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A brief memoir of the littera and its far-reaching consequences

John M. Anderson

Methoni Messinias, Greece

ABSTRACT

The most persistent misinterpretation of linguistic structure is embodied in the employment of the concept ‘littera’, which has been widespread for many centuries, particularly among language historians – though carefully avoided by Weřna (1978, 1987), for instance. A comparably influential misconception has waited till recently for the introduction of the *-eme*, followed by the more drastic ‘transformation’ and ‘systematic phoneme’ and their consequences; and their adoptions were comparatively short-lived. However, (positive and negative) concern with the latter concepts has obscured for many researchers the persistence of the earlier prominence of the littera, which has recently been maintained, often with no acknowledgment (or awareness?), only among a traditionalist body of philologists, such as Ringe (2006) or Lass – Laing (2012) (if we ignore, as is usually advisable as concerns language, some recently fashionable French ‘philosophers/littérateurs’). Here I offer some possible remedies for the phonological aberrations that this history has encouraged, directly or indirectly.^{1*}

Keywords: littera, componentiality, contrast, neutralization, prosody.

It seems that from a very early time in the study of language in Europe, the status of the sounds of language were conceived of as secondary to the graphs of written language. This reverses the priority implied by the modern usage of associating the primary expression of ‘language’ with ‘sounds’ vs. secondary use of ‘written language’ in the form of ‘graphs’: the contrastive sound has ontological priority in language. But the earlier

¹ * I am very grateful to Fran Colman in providing access to her superior scholarship in the material that is addressed here, and for her comments on the present paper.

reversed priority is unsurprising, given that expression, transmission, and preservation of any explicitly formulated study of language, particularly in the absence of sound recording or a standard oral tradition, presupposes a written language as its vehicle. Etymologically, ‘grammar’ (γραμματική (τέχνη)) is the study of one’s letters (γράμματα), generalized to include written language as a whole. Indeed, as Robins (1951: 39), for instance, recounts, the Alexandrian grammarian Dionysius Thrax regarded grammar as not a τέχνη (‘art’, ‘discipline’, even ‘science’) but an εμπειρία (‘practical accomplishment’, ‘experience (in)’), associated with basic education in literacy and with the preservation of literature as a model. His grammar thus begins with the study of the (in modern linguistic usage) strange bed-fellows ‘letters’ and ‘syllables’.

Latin grammarians distinguished the components, or ‘accidents’, of the letter, *littera*, as *figura* (‘written shape’), *potestas* (‘spoken value’), and *nomen* (‘name’ – e.g. in describing Greek *alpha*, *beta*, etc.), equivalent to the Stoics’ χαρακτήρ τοῦ στοιχείου, στοιχείον, and ὄνομα as the three aspects of the γράμμα. The equivalent of *littera* for syllables was taken to be a three-part syllaba, with again *figura*, *potestas*, *nomen*. But the set of these would largely duplicate the contents of sets of *litterae*, particularly the values. Nevertheless, the bed-fellows have for centuries lain undisturbed, despite the recognition of syllabaries, not to mention the misleadingly named ideograms. For a more extensive discussion of this history and further references see Munzi (2016).

From the perpetuation of the above Latin terminology there arises the ambiguity concerning whether ‘letter’ and its equivalents in other languages denote this collection of components or just the *figura*, the distinctive letter-shape, or the *potestas*, the sound. The ambiguity is illustrated by Lass’ (2014: Appendix, p. 57) citation of Donatus’ view of the *littera*, in his own brief defence of the *littera* as a member of a ‘universal phonetic alphabet’: ‘Donatus (*Opus minor*, I) defines *littera* as “pars minimis [sic Lass, sc. “minima”] vocis articulatae” (the minimal unit of articulate sound), and then assigns the three accidents above to a *littera*; ...’ However, the *littera* cannot be characterized in both ways – the minimal part of a spoken word and an entity combining sound and writing – without introducing ambiguity (see further Anderson 2014: §1). In classical grammars, only sporadic attempts over time were made to acknowledge the ambiguity and remove it. As Abercrombie (1965: 78) points out, ‘Priscian was one of those who distinguished *litterae* and *elementa* (“minimal units of a word’s sound”), though Priscian draws attention to confusion in their use (and was by no means consistent himself)’.

It is, I confess, less than satisfactory on my part to isolate the *littera* from the rest of the Greco-Roman tradition of studying language, wherein *figura* is also applied to other linguistic units; and *vox* ('voice') appears as either *vox articulata/significata* 'sound with meaning' (roughly 'phonetic form of a word') or *vox inarticulata* (sound alone). Padley (1976: 33) comments on the *vox articulata*: '<i>n Priscian's system ... it is only in construction with other voces in an utterance that a vox articulata achieves the status of a dictio ('sign'), which attains its full meaning only by virtue of its relationship to other dictiones in a linguistic structure'. The *dictio* is a *pars minima orationis constructae*. But I judge and hope that this focusing of mine does not undermine understanding of the pervasive tradition of *littera*, particularly of the ambiguity that arises in (Lass' [2014] gloss to) Donatus' definition.

An alphabet of *litterae* may be developed into a 'universal phonetic alphabet' (as Lass [2014] envisages), as indeed with the modern IPA symbols, rather than simply an alphabet of each *pars minima vocis articulatae* of a particular language: an alphabet that is freed from any concern with the sign (*dictio*) as differentiating contrasts of a particular language. But an 'alphabet' in this sense remains a transcription: it provides (in an interpretation allowed by its etymology) the written equivalents of sound-types, but it is not a characterization of speech sounds, either universal or language-particular. Nor, given the usual alphabet-based orthographic commitment to non-compositionality and monosystemicity – a *figura* has only one potestas and vice versa – does it constitute a description of the phonological system of a language. Adoption of an alphabetic writing-system does not provide a reconstruction of the phonology of a language, whether, at the period concerned, the language is written or unwritten. A writing system and its conventions, particularly if applied to various languages, may be one source of potential evidence in reconstructing languages of the past, but that is all. And it does not express the phonological structure of a current language.

Unfortunately, after the above classical developments, inertia sets in in this area for centuries. 'Universal phonetic alphabets' were slow to develop, though awareness of phonetic distinctions and classes has ancient roots. Rather, the Latin alphabet came to be applied, with adaptations, to the vernaculars of Europe, and eventually to 'more exotic' languages. And even the renaissance humanists consistently maintained the ambiguous *littera*, however much they simplified (not always helpfully) other medieval conceptions based on the Greco-Latin tradition. An attempt to revive the *elementum/lit(t)era* distinction was made by the humanist Despautarius

(Padley 1976: 31): *littera scribitur; elementum profertur* ['a/the letter is written; a/the element is pronounced']. But this had little effect.

In the 16th century there began to develop a serious interest in describing the sounds of speech and in spelling reform, and this came to full fruition in the centuries that followed. However, even in this tradition, (to coin a phrase) 'old habits die hard'. Thus, such a leading figure in these developments as Wallis begins his 'Introductory Treatise on Speech' (included and translated in Kemp's [1972: 129] edition) with the subtitle 'Of the Formation and True Sound of all the Letters', and begins the text with the traditional formulation: 'It is common knowledge that words joined together make sentences, syllables joined together make words, and letters joined together make syllables'.

Kemp comments on Wallis's usage as concerns *lit(t)era* as follows (1972: 63):

Wallis recognizes the ambiguity of meaning of *littera* as either 'sound' or 'symbol', and for the most part succeeds in avoiding the pitfalls into which confusion of these two meanings had led many of his contemporaries. On the whole he seems to use *littera* to signify one of the phonemes of a language having a distinctive symbol associated with it; phonetically similar phonemes in different languages, although their symbols may differ, e.g. *P* and Greek Π, are the same *littera*. In describing vowels he seems to avoid using *littera*, perhaps because particular symbols, such as A E I O U, are more ambiguous in their realization as sounds than are the consonant symbols. In some instances he is certainly using *littera* to mean written syllables. However, ... where the discussion is specifically concerned with the confusion of symbols, he uses *characterem litterae z* (the symbol for letter z).

There is enough ambiguity and uncertainty here not to deter philologists from maintaining the different Latin and medieval traditions concerning the letter.

There was widespread exploitation in the 19th century of the intersecting 'series' of litterae that were associated with the 'shifts' that were identified as having differentiated various (sets of) Indo-European languages, such as 'Rask-Grimm's Law', or 'Verner's Law'. These concerns did not serve to dislodge the littera from its basic status. There was, however, the renewed explicit recognition that litterae were grouped in classes, 'series'. It was a

series whose members underwent 'shifts'. Such a 'series' might be labelled as 'voiceless fricatives', described by their common mode of production. Its members are in an associative, 'paradigmatic' relation, and potentially contrastive.

But there was no recognition that there are more basic elements whose presence in different sequential units, unexpressed in the figurae, is fundamental to the phonological expression of the 'series', and thus the formulation of such 'shifts'. The labels for the 'series' are more fundamental than the members, which are each simply a bundle of such phonic properties as mode or place of articulation. There is a need for the introduction of sub-segmental components that define a 'series' and other dimensions that are associated with the phonology of litterae.

However, the formulation of 'shifts', which differentiate (groups of) languages which otherwise show similarities suggestive of relatedness went some way towards the identification of the likely contrastive sounds of unwritten 'parent' languages, such as, ultimately, Proto-Indo-European (for a succinct and lucid account of the traditional view of major developments, see Lass 1994: Part 1). The identification and formulation of relatedness, language families, and their 'parents' are, of course, well known as a major contribution of the 19th century study of languages – though there has been a renewal of interest in the Indo-European area since the late 20th century. But it is in the representation of these 'traditional' reconstructions of unwritten 'parents' that the crucial ambiguity of the littera becomes salient.

Reconstructed representations of these unwritten languages have employed the same litterae as were applied to written, or historical, languages. But the former representations are surely not a reconstruction of the litterae of unwritten languages! Then they are simply the nomina of elementa only; they serve to identify elementa. The attempts to differentiate the pre-historic representations by (non-)italicization or by preceding them with an asterisk constitute an admission that they are not composed of littera but are names for suggested different phonological segmental units. But often in philological work there has been no notational distinction made between the representations of 'written' and 'reconstructed' littera. For example, in talking about the phonology of Old English, Wright & Wright (1923) give emboldened graphs for the letters (plus diacritics) used to write both a standardized Old English and for 'the primitive Germanic equivalents of the Indo-Germanic vowel system' (title of ch. II, p.12); glosses in modern English are in italics. This suggests we should differentiate more saliently

the littera from the reconstructed phonological unit – and, for that matter, when dealing with written languages also.

At the same time, we need to recognize the secondary status of the segment as a phonological unit by the introduction of potentially contrast-bearing components of the segment, *elementa* proper, i.e. features of some sort, whose domain is not necessarily limited to the segment. However, componentiality and the possible extension of ‘features’ to non-minimal domains (i.e. prosodic status in the sense of Firth and his colleagues) was slow to enter even the ‘mainstream’ of the structuralism that developed in the 20th century. This necessarily brings us back to concerns with the influence of the ‘segmental’ littera, our main object of interest.

The major development in the first half of that century, in terms of attention-demanding, was the introduction of the phoneme. This appeared to recognize the independence of phonology, by introducing a notation distinct from any written alphabet that might have been devised for a language. But it still provides only a transcription, and so still carries some of the baggage associated with an alphabetic orthography (see again Anderson 2014: §2). He points out that this is evident from the influential ‘Phonemic Principle’ of Swadesh (1934/1958), in particular the assumption of monosystemicity, carried over from the littera-based requirement that the relation between *figura* and *potestas* is bi-unique.

One of Swadesh’s ‘criteria’ for establishing the phonemes of a language, no. 4, ‘complementary distribution’, stipulates that ‘<i>f the distribution of one type of sound is complementary to that of more than one other, it is to be identified with one rather than the other if there is a more definite phonetic similarity in that direction’ (Swadesh [1934/1958: 3])). He goes on: ‘an example is the p of English *speech* whose distribution is complementary to that of the voiced labial b as well as to that of the voiceless labial stop sounds of *peak*, *keep*, *happen*, but goes with the latter rather than the former because of ‘the phonetic similarity’. In the first place, the claimed ‘phonetic similarity’ is not at all evident (to ears unprejudiced by the spelling), and is certainly not confirmed by subsequent instrumental work. And this indecisiveness is often the case in such situations; but we have neutralization of a contrast whichever of these implementations is involved: voiced versus aspirated.

There are problems in applying this ‘criterion’ of Swadesh’s, then. Even more importantly, making such a choice disguises the phonological status of the plosives following the initial sibilant in words like *speech*. We return to the observation that such a plosive is not in contrast with either of the pair of plosives with the same ‘place’ value that we find elsewhere.

There is a different system operative at this position, following the sibilant spelled <s>, as in *speech* and *asp*, and in foot-medial *aspect*, where the first plosive is ambisyllabic.

In the sometimes cited ‘counter-example’ of the phonology of the *sb* sequence in *asbestos* there is variable voicing of the sibilant. But, crucially, the foot division comes between the first sibilant and the following plosive; here the plosive is foot-initial, whereas the neutralization of plosives occurs after the sibilant that shares its syllable, in onset or coda, as in the second sibilant+plosive sequence in *asbestos*, again with ambisyllabic plosive. The sequence traditionally transcribed as [zb], as in *asbestos* or *frisbee*, can serve as neither an onset or a coda in English: a phonological boundary comes between the segments, and the sequence itself occurs neither word-initially nor word-finally.

The sibilant that precedes these neutralized plosives in such an example as *speech* is also a neutralized segment, indeed an even more striking one: in this position it contrasts only with its absence, even though it is very similar in implementation to other, but more generally contrastive, occurrences of such a voiceless fricative. And in the phonology of the form *asp* the sibilant participates in other neutralizations: cf. *alp*, *harp* (if rhotic).

‘The criterion of complementary distribution’ makes it impossible to give recognition to this evidence of polysystemicity: a choice of plosive must be made if the criterion is to be satisfied. This derives from assumed bi-uniqueness of the relation between phone and phoneme, parallel to the relation between potestas and figura: the phone that does not contrast with either of the two phones found elsewhere must be grouped with one of them; in the orthography, a particular potestas has to be grouped with one of two potestates and associated with its figura in order to ensure bi-uniqueness, as in the spelling of English *spit* etc. This conceals a lack of contrast, a neutralization.

The similarity between phoneme and figura is not surprising. Swadesh (1934/ 1958: 35) declares (page references to the Joos version, here and elsewhere if relevant): ‘<a> phonemic orthography provides the most adequate, economical, and effective method of writing’; and again ‘<i>f the writing is entirely in keeping with the phonemics of the language, a mechanical substitution of values of the signs will reproduce the recorded forms correctly and economically’. So that: ‘<e>ven in the problem of phonemics itself, orthography is a valuable technique.’

On the other hand, Twaddell (1935/1958: 76), in (correctly) predicting the negative reaction to his essentially polysystemic concept of the ‘phoneme’,

admits: 'The relatively large number of such phonemes in a given language will doubtless appear unfortunate to some linguists.' But he contrasts his own view that 'the phoneme is a unit defined for a convenient description of phonological relations' with the then standard view of the phoneme:

For many linguists, it appears, the phoneme functions as a unit to be represented by a symbol in so-called phonetic transcriptions. It appears that the unit these linguists require cannot sufficiently take into account either phonological or phonetic facts: it would clarify the issue if these units might be called "graphemes", "transcribemes", or even "letters". For I know of no earlier phoneme-definition which does not achieve transcriptional sanctions by violence to essential phonological relations and palpable phonetic fact.

The appeal to symbol economy by Swadesh and others betrays the orthographic principles that are attributed to the transcription of the phonemes they propose. So it is again not at all surprising that Pike should subtitle his book on *Phonemics* (1943) with the oft-quoted *A Technique for Reducing Languages to Writing*.

Bizarrely, Hockett (1942/1958: §7) dismisses even Twaddell's position on such phenomena as are illustrated by the distribution in English of the segments in [#sp] etc. commented on above; and Hockett declares (p. 101) that 'The simple statement of distribution' [in conventional phonemic terms] 'gives the facts without any complications; any talk of neutralization or cancellation or archiphonemes confuses the facts without adding anything'. But 'neutralization' is in such terms a 'fact', one obscured by the 'complications' resulting from the imposition of conventional phonemic requirements.

On the contrary, what is missing from Twaddell's account is recognition of phonological componentiality, 'features', which not only allows explicit formulation of the neutralizations he describes, but also resolves the 'economy' problem (for what it's worth): the distinctive components/features associated with a phonology are more economical than Swadeshian phonemes. And diachronic 'sound shifts' are optimally formulated in terms of them. Such components also provide for the explicit formulation of relations between the participants in appropriate 'allophony', or 'polysystemic contrasts'. Consider *pit* and *tip*, where the plosives belong to two different sets of contrasts associated with either the onset or coda positions.

Despite early rejections (particularly in North America) and the lack of componentiality, Twaddell's position was quite widely adopted instead of or along with the developments in ideas of the littera, the latter of which I shall look at below. Some of this pattern is illustrated by contributions to Rissanen, Matti – Ossi Ihalainen – Terttu Nevalainen – Irma Taavitsainen (eds.) (1992). And Davidsen-Nielsen (1978) documents the development of interest in neutralization and archiphonemes.

Unfortunately, when the componentiality, or compositionality, of European structuralists was adopted in 'generative phonology', the framework (as in the key work of Chomsky – Halle [1968]) had lost any interest in phonological contrast proper in favour of 'morphophonological contrast' (involving the so-called 'systematic phoneme'), which renders it, in its various manifestations, unsuitable for pre-present-day phonological reconstruction, as well as for characterizing synchronic phonology (see Anderson 2014: §3).

If the goal of phonological representation is to identify those elements of sound at particular positions that differentiate between lexical-items/signs (while allowing for some homonymy), and are thus contrastive, this is lost in the 'generative' tradition. This goal requires that we recognize the possibility of neutralization of a contrast in particular positions, and of contrastive prosodic elements (again in the sense of Firth [e.g. 1948]) which are associated not with a particular segment (or minimal sequential unit) but with a higher unit in representation, phonological or morphological or with a word-form or base (as in some so-called 'vowel-harmonies').

A rather different tradition concerning the littera from those we have looked at developed around the turn of the millennium. In various publications, including Benskin (1990, 1997, 2001) and Lass – Laing (2012), a tradition that ignores the problems concerning the littera identified in preceding centuries in favour of a differently obscure alternative. The last of the above publications, for instance, provides a rather different account of 'littera' in the description of their terminology (Lass – Laing 2012: 76, n.7).

We use the terminology of the medieval theory of *littera* [why 'medieval'? and which 'theory'? – JMA]. The conventions (established by Michael Benskin 1997: 91, n.1 and 2001:194, n.4), are as follows. *Littera* is the abstract or superordinate [=? – JMA] notion of the letter, and (when referred to independently of manuscript citation), *littera* are enclosed in single inverted commas. *Figura* is the shape of a *littera*. Manuscript *figurae* are here enclosed in angle brackets or are italicised

when combined as single words or longer. *Potestates* are sound values and represented by IPA symbols in phonetic brackets [= ? so-called 'broad transcription' – JMA]. As an additional convention, glosses and names of lexical categories are in small capitals. Etymological categories [= ? – JMA] and citations are in italics.

Unfortunately, the characterization of the 'Littera' here remains obscure [as well as of doubtful inflected number, apparently – JMA]: 'Littera is the ABSTRACT or SUPERORDINATE NOTION of the letter' [the capitals are mine – JMA]. What does this 'definition' of the littera mean???) Things don't improve as this account progresses in pp.76-7: '...the label ('label' [= ? – JMA] "æ̃" attached [= ? – JMA]) to a form does not make a hard claim [= ? – JMA] to the effect that it had nuclear [æ̃] in West Saxon or [e:] in non-West-Saxon dialects of Old English...It is rather a class identifier indicating a certain configuration [? – JMA] traceable in the discourse [= ? – JMA] of English etymological history [??? – JMA]. Why is there little attempt to justify and clarify the 'sound values', whatever their status? And if they do not express contrasts, why not? More generally, this reader would welcome a translation of the suggested 'terminologies' into the familiar terms and conventions available to contemporary students of language – though I suspect that that would not render the resulting analyses any less tedious and their status any less doubtful.

Benskin's (1990: 164, n. 5) short 'explication' is more transparent, but appeal to the littera is not well motivated: 'Angle brackets < > enclose written symbols, regardless of whether current theory would count them as graphemes: they are the *figurae* of classical and medieval tradition, in – to borrow a term from the phoneticians – broad transcription. Inverted commas enclose *litterae*'. Avoidance of the use of 'grapheme' is highlighted: O.K., but, as the 20th century at least revealed, appeal to any -eme is generally undesirable in the description of language (though familiar in another vague sense to social-media enthusiasts). An appeal to 'broad transcription' – 'borrowed' from 'the phoneticians' – remains as obscure and arbitrary as in phonetics. And this is not clarified by Benskin (1997: 91, n.1), which gives a brief account of a familiar understanding of the littera and its 'accidents' and an obscure explanation of his own use of angle brackets.

This recent tradition throws very little light on the main traditions, favourable or critical, concerning the linguistic status of the littera, or, indeed, of these writers' own 'terminology'. It is not clear, for instance, why we need the 'abstract or superordinate notion of the letter' rather than simply 'littera/

letter'. It bears very little in common with the recent work of etymologists such as Durkin (2009). But it reverts to the classical primacy of the graphic accident of the littera, and adopts the recognition of the gradualness of adoption of words and their sound and spelling, familiar from Weinreich – Labov – Herzog (1968), Toon (1983), and others. The character of phonology and its ontological priority is neither clarified nor even acknowledged, nor is componentiality, contrastivity, neutralization, or prosodic status, and their relation to the proposed 'terminology', whatever its status might be.

As one recent example of componentiality within a framework that assumes phonological (as well as morphophonological) contrast as basic (though such ideas have some history), we can consider the **C** and **V** components/features/elements of 'dependency phonology' (an illustration selected at random, of course); for recent presentations and references, see e.g. Anderson (2011: vol. III, and 2022: particularly chs. 1–2, 6, 11–13, 27–8, and 42). **C** identifies a perceptual property that is associated with all consonants; different major kinds of consonant involve different kinds of combination (including non-combination and asymmetric combinations) with the element **V**, which, when not in any combination, identifies the perceptual property characterizing vowels. These elements are names, nomina, of a 'potestas' that is subsegmental or suprasegmental; they are not part of an orthographic alphabet, but part of an onomasticon of metalinguistic names for properties of our perception of speech sounds. These properties are often described indirectly, in terms of the articulations that have the acoustic effects that can also be used to describe these perceptions, since the major evidence for the perceptual properties is their role in (morpho)phonological structures and the implementation of these in articulation and recognition.

Combinations of **C** and **V** provide the necessary cross-classificatory capacity lacking with litterae; and different ways of viewing the combinations that characterize various hierarchies, including relative sonority; combinations can also indicate degree of intrinsic (rather than positional) markedness by their relative complexity so that voiceless stops (**C** alone), being the least marked consonants, are maximally different from vowels (no **C**); and the prototypical syllable is {**C**} + {**V**}, where {**C**} and {**V**} within braces are units composed of, respectively, only **C** and only **V**. Any {**V**} is the prototypical exposed peak of the syllable pulse on whose margins consonants are formed. Fricative and sonorant consonants show combination with **V**, but in different proportions. With the former, represented {**C**;**V**}, **C** is predominant; with the latter, {**V**;**C**}, **V** is dominant over **C**. {**C**}, {**C**;**V**}, {**V**;**C**} are progressively more {**V**}-like, more sonorant. With voiced units/

segments $\{v\}$ is present: this is a secondary feature that is prototypically redundant with $\{V\}$ and $\{V;C\}$, but representable (redundantly) as $\{V\{v\}\}$ and $\{V;C\{v\}\}$; and the secondary features have a lesser role than the primary in determining the sequencing of segments within the syllable. ‘Place of articulation’ differences belong here, as articulatory implementations of secondary features, also. As well as componentiality, there is thus a componential hierarchy, based on phonological salience, e.g. in contribution to sonority ranking and syllable structure.

In the (by now familiar, I would have thought) case of *spin*, *bin*, and *pin*, the plosives in the latter two are in contrast. If we ignore their shared ‘place’, in *bin* the (bilabial) plosive can be represented as $\{C\{v\}\}$, voiced, in *pin* as $\{C\{c;v\}\}$, aspirated. The plosive in *spin* does not participate in this contrast; but is characterized only as the bilabial plosive that follows, in the present case, initial [s]. Generalizing again over the plosives occurring in this environment, we might represent this, roughly, as $\#<[s]>\{C<v>\}$, where the two entities within angle brackets are incompatible; unbracketed v includes both voice and aspiration as absent in this context. This distinction is absent from the subsystem associated with this particular environment (and at other initial non-foot boundaries as well as from the word-initial $\#$); by occurring instead of the major system that we find elsewhere, where there is a voice contrast and other (sometimes more salient) differences between the two plosives, its presence illustrates polysystemicity. In principle, the realization of the neutralized plosive in this environment could be implemented in the same way as one of the initial plosives in *bin/pin*, or alternating between the two or, as in this case, unlike either.

We should note too that what we have represented, in transcription, as [s] also realizes a neutralization in this environment; here it is in contrast with no other consonant. We might represent this phonologically as $\#<C>\{C<v>\}$, where, as we’ve indicated above, (unbraced) v lacks voicing or aspiration, and here the unbraced C at the beginning characterizes presence of any consonant; and the backwards slanted line indicates that the first segment is dependent on the following. (I assume that in consonant clusters the more sonorant is dependent, as argued in the sources cited above.) Again, of course, the contents of the pairs of angle brackets are incompatible. We have another minor subsystem, contrasting this consonant with its absence. It is not relevant to phonological contrast that the phonetic realization/implementation of the C here coincides with or is very like that of other consonants (typically spelled *s* or *ss* or *ce* or *sc*) found in other subsystems of English. Such a voiceless sibilant can be said to be polysystemic; it appears

in more than one subsystem, unlike the plosives following such a syllable-initial.

The representations I have suggested here are, obviously, incomplete and merely illustrative (but I hope not misleading), in the absence of a full treatment of a phonological system. And there may well be other particular frameworks of phonological representation that satisfy the requirements I've invoked here concerning contrast, componentiality, neutralization, and prosodic scope. But I confess that what I have just outlined may not, as such, accommodate the phonological contribution to whatever it is that Benskin and Lass and Laing have in mind, whatever it might be, particularly the role of the littera therein.

A number of modern languages have preserved the semantic distinction between what becomes *letter* in English and the descendant of the Latin collective *littera* we find in *letters* (=‘literature’) and in analogues to other collections of paper things, such as ‘documents’. Wallis Chapter XIV (edited by Kemp) includes an exemplification of *Etymologia*, another much borrowed ‘technical term’, examples of which, in the 5th edition of the grammar, are divided into two well-filled sections. In his translation Chapter [28] Kemp provides examples in English divided into the two sections:

Section I. Regular word formation

Section II. Remoter derivations

Examples include:

I. *you/your, they/they're, joy/joyful, top/tip, swallow/swill, -wick/bailywick*

...

II. *beat/bat/battle/batter, twig/twitch/twinge/, sniff/snuffle/snarl ...*

Kemp comments on such as these last that Wallis ‘tries to find common meanings in consonant clusters’, such that the last set reproduced here are associated with ‘nose’. And it not inappropriate that the treatment of etymology should lead on to poetry (translated on p. [29]).

Not unusually, too, the focus in all of these derivations is not on history, as such, but on one-off derivations: a temporal sequence of such is ‘historical etymology’. Perhaps use of *littera*, unlike later *littera* expansions, should have followed this example, with recognition and introduction of ‘phrasal littera’. However, though sometimes it is acknowledged that traditionally

etymology is only secondarily historical, how could anyone sufficiently apologize for the modern obscurantist mutilations of the littera?

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Address: JOHN M. ANDERSON, PO Box 348, Methoni Messinias, 24006 Greece.

ORCID code: orcid.org/0000-0002-4746-9426.