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All too often, linguists take the descriptive statements of philologists on trust, relying on them as the raw material for formal analysis with a view to arguing for or against some theoretical claim. The results are often of doubtful value, both empirically and conceptually (e.g. Idsardi 1994; cf. Hogg 2000: §3). In contrast, Minkova’s book (M) illustrates the proper relationship between linguistics and philology: in it, theory informs and guides philological research, posing new and ever more precise and challenging questions. In this vein, Minkova pays the highest possible compliment to her nineteenth-century forerunners by treating their tradition as alive, and its results as liable to be not only marginally added to, but radically revised and expanded. Minkova is fully aware of the challenges of this enterprise: “In an ideal polymathic world a historical phonologist would also be an expert archivist, paleographer, comparative philologist, cultural anthropologist, a sensitive reader of verse, and a cutting-edge theoretician” (M 69). Though she self-deprecatingly claims not to attain to this ideal, most of her readers will agree that no one working in English historical phonology today comes closer (see e.g. Fulk 2003: 348).

The book surveys approximately eight centuries of English alliterative verse, from the earliest Old English (OE) productions to the late Middle English (ME) revival. Minkova illuminates the linguistic basis of the poets’ alliterative practice and draws conclusions on a variety of phonological questions, such as the status of OE palatalized dorsals, and the behaviour and evolution of empty and complex onsets. Since the volume’s proposals have been perspicuously summarized by previous reviewers (specially Fulk 2003 and Laker 2003), my focus here will be on Minkova’s methodological contribution to historical research on the interface between phonology and metre.

This type of investigation typically involves the use of phonological reconstructions to support analyses of metre, and of analyses of metre to support phonological reconstructions. Minkova insists that, in all such cases, the premises of the argument must be carefully supported with evidence that is independent from the conclusion. Minkova shows that this can be achieved by drawing on a variety of sources: prosodic and metrical typology, nonmetrical evidence, etc. (M §2.6). Ever alive to the dangers of circularity, Minkova constantly refuses to jump to conclusions about phonology on the basis of metrical data, reminding us of the need to countenance the possibility of prosody/metre mismatches, and tellingly deploying comparative evidence to assess the limits of our knowledge. In §2.4.5, for example, Minkova delivers a masterclass in method in just eight and a half pages: discussing Duggan (1990), she endorses his tightly constrained analysis of the shape of the b-line in ME alliterative verse, which requires the first syllable of words such as maintain and construe to be allowed to be ictic; but she demonstrates that the metrical evidence does not warrant Duggan’s conclusion that the relevant words varied between trochaic and iambic pronunciations in the spoken language of the period.

More controversially, Minkova follows phonetically based versions of Optimality Theory (e.g. Hayes et al. 2004) in emphasizing the rôle of phonetic substance in constraining metre at the expense of abstract phonological structure. This is particularly apparent in her treatment of the Anglo-Frisian palatalization of Germanic (Gmc) */k/ and */y/ before front vowels, where she advances some of her more radical proposals (M ch. 3). Reversing the
order of Minkova’s discussion, I shall deal first with the reflexes of Gmc */#/j/, then with those of */k/.

Before c. AD 950, Anglo-Saxon *scops* allowed free alliteration among the nonpalatalized reflexes of Gmc */#/j/, the palatalized reflexes of Gmc */#/γ/, and the reflexes of Gmc */#/j/:  

(1)  

<table>
<thead>
<tr>
<th>Gmc</th>
<th>*#/j/</th>
<th>*#/γ/</th>
<th>*#/j/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early OE</td>
<td>[j]</td>
<td>[揠]</td>
<td>[γ]</td>
</tr>
</tbody>
</table>

‘young in (the) yards, whom God sent’

*Beo* 13 (cited in M 76, 113)  

After c. AD 950, however, two separate alliterating sets develop: the reflexes of Gmc */#/j/ and the palatalized reflexes of Gmc */#/γ/ continue to alliterate with each other, but no longer mix with the nonpalatalized reflexes of Gmc */#/γ/. Minkova accounts for these metrical facts as follows. The palatalized allophone of */#/γ/, initially *[γ]*, alliterated with the surface realization of */#/j/ through phonetic similarity. This formed a bridge for alliteration to cross the phonemic boundary between */#/γ/ and */#/j/, which were in contrast before etymologically back vowels: e.g. *geoc* ~ *jok* /ˈyoke/ < IE */#/juko/-, vs *gors*/*t* /ˈgorz/ /ˈgorze/ < IE */#/jors/- (M 116).  

During the tenth century, however, nonpalatalized */#/γ/ hardened to *[γ]* when initial in the prosodic word. This prompted a split among the word-initial reflexes of Gmc */#/γ/: the palatalized ones were reinterpreted as allophones of */#/j/; the nonpalatalized ones were reinterpreted as allophones of a new plosive phoneme */#/g/.

Linguistically, Minkova’s analysis is completely convincing. In particular, it adds to the weight of evidence against the claim that initial *[γ]* had already hardened to *[γ]* prehistorically (Lass & Anderson 1975: 134; cf. Hogg 1992: §7.17(1), §7.68). On the metrical side, however, I found myself wondering about Minkova’s explanation of the *scops’* alliterative practice. The key problem here is how to account for the ability of different phonemes to alliterate, as in */#/jong ~ */#/γ/od* in *Beo* 13.

An appeal to identity at a more abstract level than that of the phoneme seems doomed to failure. Consider, for example, how underlying representations were affected by the neutralization of the contrast between */#/j/ and */#/γ/ before front vowels. If one assumes archiphonemic or contrastive underspecification in the style of the Prague School (see Steriade 1995: 142), one will need to posit the three underlying voiced dorsal continuants shown in (2), where the feature geometry follows Clements & Hume (1995).

(2)  

<table>
<thead>
<tr>
<th></th>
<th>*/#/j/</th>
<th>*/#/γ/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral cavity</td>
<td>oral cavity</td>
<td>oral cavity</td>
</tr>
<tr>
<td>C-place</td>
<td>C-place</td>
<td>C-place</td>
</tr>
<tr>
<td>[coronal]</td>
<td>[dorsal]</td>
<td>[dorsal]</td>
</tr>
<tr>
<td>V-place</td>
<td>V-place</td>
<td>V-place</td>
</tr>
</tbody>
</table>

The archiphoneme */#/γ/ will occur before palatalization triggers, whereas */#/j/ and */#/γ/ contrast before nonpalatalizing vowels. Accordingly, *geong* in *Beo* 13 will have initial */#/j/; *geardum*, */#/γ/; and *God*, */#/γ/. Against this background, one might expect any two consonants to be able
to alliterate if they are underlyingly nondistinct. However, this seemingly plausible hypothesis makes the wrong predictions: it allows alliteration between /j/ and /T/, and between /T/ and /ɣ/, but not between /j/ and /ɣ/, contrary to fact. An explanation in terms of radical underspecification would fare even worse: if one assumed radical underspecification of coronals, for example, the underlying representation of /t/ would contain a subset of the features of underlying /k/, but /t/ and /k/ never alliterate with each other.

Minkova’s solution to this puzzle relies on a criterion of phonetic similarity: “The appeal to specific features, rather than to overall phonemic identity in alliteration should be made with utmost discretion […]; it will only be plausible if it can be defended phonetically” (M 116, my italics). In particular, Minkova proposes that the *scops*’ metrical system allowed alliteration between consonants differing with respect to (secondary) place, whereas the constraint demanding identity of manner was inviolable; in consequence, the hardening of word-initial [ɣ] inevitably triggered a change in alliterative practice. Crucially, these constraints are assumed to be grounded on —and projected from— relationships of phonetic similarity. In particular, Minkova adduces phonetic evidence to show that voice and manner features are perceptually more salient than place features (M 129).

Theoretically, Minkova’s appeal to phonetic similarity enjoys considerable support. For example, Steriade (2003) provides evidence from Romanian poetry to show that the acceptability of imperfect rhymes cannot be predicted by means of a simple count of mismatched distinctive features, but depends on the auditory salience of the phonetic differences between the two strings involved. Minkova puts the same idea to good effect in chapter 6, where she analyses the practice of optional cluster alliteration in fourteenth-century verse. She shows that onset clusters that do not contain salient perceptual discontinuities are more likely to alliterate with identical clusters, whereas onset clusters containing perceptually salient transitions are more likely to alliterate just on the first element. These results dovetail nicely with Fleischhacker’s (2001) findings concerning the relative resistance of consonant clusters to vowel epenthesis.

One wonders, however, whether the behaviour of dorsal consonants in OE metre is a phenomenon of the same nature as imperfect rhyme. Imperfect rhyme involves probabilistic deviation from a canonical norm defined by the system of phonological contrasts of the language. In OE poetry, in contrast, the well-formedness of /ʃ/~/ɣ/ alliteration until the mid-tenth century, and its ill-formedness thereafter, look like categorical phenomena. This would seem to invite an explanation in terms of phonological oppositions, rather than phonetic similarity.

From this viewpoint, let us consider how the hardening of word-initial nonpalatalized /ɣ/ may have affected the system of oppositions between dorsal consonants in the onset of strong syllables. In (3) I use contrastive hierarchies in the style of Dresher (2004) to represent the likely realignment of the system. I take particular note of the fact that, before the fortition of initial nonpalatalized /ɣ/, voicing was contrastive for OE continuants only in the dorsal region; fortition removed this asymmetry and confined voice oppositions to the plosives (Hogg 1992: §7.67, §7.68).1

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1 In late OE, [ɣ] remains only intervocically. Since [x] does not occur in that position, the only dorsal consonant with which [ɣ] contrasts is [k]. For our purposes, it does not matter whether native speakers reanalysed this opposition as one of continuancy rather than voicing, with medial [ɣ] perceived as a voiced allophone of /ʃ/. Hogg (1992: §7.64, §7.68) endorses this view, noting spellings such as <dahum> ‘day’ DAT.PL. alongside <dagum> (Bo 4.10.10). But the incidence of such spellings seems limited: even the *Peterborough Chronicle Continuations* have <dæis> alongside <dæges> (e.g. *Chron(E)* 1124.4, 1124.36), but not *<dahas>* alongside <dægas> (e.g. *Chron(E)* 1123.28, 1123.56).
(3) a. Before c. AD 950

\[
\begin{align*}
\text{C-place: [dorsal]} & \quad \left\{ \begin{array}{l}
\text{[–continuant]} \quad \underbrace{\text{–voice]} \quad /\mathrm{k}/ \\
\text{[+continuant]} \quad \underbrace{\text{[v–continuant]} \quad \text{V-place: [dorsal]} \quad /\gamma/} \\
\text{[+voice]} \quad \underbrace{\text{V-place: [coronal]} \quad /\mathrm{j}/}
\end{array} \right.
\end{align*}
\]

b. After c. AD 950

\[
\begin{align*}
\text{C-place: [dorsal]} & \quad \left\{ \begin{array}{l}
\text{[–continuant]} \quad \underbrace{\text{–voice]} \quad /\mathrm{k}/ \\
\text{[+continuant]} \quad \underbrace{\text{[v–continuant]} \quad \text{V-place: [dorsal]} \quad /\mathrm{g}/} \\
\text{[+voice]} \quad \underbrace{\text{/x/, /j/}}
\end{array} \right.
\end{align*}
\]

In this light, there seems to be a plausible structural alternative to Minkova’s reliance on phonetic similarity. Before fortition, the opposition between /\gamma/ and /\mathrm{j}/ depends solely on [coronal] vs [dorsal] V-place; but this distinction is not phonemic anywhere else in the system (though see the discussion of the palatalization of /\mathrm{k/} below) and, most importantly, it is subject to neutralization through the autosegmental spreading of [coronal] from neighbouring vowels. After fortition, however, a much more robust contrast between /\mathrm{g/} and /\mathrm{j/} develops, as the feature [continuant] is not subject to spreading, controls the opposition between /\mathrm{g/} and /\mathrm{x/}, and is involved in further phonemic distinctions in the labial and coronal areas: viz. /p, b/ vs /f, w/, and /t, d/ vs /\theta, s/. This approach may illuminate the development of Gmc */\mathrm{k/}, whose palatalized and nonpalatalized reflexes alliterated freely with each other throughout the OE period:

\[
\begin{align*}
\&/k/ \quad \text{Øþþ} \\
\&/k/ \quad \text{cynedōm} \quad \text{cīosan} \quad \text{wolde} \\
\text{or the.M.ACC.SG} \quad \text{kingdom} \quad \text{choose.INF} \quad \text{will.3SG.PST.SBJV.} \\
\text{‘or that he would assume the kingship’}
\end{align*}
\]

(4) *Beo 2376 (cited in M 73)*

Minkova argues persuasively that this phenomenon should not be dismissed as a metrical archaism. She therefore proposes the following explanation:

(i) The distinction between [k] and [\mathrm{k/}] remained allophonic until the eleventh century. Rounding inhibited palatalization before vowels fronted by i-umlaut. Their unrounding happened late, delaying the secondary split of [k] and [\mathrm{k/}].

(ii) The affrication of [\mathrm{k/}] to [\mathrm{t/}], which explains spellings such as <feccan> for /\mathrm{fet.jan/}, started in the coda and did not spread to onsets until the eleventh century.

In the light of (3), both assumptions may be unnecessarily strong. As noted in Fulk (2003: 351), Minkova concedes that until c. AD 950 the alliteration between /\gamma/ and /\mathrm{j/} crosses a phonemic boundary. By parity of reasoning, a limited secondary split between /\mathrm{k/} and /\mathrm{k/}
should not automatically block alliteration; what matters, rather, is the active feature in the new opposition. Note, in this connection, that the unrounding of /ø/ begins already in OE and precedes that of /y/: see e.g. Campbell (1959: §198, §§316-17). Similarly, native speakers may have continued to categorize /k/ as [dorsal] even after its phonetic realization became acoustically close to that of /t j/, with this [dorsal] categorization crucially underpinning alliteration with /k/. In this respect, Laker (2003) disagrees with Minkova’s proposal that affrication began in the coda, suggesting that the opposite pattern holds in Old Frisian and Low German.

These caveats do not in any way detract from the magnificent achievement of Minkova’s volume, which, among many descriptive and theoretical contributions, provides valuable new evidence for the debate surrounding the phonetic grounding of sound patterns. Indeed, it is in the nature of such a rich work to stimulate further thought and debate. The book should be compulsory reading for anyone interested in OE and ME, on the theory of metre, or on the empirical foundations and methods of diachronic phonology. The author hints that a further volume on the rôle on vowel length, syllable weight, and stress in early English verse may be in the offing (M xv); we await its appearance with the most eager anticipation.