Intervocalic Devoicing in Kiput and Berawan Dialects

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Voicing in intervocalic position (T > D / V__V) is well attested and phonetically well motivated, both as a synchronic process and as a sound change. According to a survey conducted by Kaplan (2010), voicing is the most frequent type of voiceless stop lenition (alongside spirantization, approximatization and others). Moreover, intervocalic position is the typical leniting environment. Diachronically, intervocalic voicing is explained as a spreading of the voice feature or, in other words, as an increase in the sonority of voiceless stops in leniting position and assimilation to the vocalic environment.

Intervocalic devoicing (D > T / V__V), on the other hand, is phonetically highly unmotivated. We do not expect fortition or dissimilation of voice in an environment that so strongly favors voicing. Moreover, it is assumed that intervocalic devoicing does not exist as a synchronic phonological process. Steriade (2001) provides an explanation for this systematic gap in terms of the "P-map": the perceptual difference caused by devoicing in intervocalic position is greater than the perceptual difference caused by other processes, which rules out the possibility of voiced stops becoming voiceless (cf. also Kaplan 2010).

Despite its unnaturalness, intervocalic devoicing as a sound change has been reported for Kiput and the Berawan dialects of the Malayo-Polynesian (North-Sarawakan) group in Blust (2002, 2005, 2013). In Kiput, *g is reported to have undergone devoicing to k intervocalically, but not in word-initial position. Likewise, *ɟ͡ʝ devoiced to c͡ç and *v to f in intervocalic position. Note that the devoiced *ɟ͡ʝ goes back to *ɟ͡ʝ or to the "hardened" glide *j, which merged with the reflex of the former phoneme. The devoiced *v goes back to the "hardened" glide *w. The other two voiced stops in the system, b and d, remained voiced in all positions. The changes is Kiput are summarized in the table below (Blust 2002, 2013):

	#__	V__V
*b	b	b
*d	d	d
*g	g	k
*ɟ͡ʝ	d	c͡ç
*v	/	f

In dialects of Berawan, intervocalic devoicing targets only *b and *g (from *ʀ). The outcome in both cases is a velar stop k, indicating that *b underwent a change in place of articulation as well (Blust 1992, 2005, 2013).

	#__	V__V
*b	b	k
*d	d	r
*g	g	k

The purpose of this paper is to reexamine the data from Kiput and Berawan and provide a new explanation that will better capture the data. I propose that the appearance of intervocalic devoicing is a side effect of several independently motivated sound changes, namely, (a) the conditioned weakening of a subset of stops, followed by (b) unconditioned devoicing of fricatives and affricates,

and (c) occlusion of fricatives. Thus, the combination of three sound changes yielded a system with apparent intervocalic devoicing.

A closer look into the Kiput data shows that two of the three voiced stops in the system actually remain voiced both intervocalically and word-initially. Only the velar stop *ɡ appears devoiced. If we look at the other two devoiced phonemes, we see that they are not stops, but a fricative and an affricate, respectively. Moreover, *ʝ͡ʝ despirantizes to d before intervocalically devoicing to c͡ç. The latter fact points to a stage with complementary distribution: *ʝ͡ʝ surfaced as d word-initially (following despirantization in that position) and as *ʝ͡ʝ elsewhere. Such a distribution is not rare; for example, in the Sursilvan dialect of Romansh, an affricate d͡ʒ was resolved only in word-initial position (d͡ʒ > ʒ / #__, Kümmel, 2007, 73).

From this point on, an unconditioned and phonetically well-motivated sound change occurred. Both voiced fricatives and voiced affricates are highly marked, and one possible resolution of this markedness is to devoice them. Unconditioned devoicing of voiced fricatives and affricates is well attested cross-linguistically. Since, at some point, voiced *v and *ʝ͡ʝ surfaced only intervocalically, unconditioned devoicing appears as intervocalic devoicing.

Devoicing of *ɡ to k can be explained along the same lines: we can assume intervocalic fricativization of *ɡ to *ɣ, which is a common sound change. Again, an earlier stage occurred that featured complementary distribution between *ɡ word-initially and *ɣ intervocalically. At this point, unconditioned devoicing of voiced fricatives occurred (just as with *v), yielding *x and consequently k. The other two voiced stops, b and d, did not devoice, because they did not undergo intervocalic fricativization. Asymmetries, in which only voiced velar stops undergo fricativization, are well attested (cf. Kümmel 2007, 60). Overall, all the sound changes assumed here are well attested and phonetically well motivated.

There is, in fact, strong evidence that supports this new explanation. In the Berawan dialects, *d lenites to r intervocalically, but remains a voiced stop word-initially, thus revealing complementary distribution in the contemporary language. The analysis presented above simply assumes the same process for other two stops as well: *ɡ lenited to *ɣ and *b to *ß, which weakened further to *ɣ. Unconditioned devoicing of voiced fricatives further yielded *x and, after occlusion, we get the attested k. Note that this explanation also better captures the fact that *b underwent change of place of articulation: velarization was an additional consequence of the general tendency to lenite intervocalic voiced consonants.

References

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