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The search for linguistic universals has often been frustrating because all it takes to disprove a supposed universal is a single contrary case. In view of this it’s not surprising that some linguists have fallen back to positing universal ‘tendencies’, essentially ‘universals’ that need not be quite universal and which thus can hardly be disproven. The ‘universal condition on preferred syllable structure’ once proposed by Hooper (1976: 229-30) is a case in point.

The Kurtjar language of Australia has a phonology that is unusual in several ways, including its failure to conform to Hooper’s preferred syllable structure, whether or not it can thus be taken to disprove it as a universal ‘tendency’. In order to make clear why and how this is so, let’s begin by considering proposed universals of syllable structure more generally.

**Universals of Syllable Structure**

Even though one might expect a single case to be enough to disprove a universal, some universals seem to persist regardless. In a phonemic day and age Jakobson (1956: 526) concluded that all language had syllables
with initial consonants (C) and ones with final vowels (V), and that the syllable shape CV was thus universal. That phonemic CV syllables are intended is not only implied by Jakobson elsewhere, but also made abundantly clear by Malmberg (1963, p. 129), where the universal is stated unequivocally shortly after a hypothesized primeval language without contrastive vowels, in which phonemic /ptk/ is realized with a phonetic schwa after each consonant, is taken to have syllables consisting solely of the individual phonemic consonants rather than as their phonetic CV manifestation.

Sommer (1970) should have disproved the universality of CV syllables when he described certain ‘Kunjen’ varieties of northern Australia as lacking such syllables, and having only VC(C(C)) syllables instead, i.e. ones with initial vowels and final consonants or clusters. (Whereas Dixon (1970) demonstrated that an Olgolo variety of Kunjen clearly does have final vowels, as Sommer (1969: 31-2) had also noted, this does not detract from Sommer’s claim about such varieties of Oykangand.) Subsequently, however, Darden (1971) and Hooper (1976: 199, fn. 3) attempted to maintain the validity of Jakobson’s claim by reinterpreting it phonetically: they suggested that some final consonants may be elided or followed by epenthetic vocoids to produce phonetic CV syllables in Kunjen.

Kunjen was thus taken to be unexceptional, even though, as Anderson (1974, p. 254) correctly inferred, the way its speakers actually syllabify forms is in fact strikingly different from the norm. For example, I have heard speakers of the Oykangand variety of Kunjen syllabify the plant name *obmbóman ijijánang* (*Litsea glutinosa*) as *obmb-óm-an ij-ij-án-ang*
by placing a glottal stop before each non-initial vowel, and thus not even breaking up the bmb cluster between syllables.

At the same time there is good reason to wonder if CV syllables are universal even phonetically. Uradhi, an Australian language of northern Cape York Peninsula, does have word (and hence syllable) final vowels phonemically, but utterance finally these are ‘terminated rather energetically with a constriction in the velar region’ (Hale 1976: 44), i.e. with a phone similar to k or to the velar nasal ng depending on the environment. It is thus an open question whether such Uradhi forms as yuku [yúkuk] ‘tree’ or any longer utterance can be taken to contain CV syllables phonetically—e.g. should [yúkuk] be syllabified as CV-CVC or as CVC-VC? Phonemic transcriptions could perhaps disguise other languages that phonetically have epenthetic final contoids, if perhaps only laryngeals.

If Jakobson’s universal dies hard, Hooper’s (1976: 229-30) ‘universal condition on preferred syllable structure’ seems even more insidious from its inception. This ‘universal condition’ essentially maintained that the same consonant clusters should not be permitted both initially and finally in the syllable, but rather that syllable initial and final possibilities should tend to be mirror images of each other. In English, for example, the cluster pl occurs initially, as in plug, and the cluster lp occur finally, as in gulp, but not the reverse.

Hooper formulated her condition in terms of the relative ‘strengths’ of consonants, with the requirement that relatively ‘stronger’ consonants, such as the English p in the above example, can be separated from the
syllable nucleus (usually a vowel) only by relatively ‘weaker’ consonants, here English \( l \). Her formulation was as follows; here \( i > j \) implies that \( C_i \) is ‘stronger’ (in the given language) than \( C_j \), \( C_\emptyset \) is null (the lack of a consonant), and $ represents a syllable boundary (and an apparent typographical error has been corrected following Jensen 1978):

\[
\$ C_m \ C_n \ C_p \ C_q \ V \ C_r \ C_s \ C_t \ $ \\
where: \( m > n > p > q \) \\
\( r < s < t \) \\
\( m > t \) \\
\( m \neq \emptyset \)
\]

The above syllable structure was supposed to be universally preferred by all languages. This is not to say that all syllables must conform to this structure. By the condition \( m \neq \emptyset \), for example, Hooper did not mean that all syllables must have an initial consonant, which would clearly be false, but rather only that ‘a given language may not have [a syllable structure condition] that does not permit $CV$ syllables.’ (Hooper 1976: 230).

From this and some subsequent discussion Hooper could appear to have been maintaining that a language could have syllables, such as VC, that violate the condition in some way only if it also has ones—in this case perhaps CVC—that differ only in that they conform to the condition in the same way, however this might be formulated. Apparently Hooper did not even require this, since she also noted that violations of the condition, as in the final clusters of French \textit{pauvre} and \textit{ministre}, can in fact arise ‘as historical by-products of some other process that has some distinct motivation’ (Hooper 1976: 229; see also the summation on p. 232), the
motivation for the French violations being to eliminate unstressed vowels and perhaps to regularize stress placement.

Hooper’s ‘universal condition’ thus seemed to be only a universal tendency, whose violations were to be accounted for as being due to conflicts with other universal tendencies. If violations could not be accounted for in this way, then one could always appeal to the phonetics. For example, with regard to the occurrence of both of the English clusters \(st\) and \(ts\) in syllable final position, as in \(past\) and \(pats\), Hooper noted that ‘The claim that \(r > q\) for all languages predicts that the phonetic realization of, e.g. /s/ in \(Vst\$\) and \(Vts\$, is different, the syllable-final version being stronger than the other’ (Hooper 1976: 209, fn. 1).

There thus seems to be excessive leeway in how apparent violations of the ‘universal condition’ could be accounted for. Rather than taking French \textit{pauvre} and \textit{ministre} to violate the condition, for example, it would seem that Hooper could alternatively have taken them to conform to the condition phonetically because they can be pronounced with epenthetic final schwa in careful speech. At the same time she would not have needed to propose a phonetic explanation for the occurrence of both \(st\) and \(ts\) syllable finally in English if she had wanted to maintain that for \(st\) to occur both syllable initially (as in \textit{spat}) and syllable finally in English, in violation of the condition, should simply imply that the mirror image \(ts\) should also occur to conform to the condition, which it does. However, implications of the last sort are perhaps best not drawn: whereas Hooper did draw such an implication to account for syllables that have initial vowels in apparent violation of her formula, she might have done better by simply not requiring the initial \(C_m\) to be non-null. The data presented
below will in any case demonstrate that such implications cannot always be drawn at the phonemic level at the very least.

**Kurtjar Syllables**

Kurtjar is a Australian language traditionally spoken along the lower Gilbert River in southwestern Cape York Peninsula, Australia. When I studied the language in the 1970’s there were less than a dozen reasonably fluent speakers, mostly elderly (see Black 1975, 1976, 1978).

The phonology of Kurtjar has a number of unusual features, including its vowel configuration (see later) and the lack of the widespread fricative s despite the presence of (largely voiced) fricatives. Its syllable structure is unusual both for its general lack of CV syllables and for the fact that virtually the same set of consonant clusters, rather than two sets that are mirror images of each other, occur both initially and finally in syllables. These clusters include sequences of a liquid followed by a stop that Schane (1973: 45) thought would be ‘rare if not impossible’ in initial position—although they can also be found in Russian and (at least Classical) Tibetan—e.g. Kurtjar lk occurs initially in lkeen ‘moon’ as well as finally in dhoelk ‘plain turkey’.

Phonemically, at least, Kurtjar thus violates Hooper’s ‘universal condition’ just about as much as any natural language might be expected to be able to. Since the ‘universal condition’ is simply a universal tendency—or perhaps better a “target”—however, perhaps Kurtjar is only the exception that proves the rule. Certainly Kurtjar’s unusual syllable shapes did arise historically from less unusual shapes, through the loss of initial syllables
and final vowels, as in *kiaarr ‘sawfish’ < *wulkarV (see Black 1980). Perhaps there was a distinct motivation for these changes that was strong enough to permit them to create violations of the ‘universal condition’: similar changes apparently occurred independently in a number of groups of languages in Cape York Peninsula (see also Hale 1976 and other papers in the same volume). These changes are in fact also responsible for the lack of phonemic CV syllables in certain of Sommer’s ‘Kunjen’ varieties (Sommer 1969: 50-58). In any case, however, Kurtjar is certainly a prime example of a language that does not now prefer Hooper’s ‘universally preferred’ syllable shapes.

Most aspects of Kurtjar syllable structure are clear from monosyllabic words, which constitute about 30% of over 1500 attested Kurtjar stems—a situation quite unusual among Australian languages (see e.g. Dixon 1980). Virtually all monosyllables have the shape (Ci)V(Ci), in which the permitted optional initial consonants or clusters Ci are virtually identical with the permitted obligatory final consonants or clusters Ci. The consonants are as follows, in the practical orthography used by Black and Gilbert (1986):
The stops are voiced after nasals and generally voiceless elsewhere. The fricative $bh$ is a voiced or voiceless bilabial, whereas the other fricatives are always voiced. The retroflex $rd$ can be a glide as well as a flap. For further phonetic details see Black (1980).

All consonants occur both syllable initially before a vowel and syllable finally following a vowel. The fricative $dh$ is not attested before pause but can be taken to occur syllable finally in such polysyllables as $madharr$ ‘root’; the alternative of taking the syllables to be $ma$ and $dharr$ seems no better because such CV syllables as $ma$ are also unusual in Kurtjar (see later). The following consonant clusters also occur both initially and finally except as noted:

(a) the homorganic nasal-stop clusters $mp$, $nt$, $nhth$ (more simply written as $nth$), $nych$ (more simply written as $nch$), and $ngk$: e.g. $rreemp$ ‘stone’, $mpoongk$ ‘champ’, $ngkaard$ ‘up’, $ ntoong$ ‘my’, $ncheench$ or $ ntheench$ ‘shell forehead ornament’.
(b) the non-homorganic nasal stop clusters np and nk, as in dhaanp ‘to me’, npilany ‘parrot species’, raank ‘red-bellied blacksnake’, and nkoord ‘girl’. Some speakers lack word-initial np, having initial lmp (see c below) instead, as in lmpilany ‘parrot species’.

(c) the liquid r or l followed by a non-apical consonant other than p, dh, nh, and y, or by a non-apical homorganic nasal-stop sequence of type (a) above. The extent to which clusters of this general type occur word initially varies somewhat:

(i) those in which the liquid is followed by the obstruent bh, th, ch, or k occur freely word initially, as well as word finally: e.g. rbhooord ‘magpie’, aalbh ‘earth oven’, lbhaan ‘scar’, rthigh ‘berry species’, lthoow ‘ground’, rchaam ‘pandanus nut’, lchirgh ‘many’, rkiial ‘water-lily stalk’, lkaarch ‘bank (e.g. of a river)’.

(ii) those in which the liquid is followed by the nasal-stop sequence mp, nth, nch, or ngk, except for the unattested cluster rnh, also occur word initially, even though those with nth and nch are unattested word-finally: e.g. rmpaalgh ‘fish species’, lmpeerd ‘gutta-percha’, rntheen ‘wet season’, lnthaak ‘jellyfish’, rngkiuaard ‘heron’, lngkirgh ‘sand’, with lnh attested initially only in the polysyllabic lncheerding ‘stranger’.

(iii) the clusters rgh and lgh generally reflect earlier word final liquids, as in thirgh ‘smoke’ < *kaatyir and lkialgh ‘meat’ < *ngukal. Only rgh is also attested word initially, and only in rgheelbh ‘Milky Way’.
(iv) Those in which the liquid is followed by \( m \) or \( ng \) occur word initially, e.g. \( rmaang \) ‘pandanus’, \( lmoworth \) ‘stingray species’, \( rngeeny \) ‘hooked stick’, \( lngeening \) ‘ours’. Of these, only \( rng \) is attested word finally, in \( roorng \) ‘soft’.

(v) Only \( r \) is attested before \( w \) and \( ny \), and only in \( rwaanch \) ‘rib’, \( rwaant lang- \) ‘carry against the chest’, and \( lirny \) (or \( liny \)) ‘quail’.

Phonetically it is less clear that Kurtjar violates Hooper’s condition. All initial clusters, and also initial \( r \) and \( rd \) before vowels, can in fact be preceded by a brief, non-contrastive vocoid that could perhaps be considered the nucleus of a phonetic syllable. Initial liquids, such as the \( l \) in \( lthoow \) ‘ground’, can alternatively be devoiced (perhaps ‘strengthened’?) before some consonants, whereas initial nasals can be omitted before stops, their underlying presence being signalled by the voicing of the stops: for example, \( ngkaard \) ‘up’ can be pronounced with initial \([g]\), thus remaining distinct from \( kaard \) ‘thusly’. Alternatively the initial clusters can be pronounced much like their phonemic representations suggest.

Similarly, whereas Kurtjar generally lacks final vowels, and hence CV syllables, a brief, non-contrastive vocoid is frequently heard after a final obstruent, \( r \), and \( rd \), especially in the careful pronunciation of monosyllables. In extremely careful pronunciations, on the other hand, such vocoids can themselves be followed by glottal stop, converting the putative phonetic (C)V final syllables into (C)VC.
About a half dozen forms are exceptional in that they have final vowels phonemically. Of these, perhaps the best case is *tholotholo*, an onomatopoeic children’s term for *rdachrdoek* ‘owl species’. The conjunction *o* ‘or’ is problematic as an exception because it does not normally occur utterance finally (e.g. in isolation), whereas the interjections *e’e* and *ehe* are in any case phonologically deviant, much like their English equivalent *uh-huh*, in that they have nasalized vowels, as well as an *h* and glottal stop (’') not otherwise found in Kurtjar. Other exceptions are recent loans from English, and at least one of these—*talta* ‘Delta Downs (a cattle property)—was apparently originally borrowed with a final consonant, as *taltan*, to make it conform to Kurtjar’s general prohibition of final vowels.

Despite Kurtjar’s unusual syllable shapes, in normal connected speech the epenthesis of brief vocoids and the occasional elision of consonants work together to produce a reasonably smooth alternation between syllabic troughs and peaks that seems unremarkable for languages in general. Leaving aside the question of the universality of open CV syllables, which this pattern does not support, if Hooper was simply attempting to capture the naturalness and probable universality of such a general pattern, then she was surely well motivated, whether or not a ‘universal condition’ on the ‘preferred’ structure of individual syllables was the best approach.

As noted earlier the vowel system of Kurtjar is also mildly unusual. In contrast to the nicely ‘universal’ characteristics of the *i-a-u* inventory posited for many Australian languages, Kurtjar has a more ‘diamond shaped’ system:
The central vowels oe and ooe are only slightly rounded. High central i is a high schwa with no long counterpart; it is also found in a diphthong with short a or long aa, thus ia and iaa respectively.

Whereas the long vowels are as low or (for the mid vowels) even lower than their transcription suggests, the short vowels tend to be higher but also laxer. Short e and o are high vowels for many (but not all) speakers, but nonetheless the extremes of [i] and especially [u] rarely occur. The fact that long e and o are lower than their short equivalents seems unusual in comparison with languages elsewhere in the world (e.g. the Cushitic languages investigated by Black 1974), where non-low long vowels tend to be higher than there short equivalents. Even so, a similar pattern can be observed in various other Australian languages (e.g. Koko-Ya'o, Yolngu Matha varieties), although the vowels are usually written differently.
References


