

## Abstract for an imaginary 200A term paper (about an imaginary language)

### Commentary

The existence of both local and global optionality requires augmenting the machinery of SPE, and local optionality poses a problem for OT. When a form contains more than one possible target for a rule, SPE states that the rule should apply simultaneously to all targets. If the rule is optional, should the decision of whether to apply the rule occur before all sites are identified (global optionality), or independently at each site (local optionality)? If both possibilities are attested, a rule must stipulate how its variation works. As for OT, if variation is implemented by allowing the speaker to choose different constraint rankings on different occasions, the same choice should apply to a whole utterance, and each possible target of the change should behave the same.

What the issue is

Xarao (an isolate of Colombia) is claimed by Gao (2003) to display local optionality. The language has no contrast between [b] and [p], with free variation between the two: [bimro] ~ [pimro] ‘throat’. Within a word, some bilabial stops may be realized as [b] and others as [p]: [ipabatsu] ~ [ibabatsu] ‘untrue’. In SPE, this would mean that, after all possible targets of the rule are identified, each instance may or may not undergo the rule (which could be either voicing or devoicing, since there is no contrast). In OT, this would mean that in [ipabatsu], somehow the first consonant obeys the ranking  $*P \gg *B$  and the second obeys  $*B \gg *P$ .

What your case is and how it's been claimed to be relevant to the issue.

Gao proposes a new version of OT in which the output forms of segments are chosen one at a time, starting at the beginning of the word (the rest of the underlying form can be seen, but not the rest of the surface form). The variable constraint ranking can change for each segment. As Gao discusses, this poses problems for right-aligned stress and right-to-left harmony processes.

How secondary source solves problem (could be more straightforward, e.g. uses SPE for opacity).

The source for Gao's data is Posborn 1969, a reference grammar derived from fieldwork. Posborn's characterization of the data is the same as Gao's. However, in assembling all the relevant examples in Posborn, I found that morphology matters: in order for a labial stop in an affix to be realized as [b], any labial stop in its stem must also be [b] (assuming that the pronunciations listed by Posborn exhaust the possibilities). For example, in ‘untrue’, which is prefixed (‘un+true’), Osborn lists [ipa-patsu], [ipa-batsu], and [iba-batsu], but not \*[iba-patsu]. And for the inflected ‘untrue-plural’ (‘un+true+PL’), where the plural affix presumably attaches to the prefix+root, Osborn lists [ipa-patsu-pi], [ipa-batsu-pi], [iba-batsupi], and [iba-batsu-bi], but not \*[ipa-{b,p}atsu-bi] or \*[iba-patsu-{b,p}-i]. There are also no cases of disagreement within a root: Osborn lists [balbi] and [palpi] for ‘otter’, but not \*[balpi] or \*[palbi].

What you found in looking at primary source (could be more straightforward: you found that secondary source was accurate).

I conclude from this that variation occurs not from one segment to the next but from one cycle to the next. When ‘true’ enters the derivation, whether it is underlyingly /patsu/, /batsu/, or underspecified /Patsu/, it can be realized as either [patsu] or [batsu] because on the Stem Level  $*B$  and  $*P$  are variably ranked, with any faithfulness constraints ranked lower. That form becomes the input to the Word Level, where  $MAX(+voice)$  is undominated, with  $*B$  and  $*P$  again variably ranked. Thus the input /iPa+patsu/ can become [ipapatsu] or [ibabatsu]—not \*[ibapatsu], since both stops are subject to the same ranking. And /iPa+batsu/ can become [ipabatsu] ( $*B \gg *P$ ) or [ibabatsu] ( $*P \gg *B$ ), but \*[ibapatsu] would violate  $MAX(+voice)$ : past the Stem Level, /p/ can become voiced but /b/ cannot devoice. One drawback of this account is that I'm forced to stipulate that affixes can underlyingly have only /p/ or /P/ and not /b/, contradicting the OT tenet of Richness of the Base.

Your analysis—you might not have this part yet.  
In that case you could say:  
“Because of these morphological effects, an account in Stratal OT or Lexical Phonology will be pursued.”