

The nature of allomorphy: The Burushaski evidence

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A widely held view amongst practitioners of Optimality Theory is that the distribution of suppletive allomorphs may be seen as falling out from markedness constraints. There is a significant residue of cases, however, where appeal to markedness fails to make the right (or any) prediction with respect to the choice of allomorph (Paster 2005, Bye 2006). In these cases at least, the choice of allomorph would appear to have to be specified directly in the lexicon in terms of subcategorization frames. The same is quite possibly true even in cases where the distribution happens to fall along natural lines. The idea that phonological regularities may be encoded directly into the lexicon may seem to resonate well with the central claim of Evolutionary Phonology (Blevins 2004), that cross-linguistic regularities emerge during language transmission, and for that reason need not be assumed to reflect knowledge of phonetics or ‘inherent typology’. Because substantive considerations of naturalness are assumed to lie outside the grammar, there is room for the evolution of arbitrary rules, e.g. through telescoping. The purpose of this paper, however, is *not* to argue Evolutionary Phonology’s superiority to approaches like OT, conceptual or empirical. My starting point is to accept that natural languages have both phonetically grounded constraints (by and large universal) and (potentially) productive, yet arbitrary, language-particular constraints crystallized over a static lexicon (cf. Kiparsky 2005). This paper contains a proposal for a sensible division of labour between the two that preserves valuable insights from both perspectives.

This is pursued through a detailed account of the morphology of noun pluralization in Burushaski, a language isolate of the Karakoram of North Pakistan with an unusually rich system of allomorphy (Berger 1974; Morin and Tiffou 1989). The Burushaski system will be shown to be key to understanding the essence of allomorphy in at five respects.

1. Subcategorization. Burushaski provides robust support for phonological subcategorization, in particular syllable counting allomorphy as discussed by Paster. In Burushaski, however, the system is more richly articulated than any of the cases discussed to date. For example, the default plural suffix for animate consonant-final stems is *-išu*. Polysyllabic stems ending in *s* or *n*, however, take the ending *-yu*. Monosyllabic consonant-final stems are also singled out by means of special suffixes: *-ašku*, if the stem ends in a nasal, and *-anc* otherwise. What is interesting is that these generalizations are productive, yet there is no connection between the shape of the allomorph and its distribution.

2. Productivity. There is no conflict between the productivity of a pattern and its encoding in the lexicon. In addition to the productive phonologically subcategorizing suffixes listed above, Burushaski has several plural suffixes that only attach to listed lexical items with specified phonological properties (such as monosyllabicity).

3. Opacity. Burushaski also provides examples of opaque allomorph selection, which reinforces the claim that allomorph choice is arbitrary. The default plural suffix for animate vowel-final stems is *-mu*. Stems that end in a retroflex sibilant *ʂ* take the suffix *-ha*. On adding this suffix, however, the *ʂ* deletes due to constraints on possible consonant clusters, leaving what appears to be a vowel-final stem. Polysyllabic stems in *n* illustrate

the same point. As pointed out in (1), these take *-yu*, but the stem-final *n* does not surface, leaving a vowel-final stem on the surface.

4. Context. Phonological environment is only one of the factors that influence allomorph selection. One other factor is semantic field. For example, nouns referring to relatives in one's age set and older are singled out for special morphological treatment in the plural. Nouns referring to individuals that should only be approached with circumspection (royalty, supernatural beings, saints, outcasts) are also assigned their own unique allomorph of the plural. These semantic fields are not otherwise in evidence in the grammar of Burushaski. Morphosyntactic conditioning (by gender) is also evident, e.g. all inanimate nouns take *-ŋ*.

5. Profiligacy. One of the most puzzling aspects of Burushaski pluralization is its profiligacy. An areal feature of the languages of the Himalayas is 'multiple exponence' or 'coaffixation': certain categories may be marked by more than one identifiable suffix, e.g. inanimate nouns with a final *ʃ* take *-ha-ŋ*, both elements of which occur independently as plural suffixes. Listed lexical items may mark the plural up to three times. An understanding of profiligacy casts interesting light on the nature of allomorphy.

Using Koenig and Jurafsky's theory of the type-underspecified hierarchical lexicon (TUHL; Koenig & Jurafsky 1995; Koenig 1999), I will give an account of the distribution of the allomorph of plurality in Burushaski based on a corpus of over 1000 plural forms. According to this view, the lexicon is a richly articulated network of types encoding both productive and non-productive language-particular regularities. Type underspecification is crucial in licensing productivity. (Inflectional) affixes are conceived here as chunks of phonological material without an associated syntax or semantics. They are not 'signs' and thus no different to 'zero morphs' or 'stem augments'. They are simply garments donned by lexemes for different morphosyntactic occasions. Their insertion is governed by morpholexical selection constraints of the form 'Type T selects Affix A'. Abstract types (specified in terms of plurality, semantic field, gender, and phonological shape) are predicated as selecting a particular phonological chunk. Generally, a lexeme may belong to more than one abstract type. In this case, the types are either comparable (one is include in the other) or non-comparable (overlapping). For example, the types 'consonant-final plural noun' and 'consonant-final *n*-final plural noun' are comparable, whereas the types 'retroflex sibilant-final plural noun' and 'inanimate plural noun' are non-comparable. If the types are comparable, the relevant morpholexical selection constraints conflict, and the conflict must be resolved by appeal to the Elsewhere Principle. (Morpholexical constraints interact purely intrinsically.) In this case, affix selection is interpreted disjunctively (resulting in allomorphy). If the types are *non-comparable*, there is no conflict between the selection constraints, and affix selection is interpreted conjunctively (resulting in the coaffixing pattern). Morpholexical constraints may not interact extrinsically, either between themselves or with the phonological constraints of H-EVAL. The intricacy of the Burushaski facts provides an ideal testing ground for this prediction and permits a fully fleshed out proposal for the nature of the relationship between H-EVAL and TUHL.