed (x) and stressless (.) syllables. The half-line (x.x.), for instance, is happily paired with *anything* but another (x.x.), despite the fact that (x.x.) is by far the commonest half-line type in the poem. Statistical analysis shows that this avoidance is not by chance and suggests that *having identical adjacent half-lines is unmetrical* in the poem. The same appears to be the case for half-lines identical in weight: a half-line with heavy and light syllables that runs (HLHL) does not pair with one that runs (HLHL). The results are obtained by looking at each and every syllable in the poem, regardless of stress, morphological status, or position within the line. This shows that *Beowulf meter strictly regulates every syllable in the poem*. Theories that ignore pre-tonic syllables (Bliss 1958), syllables that occur in prefixes (Russom 1987), stressless syllables in general (Keyser 1969, Fabb & Halle 2008), or stress in general (Golston & Riad 2001) cannot account for this fact. An adequate theory of OE meter must include stress, quantity, and the avoidance of identical half-lines.

2. Variation

We may begin with a metrical scansion of the first part of the poem, where the first syllable of every lexical root (noun, verb, adjective) is stressed (x) and all others are stressless (.):

(1) *Beowulf* lines 1-11

Hwat, wē gār-dena in geār-dagum,	. . x x .	. x x .	1
þēod-cyninga þrym gefrūnon,	x x . .	x . x .	2
hū ðā æþelingas ellen fremedon!	. . x . . .	x . x . .	3
oft Scyld Scēfing sceaþena þrēatum,	. x x .	x . . x .	4
monegum mægþum meodo-setla oftēah,	x . . x .	x . x . . x	5
egsode eorlas, syððan ærest wearð	x . . x .	. . x . x	6
fēasceaft funden; hē þæs frōfre gebād,	x . x .	. . x . . x	7
wēox under wolcnum weorð-myndum þāh,	x . . x .	x x . x	8
oð þæt him æghwylc ymb-sittendra	. . . x .	x x . .	9

ofer hron-rāde hȳran scolde,	. . x x .	x . x .	10
gomban gyldan; þæt wæs gōd cyning!	x . x .	. . x x .	11

Listen up! We have heard of the power
of the kings of the spear-Danes,
how the nobles won their honors!
Oft Scyld Scefing took the mead-benches
from many enemy nations' troops,
terrified warriors. After he was first found
destitute, he found this consolation,
he grew up under clouds, he prospered in honor,
until each of the surrounding nations
on the sea-lanes had to obey him
paying tribute; that was a good king!

Two things should be mentioned before we go on. First, I'll have nothing to say about the important issue of alliteration, only because it falls outside the scope of this article. Second, only primary stress is recorded in the scansions—secondary is sometimes taken to be metrically significant in Old English meter and I do not mean to deny that it could be; but to test scansion empirically one needs to have a simple and replicable method of scanning and I have chosen to scan only primary stresses as ekses.

Looking at the patterns of stressed and stressless syllables, it should be clear that there is no meter in the usual sense of a simple rhythmic pattern repeated a number of times. We do not find four trochees here or five iambs or six dactyls or the like. Rather, there seems to be a fairly haphazard distribution of stressed and stressless syllables. But a closer look at the data reveals an anti-pattern: the *Beowulf* poet strenuously avoids lines whose first and second halves are identical in terms of stress. The point of the meter is to have *rhythmic variety between the two halves in every line*, more Coltrane than Chopin. Note that in the eleven lines above, none has a line composed of two stress-identical half-lines. This is a robust pattern in the poem as we will see below.

Interestingly, the pattern does not hold of all adjacent half-lines. Specifically, if we look at the second half of one line and the first half of the next we find two cases (lines 4-5 and 10-11) where adjacent half-lines are identical, as the underlined portions below show:

(2) *Adjacent identical half-lines across lines*

oft Scyld Scēfing sceaþena þrēatum,	. x x .	<u>x . . x .</u>	l. **4**
monegum mægþum meodo-setla oftēah,	<u>x . . x .</u>	x . x . . x	l. **5**

ofer hron-rāde hȳran scolde,	. . x x .	x . x .	l. **10**
gomban gyldan; þæt wæs gōd cyning!	x . x .	. . x x .	l. **11**

So the avoidance of stress-identical half-lines holds only *within* lines, not across them. Below we will encounter a small number of lines (one percent of the total) that does not obey this generalization, but that number is far smaller than would be expected by chance. The avoidance of stress-identical half-lines within a line is statistically quite robust.

To determine the statistical significance of this we need to calculate how common a given type of line should be, all else being equal, and compare that number to the actual number of times a given type of line occurs. We can begin with the commonest type of half-line (x.x.), which occurs 1125 times in the 6338 half lines of *Beowulf* , roughly once per six lines. If the likelihood of getting (x.x.) in a line is 1/6, the likelihood of getting two such half-lines in the same line is 1/6 * 1/6, or 1/36. The math will be familiar from rolling dice: my chances of rolling a 4 with one die are 1/6 and my chances of rolling two fours simultaneously with two dice are 1/36. Likewise with half-lines. $1/36^{th}$ of the 3169 lines in *Beowulf* is 88, the number of lines we would expect whose stress-pattern is (x.x. x.x.), all things being equal. We find only six such lines and the difference between the actual 6 and the expected 88 is highly significant given a corpus of 3169 lines ($p < .000001$). Put another way, the probability of the number being this low by chance is one in a million. We can safely conclude from this that the *Beowulf* poet avoided lines with a perfect trochaic rhythm (x.x. x.x.). (This is a binomial probability: see Lowry 2008 for discussion and for the engine that generated the numbers in this paper.)

The same process can be repeated with the next most common types of half-lines:

665 (x..x.) half-lines = 1/10 of the total;
probability of (x..x.)(x..x.) = 1/100.
32 such lines expected, 5 found;
difference is highly significant ($p < 0.000001$).

474 (..x.x) half-lines = 1/14 of the total;
probability of (..x.x) (..x.x) = 1/196.
16 such lines expected, 5 found;
difference is highly significant ($p < 0.004$).

464 (..xx.) half-lines = 1/14 of the total;
probability of (..xx.) (..xx.) = 1/196.
16 such lines expected, 4 found;
difference is highly significant ($p < 0.0018$).

281 (xx.x) half-lines = 1/22 of the total;
probability of (xx.x) (xx.x) = 1/484.
6 such lines expected, 1 found;
difference is highly significant ($p < 0.024$).

The remaining types of half-line are not common enough to allow use of this kind of binomial probability. So while we expect 3 lines that run (…x.x) (…x.x) and get only 1 such line, that result could simply be by chance. The upshot of all this is that for all the cases we can study with this method, the low number of lines with identical half-lines is not due to chance.

2. Theory

We turn now to what this fact tells us about theories of the meter of *Beowulf*. This is not the place to cover all extant theories of Old English meter, though, so consideration of some of the most important ones will have to suffice.

2.1. Extant theories of the meter of *Beowulf*

Let us begin with Sievers 1888, the most influential theory of OE meter and the most commonly taught. Sievers' theory is based on five half-line types whose stress profiles are given below in the same eks and dot notation used above:

(3) *Sievers' 5 types*

A	x.x.'trochaic'	B	.x.x'iambic'
C	.xx.	D	xxx.
E	xx.x		

The theory is usually extended to encompass subtypes of A-E, but that is not something we need to consider here: the problems for the theory multiply with a greater number of types. For now it will do to point out that all five half-line types have four syllables, unlike most of the half-lines of *Beowulf*. To accommodate those half-lines that do not have four syllables, syllables are split apart, joined together, or ignored in Sievers' theory until there are only four syllables left. Splitting syllables is necessary, for instance, in half-lines with only three syllables; splitting a heavy syllable into two lights brings the syllable count to four, as the 5 types require. Syllables are joined together when a half-line has more than four syllables; 'resolving' a light syllable with a following syllable brings the syllable count to four again. Stressless syllables at the beginning of a line ('in anacrusis') can also be ignored if there are too many syllables, and syllables in certain prefixes can be ignored as 'extrametrical' for the same reason. It is worth stressing that the syllables are really ignored for the meter in the Sievers tradition of metrics not somehow incorporated into it. Stockwell & Minkova's discussion is typical:

> The prefixes *ge-*, *be-*, *on-* and the negative clitic *ne* (not the conjunction *nē*, however) are usually invisible to the scansion, whether on nouns or verbs; and all verbal prefixes are normally invisible. Occasionally they have to be counted to get the obligatory fourth positions… (Stockwell & Minkova, in press)

Some examples (from Klaeber 1950:281) will make clear how this is meant to work in traditional analysis:

(4) *Anacrusis, extrametricality, contraction*

. x x . . x x .	
Hwæt, wē gār-dena in geār-dagum	l. 1
x . x . x . x.	
in mǣgþa gehwære man geþēon.	l. 25

Line 1 has nine syllables, so the first word is anacrustic and not counted, giving the line two C half-lines. Line 25 has nine syllables as well, but to fit them to Sievers type A takes some more work: making the first word anacrustic give us an initial trochee, but the first syllable of *gewhære* must be ignored (made extrametrical) as well to give us a second trochee. The second half-line in 25 has too few

syllables, so the final heavy is treated as two lights (resolved). The result is [x.x. x.x.] though the text reads [.x..x. x.x] in Old English. In this way, almost any line of *Beowulf* can be fit into one of the five types.

But there is a problem here: we have seen that the *Beowulf* poet studiously avoids lines whose half-lines are stresswise identical. Lines 1 and 25 above fit this nicely, but only if we take into account all the syllables in the text. Line 1 has the half-lines ..xx. and .xx., which are different. Line 25 has .x..x. and x.x, which again are clearly different. But if we parse the text according to (4) above, as required for Sievers' theory of 5 types, we end up with stress identical half-lines. Line 1 now has identical half lines that run x.x., violating the constraint on identical half-lines. Line 25 now has two half lines that run .x.x, again violating the constraint on identical half-lines. So, if we ignore, split, and contract syllables to create eight-syllable lines we create a great number of limes with identical half-lines, something the *Beowulf* poet carefully avoids. Sievers' 5 types are both circular and unhelpful: they keep us from seeing an important metrical pattern in the poem. We need to consider all syllables in the text to see that identical half-lines are avoided; but if all syllables are part of the meter, Sievers' 5 types are not the metrical units of *Beowulf*. All syllables in the text are metrical.

All extant accounts of the meter of *Beowulf* ignore substantial numbers of syllables. Thus Heusler (1891) allows himself to ignore any number of stressless syllables between stresses; Bliss (1958) ignores syllables that fall before stressless syllables; Russom (1987) ignores syllables in prefixes; Golston & Riad (2001) ignore stress entirely and claim that Old English meter is based only on quantity, stress being relevant only for the alliterative part of the meter. Following Keyser (1969), Fabb & Halle (2008) claim that "*Beowulf* meter differs from other meters reviewed in this book in that it *systematically disregards all unstressed syllables*" (269, my emphasis). What all of these accounts have in common is that they ignore syllables whose presence keeps many half-lines from being identical. The avoidance of identical half-lines shows that *all* syllables in the text are metrical, something that it not compatible with most accounts of Old English meter.

Consider two types of line whose frequency in the poem differs dramatically:

(5) Metrical identity under Fabb & Halle's (2008) approach

Text	Fabb & Halle	frequency
..xx. x.x.	xx xx	102
x.x. x.x.	xx xx	6
..xx. ..xx.	xx xx	4

The first type has the two most common half-line types (..xx. and x.x.) and occurs 102 times in *Beowulf*. The second type has a pair of the most common half-line type (x.x.) but only 6 occurs times; and the third types has a pair of the second most common half-line type (..xx.) but only occurs 4 times. Under the present analysis the surprisingly low frequency of the second and third types can be attributed to the fact that each of these types has identical half-lines. But if we ignore the stressless syllables, as Fabb & Halle propose, all three line types are metrically equivalent (xx xx), allowing no metrical explanation for the different frequencies of occurrence. The moral is: the meter of *Beowulf* does not disregard a single syllable–*every* syllable in the poem is metrically important.

2.2. A new theory of the meter of *Beowulf*

Building on much previous work in OE scholarship and on the theory of Prosodic Metrics (Golston & Riad 2000, 2005), I propose here a new theory of the meter of *Beowulf* in which the avoidance of identical half-lines plays a central role.

The basic tenet of Prosodic Metrics is that poetic meter works off of linguistic markedness: while normal speech is prosodically unmarked, poetic meter is commonly prosodically marked *gratia artis*. Meter uses marked linguistic structures to make poetry interesting. Golston & Riad 2000 show, for instance, that Greek dactylic hexameter involves stress clash in every foot of the line. Greek phonology stresses every heavy syllable and the first of a pair of lights (Allen 1973); the two forms that a dactylic foot takes in hexameter are heavy-heavy and heavy-light-light. Stressing every heavy syllable and the first of a pair of lights gives us dactyls of the form xx and xx., both of which suffer from canonical stress clash (xx). Cross-linguistic study has shown that stress clash is never sought after in natural language and is often avoided (Selkirk 1984, Nespor & Vogel 1986), establishing that stress clash is linguistically marked. Golston & Riad conclude that the form of the dactyl in Greek is

prosodically marked because it constantly violates stress clash. Because no other Greek foot does so (LH, HL, LL, etc.), stress clash is taken as the defining property of dactylic meter. Other types of meter are defined by other marked properties. Greek iambic meter is marked by constant stress lapse (Golston & Riad 2000), Greek lyric meter is marked by constant stress clash and lapse within the same line (Golston & Riad 2005), and Classical Arabic meter is marked by trapped light syllables, whose marked status in language is established by Mester (1994).

The importation of markedness into meter makes an important set of predictions: specifically, it predicts that a meter will only use a form of prosodic markedness that the ambient language tolerates. So Greek meter can make use of clash and lapse because the phonology of Greek tolerates clash and lapse, i.e., it has no processes that resolve clash or lapse. A language like English does not tolerate clash and lapse and has processes that resolve them (Kager 1989): that is why meter that tries to violate clash or lapse in a regular way does not work in English: the clashes and lapses would immediately be repaired and the pattern would disappear. Similarly, Arabic meter can make use of trapped light syllables because the phonology tolerates them, even creating light-heavy feet with trapped lights for morphological purposes (McCarthy & Prince 1990). A language like Latin does not tolerate trapped lights and is thus predicted not to make use of meters like those of Classical Arabic.

If Prosodic Metrics is to work for the meter of *Beowulf* it needs to locate something about the actual text that is prosodically marked. Taking the observation that stress-wise identical half-lines are avoided, it looks like *Beowulf* violates the universal tendency to have the same rhythmic patterns within a given language. The constraint is so common it has no name, though it forms the basis of all foot-based work in theories of stress placement (Halle & Vergnaud 1987; Kager 1993; Hayes 1995). For all known languages with stress, it is possible to identify the basic rhythm as iambic or trochaic. The metrical analogue is equally ubiquitous: we take for granted that a meter consists of four, five, six, etc. feet *of a given type*–iambs, trochees, dactyls, anapests, whatever. The basic tendency in language and meter to have one set of feet is contravened in *Beowulf*, where almost no line repeats the same rhythm in each of its halves. Recall the first dozen lines of the poem, each divided into four feet:

(6) *Beowulf* lines 1-11

Hwat, wē gār-dena in geār-dagum,	(..x)(x.)	(.x)(x.)	1
þēod-cyninga þrym gefrūnon,	(xx)(..)	(x.(x.)	2
hū ðā æþelingas ellen fremedon!	(..x)(...)	(x.)(x..)	3
oft Scyld Scēfing sceaþena þrēatum,	(.x)(x.)	(x..)(x.)	4
monegum mægþum meodo-setla oftēah,	(x..)(x.)	(x.x)(..x)	5
egsode eorlas, syððan ærest wearð	(x..)(x.)	(..x)(.x)	6
fēasceaft funden; hē þæs frōfre gebād,	(x.)(x.)	(..x)(..x)	7
wēox under wolcnum weorð-myndum þāh,	(x..)(x.)	(xx)(.x)	8
oð þæt him æghwylc ymb-sittendra	(...)(x.)	(xx)(..)	9
ofer hron-rāde hȳran scolde,	(..x)(x.)	(x.)(x.)	10
gomban gyldan; þæt wæs gōd cyning!	(x.)(x.)	(..x)(x.)	11

Since no two half-lines are identical here, it follows that no line will have the same feet throughout: no line here consists of four trochees, iambs, anapests, or dactyls. This is metrically marked because most of the world's metered poetry repeats a given unit a number of times within the line. *Beowulf* bucks this trend, and I would contend that it is that exquisitely careful bucking that makes the meter challenging and full of artifice.

I have mentioned that Prosodic Metrics predicts that a language will use a prosodically marked category only if the phonology of the language allows it. Since the meter demonstrably uses various foot types (iambs, trochees, spondees, etc.), Old English phonology should not make much use of feet in the assignment of stress. And this is indeed the case for main stress (although secondary stress is assigned by moraic trochees, as argued in Riad 1992). Old English main stress is based on morphology (Suphi 1988, Minkova & Stockwell 1994), as Riad has shown for early Germanic languages generally:

> Germanic main-stress invariably goes on the initial syllable of the stem. The locus of main-stress is thus determined on morphological grounds, which means that there is no need to refer to previous prosodic structure in assigning main-stress; all we need is a stem morpheme, a content word. (Riad 1992:52)

This goes under the name of 'top-down stressing' (Hayes 1995:117) and it completely obscures the type of foot used in Old English. As Hayes points out, a word can begin heavy-heavy, heavy-light, light-light, or even light-heavy in Old English and gets initial stress in all cases. The phonological footing is overridden by the morphological

requirement that stress be root-initial. The prediction that Prosodic Metrics makes here is Old English meter will work for languages with morphologically determined stress, but not for languages like Greek, Latin, Arabic, or (modern) English in which primary stress is determined phonologically.

With the prominent exception of alliteration, the rest of the meter of *Beowulf* is prosodically and metrically uninteresting and provides a vanilla backdrop for the prosodic novelty of constant rhythmic variation. It is worth spelling that backdrop out to show how prosodically unmarked it is. Following Creed (1990) and others, I assume that *Beowulf* is basically a tetrameter, with four feet per line, as shown above in (6). As in Japanese, Greek, Latin, and Arabic meters, each foot is binary, with two metrical positions. Again as in these languages, each metrical position is equivalent to a phonological foot in that language, a moraic trochee in Greek (Allen 1973), Latin (Mester 1994), and Arabic (Allen 1973:165), and a bimoraic foot in Japanese (Poser 1990), with one or two units of metrical weight (moras). The typical line, then, will have eight metrical positions with between eight and sixteen moras (Golston & Riad 2001). Minimal lines include the following, assuming that CV and CVC syllables are light while CVV syllables are heavy (Golston & Riad 2001):

(7) Minimal lines in *Beowulf*

μ μ μ μ	μ μ μ μ	
on bearm nacan	beorhte fratwe	
on bosom ship	bright arms	l. 214
μ μ μ μ	μ μ μ μ	
wicg gewende	word after cwæd	
horse turned	word after spoke	l. 315

Here there are eight syllables, all light (μ), for a total of eight moras per line. Maximal lines have sixteen moras:

(8) Maximal lines in *Beowulf*

μ μ μ μ μ μ	μμμ μ μμ μμ μ μ	
cempan gecorone	þāra þe hē cēnoste	
champion choses	there that he bravest	l. 206

μμ μ μ μ μ	μμ μμ μμ μ μ μμ	
lēodgeburgean wes	þū ūs lārena gōd	
people-protector be	thou our counsel good	l. 269

As Golston & Riad 2001 have shown, if CVC is treated as light (μ), fully 99% of the lines in *Beowulf* have between eight and sixteen moras. The figure falls to 95% if CVC is treated as heavy (μμ).

We have seen that only 31 (1%) of the lines in *Beowulf* have identical adjacent half-lines in terms of their stress patterns. Interestingly, all but four of these are different in terms of heavy vs. light syllables, if we count CVC syllables as light. Here are the offending lines:

(9) brūn on bāne; bāt unswīðor	**x . x .**	**x . x .**	l. 2578
bright on bone; bit less.strongly	HLHL	HLHL	
(10) oððe fȳres feng; oððe flōdes wylm	**. . x . x**	**. . x . x**	l. 1764
or fire's grasp or flood's surge	LLHLL	LLHLL	
(11) searo-net seowed smiþes orþancum	***x . x x .***	***x . x x .***	l. 406
armor-net woven smith's skill	LLLLL	LLLLL	
(12) ætwiton wēana dǣl; ne meahte wǣfre mōd	***.x. x.x***	***.x . x . x***	
blamed woe share nor might restless spirit	LLLHLH	LLLHLH	l. 1150

If we assume that the *Beowulf* poet avoided adjacent half-lines that were identical *both* in stress *and* in weight, these four lines are the only problematic lines in the poem, just a tenth of one percent. Rather than being a loose meter, *Beowulf* is extremely rigid in its

adherence to the meter, if the meter is based on avoiding like half-lines.[1]

Wrapping up, then, we have seen that the *Beowulf* poet strenuously avoids lines whose halves have identical stress patterns; there are only 31 lines in the poem that have such lines. Furthermore, all but four of these lines have half-lines with different weight patterns, leaving only four lines in the entire poem whose half-lines are the same in both stress and weight. Other than that, the meter is a quantitative tetrameter, where each metrical position holds one or two moras. And the meter is alliterative, of course. Unlike most theories of Old English meter, this one is only true if *all* syllables are taken into account: ignoring stressless syllables, syllables in prefixes, inter-stress or pre-stress syllables, or the like destroys the picture at once. The meter is thus very tight and exacting, not a poor approximation of identical half-lines but a strict succession of different ones.

3. Typology

The last topic I would like to address here is how common this avoidance of similar half-lines is. It turns out to be an important issue in some meters but not all. We will see that it figures into a number of metrical traditions but not all, and that the use *Beowulf* makes of it seems to be unique: no other type of poetry known to me at least is based on strict avoidance of stress- and weight-identical half-lines.

3.1. Greek

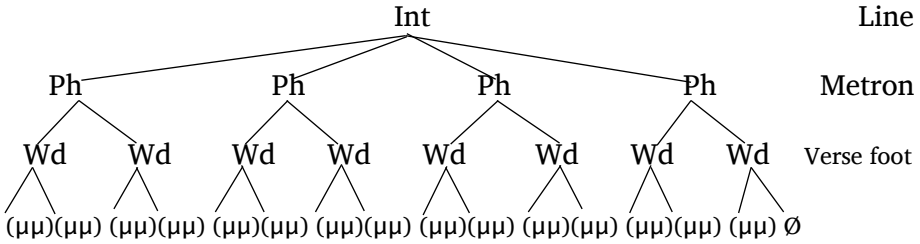
Classical Greek meters put a number of tight restrictions on where word breaks must (caesura) or must not (bridge) occur (see West 1982). Prince (1989) culls from these findings what he calls the Law of the Caesura, which says that *a word break must occur within one*

[1] Tonya Kim Dewey (p.c.) points out that alliteration may also be relevant here: only line 1150 is identical in terms of stress, weight *and* alliteration. That is, the alliterative patterns in 2578, 1764, and 406 are all aa/ax, with two alliterating syllables in the first half-line and one in the second. 1150 is xax/xax if only *wēana* and *wǣfre* alliterate and thus the only line in the poem with half-lines identical in terms of stress, weight, and alliteration. And if the alliteration includes the stressed second syllable in *ætwiton*, this line also has distinct halves: aax/xax. I do not at present know how to factor this into the statistics, however: the chances of getting lines that are identical in terms of stress, weight, and alliteration are probably quite slim, so that the non-occurrence of such lines might well be due to chance. Future research will have to determine this.

metrical position of the hierarchical center of the line but not at *the center of the line.* That is, the Law of the Caesura requires that the line be broken into half-lines that are different in terms of length. Prince shows that the Law of the Caesura holds for all major Greek meters, from dactylic hexameter (Homer and Hesiod), to dramatic (Aeschylus, Sophocles, Euripides) and comic (Aristophanes) trimeter, to trochaic tetrameter, building on standard references like Raven (1962) and West (1982). Prince's Law can be seen as a quantitative analogue of the Old English avoidance of identical half-lines, since the Law of the Caesura makes identical half-lines *impossible*: an off-center caesura necessarily splits the line into unequal parts. For Prince's law to hold, of course, it must take into account *all* moras in the line, as classical Greek scholarship has always done.

A second way in which the Law of the Caesura is enforced in Greek is by final catalexis, empty metrical positions that go unfilled by text. Take anapestic tetrameter catalectic, for instance, which has fifteen filled metrical positions (each two moras μμ):

(13) Greek Anapestic Tetrameter Catalectic



This meter is 'catalectic' because the sixteenth and final metrical position is empty. Final catalexis gives the line an odd number of metrical positions, guaranteeing that the caesura will be off-center no matter where it occurs.

3.2. Meters of Asia

A number of unrelated Asian languages adopt the classical Chinese form of having lines with five and seven syllables. This is found in Vietnamese *bát cú* and *tú tuyêt* meter (e.g., Balaban 2000), in Japanese *haiku* and *tanka* (Gilbert & Yuneoka 2000, Kozasa 2000), and of course in much Chinese poetry (Chen 1979, Yip 1980, Duanmu 2004). Lines with three or five syllables cannot break neatly

in half, of course, so the Law of the Caesura is immediately satisfied in such meters.

Japanese meter is especially good for seeing this because it actually involves an eight-mora line whose filled moras are restricted to five and seven. The moras in the text of a haiku, for instance, read 5-7-5 moras, but the poem is to be read as 8-8-8, with the extra moras (3-1-3) filled by silence (Gilbert & Yuneoka 2000 and Kozasa 2000). As Prince points out for Greek, the Law of the Caesura holds for *filled* metrical positions. So if haiku had all eight metrical positions filled, as below,

(14) An unmetrical line of Haiku with eight moras

ha na ko wa	to mo ko ga	Hanako(subj) Tomoko(obj)
μ μ μ μ	μ μ μ μ	

it would run the risk of breaking neatly in half. One way to impose an off-center caesura is to make an uneven number of filled moras, which makes weight-identical half-lines impossible, as we find in actual haikus:

(15) Haiku

za ʃi ki ro	o	Locked in my room
μ μ μ μ	μ μ μ μ	
ju me wa ku	ru wa o	my dream goes wandering
μ μ μ μ	μ μ μ μ	
ka ke me gu	ri	over brothels.
μ μ μ μ	μ μ μ μ	

This may be the reason why many Chinese-influenced meters have lines based on counts of five and seven: they are one way of keeping a line with an even number of metrical positions from splitting into weight-identical half-lines. These meters guarantee different half-lines within a line by having an odd number of filled metrical positions, having *less text* than the (filled) positions would otherwise demand.

3.3. English iambic tetrameter

The iambic tetrameter begun by the English Romantics avoids identical half-lines by having *more text* than the meter would otherwise demand, though in a less regular way than Asian meters. Consider the beginning of Frost's 'The Road Not Taken':

(16) Two roads diverged in a yellow wood,	**(.x) (.x) | (..x) (.x)**	**1**
And sorry I could not travel both	**(.x) (.x) | (..x) (.x)**	**2**
And be one traveler, long I stood	**(.x) (.x) (.| x) (.x)**	**3**
And looked down one as far as I could	**(.x) (.x) | (.x) (..x)**	**4**
To where it bent in the undergrowth;	**(.x) (.x) | (..x) (.x)**	**5**
Then took the other, as just as fair,	**(.x) (.x) (.|.x) (.x)**	**6**
And having perhaps the better claim,	**(.x) (..x) | (.x) (.x)**	**7**
Because it was grassy and wanted wear;	**(.x) (..x) (.|.x) (.x)**	**8**
Though as for that the passing there	**(.x) (.x) | (.x) (.x)**	***9**
Had worn them really about the same,	**(.x) (.x) (.|.x) (.x)**	**10**
And both that morning equally lay	**(.x) (.x) (.|x) (..x)**	**11**
In leaves no step had trodden black.	**(.x)|(.x) (.x) (.x)**	**12**
Oh, I kept the first for another day!	**(.|.x)(.x) (..x) (.x)**	**13**
Yet knowing how way leads on to way,	**(.x) (..x) | (.x) (.x)**	**14**
I doubted if I should ever come back.	**(.x) (..x) | (.x) (..x)**	***15**
I shall be telling this with a sigh	**(.x) (.x) (.|x) (..x)**	**16**
Somewhere ages and ages hence:	**(x.) (x.) | (.x) (.x)**	**17**
Two roads diverged in a wood, and I--	**(.x) (.x) | (..x) (.x)**	**18**
I took the one less traveled by,	**(.x) (.x) | (.x) (.x)**	***19**
And that has made all the difference.	**(.x) (.x) | (..x) (.x)**	**20**

We would expect eight syllables per line in tetrameter, but only five of these lines (underlined above) are such and only two, lines 9 and 19, have identical half-lines. Lines 3 and 12 are saved from half-line identity by off-center caesurae and line 17 is saved by a mix of trochaic and iambic feet. The remaining 15 lines all have extra syllables that make the adjacent half-lines different, except 15, which has identical half-lines despite its ten syllables. A larger corpus shows much the same thing:

(17) Stress patterns in 19th century English iambic tetrameter

%	English tetrameter
29.1	**(.x) (.x) (..x) (.x)**
23.0	**(.x) (.x) (.x) (.x)**
17.7	**(.x) (..x) (.x) (.x)**
10.4	**(.x) (..x) (..x) (.x)**
8.7	**(.x) (.x) (.x) (..x)**
3.5	**(.x) (.x) (..x) (..x)**
3.5	**(.x) (..x) (..x) (..x)**
4.1	**(.x) (..x) (.x) (..x)**

(Tarlinskaja 1993:74)

Almost three-fourths of the lines have more syllables than we would expect of iambic tetrameter. The most common type (29.1%) of line has an extra syllable in the third foot that makes the second half-line a little longer than the first. The second most common type of line has the four iambs we would expect (.x)(.x)(.x)(.x), but this accounts for less than a quarter of the lines written. The rest of the types have different half-lines within a line except for the last (4.1%). From the perspective of *Beowulf* it looks like the extra syllables in most of the lines serve to keep the line from breaking into identical halves. The avoidance here is only a strong trend (73%), unlike *Beowulf* where it is nearly exceptionless, but it shows that even in a fairly standard meter like this there is something awkward about rhythmically identical half-lines.

4. Conclusion

Fabb & Halle have recently claimed that 'One of the general principles of metrical poetry is that not all syllables are counted for metrical purposes' (2008, 159). I have argued here that some patterns can only be seen by looking at *all syllables in the text*. Specifically, I have tried to establish that the *Beowulf* poet rigorously avoids lines whose half-lines correspond in terms of stress and (probably) weight, counting *all* syllables in the text. Previous theories of this meter all require not counting certain syllables, so it looks like none of them is able to capture this statistically robust generalization

about the meter. Future work will have to determine whether the restriction found in *Beowulf* is also found in other Old English poems.

It is clear that *Beowulf* does not follow a simple rhythmic pattern of iambs or trochees or the like. Old English meter is not inherently rhythmic in this way. I have argued here that the genius of the meter lies in *never* repeating the same rhythm twice within a line. I have shown this for stress patterns and it seems to be true of weight patterns as well, though that awaits more rigorous confirmation. It seems then that *Beowulf* is a careful dance *around* conformity, avoiding the very thing that usually makes meter meter.

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