

Comparative Markedness and Opacity in Meskwaki Palatalization

The definition of phonological opacity is stated in Kiparsky (1973: 79) in (1). Classical generative phonological rules had no difficulty handling such phenomena: they were the predicted result of the general architecture of rule ordering. Because output-oriented theories of phonology like Optimality Theory reduce phonological phenomena to two-leveled mappings between input and output, they immediately run into difficulty with conditions like the above. In this presentation, I will address difficulties that arise from one OT response to opacity: Comparative Markedness (McCarthy 2002) by reference to data in Meskwaki (also known as Fox (Algic)).

Comparative Markedness (CM) was put forward in an attempt to address a basic problem that arose out of the original formulation of markedness constraints in early work in OT. Constraints like NoCoda or NoVcdObs, when ranked above or below relevant faithfulness constraints, worked fine in languages that systematically disallowed or allowed codas or voiced obstruents, but they immediately ran afoul of languages where some marked input structures nonetheless remained in the output representations under certain conditions, while others did not. Such so-called ‘grandfather’ effects produced paradoxes whereby a constraint needed to be ranked both *above* and *below* the relevant faithfulness constraint, as can be seen in (2) with Mekkan Arabic (McCarthy 2002). CM separates out markedness that arises from new conditions ($_{\text{NM}}$) from those that come directly from the input ($_{\text{OM}}$). The claim is that in this way you can handle cases of grandfather effects as well as derived environment effects, noniterating processes, coalescence paradoxes, and counterfeeding (underapplying) opacity, by differential ranking of “new” and “old” markedness. But this implies, seen in (3) that it is also impossible to have *both* derived environment effects *and* counterfeeding opacity, because that would itself lead to another ranking paradox. Yet in Meskwaki we seem to have precisely this set of circumstances. In (4), /t/ palatalizes to [č] before /i/. In (5), we see that this process is restricted to derived environments only. CM handles these two sets of data just fine: one need only rank a $_{\text{NM}}$ palatalization constraint above a featural faithfulness constraint, which itself ranks above the $_{\text{OM}}$ palatalization constraint. However, we see in (6) that a counterfeeding glide-deletion process also operates in Meskwaki, contradicting our earlier assessment that $_{\text{NM}} >_{\text{OM}}$. The implication is that other methods of handling opacity, whether within OT or not, are needed which can account for such apparent ordering effects.

(1) *DEFINITION*. A Rule "A > B / C __ D" is opaque to the extent that there are surface representations of the form:

- (i) A in the environment C __ D, [= apparent underapplication, counterfeeding opacity] or
 (ii) B in the environment other than C __ D, *caused by that rule* [= apparent overapplication, counterbleeding opacity]

(2)

Mekkan Arabic [-voice] Assimilation (Abu-Mansour 1996, Bakalla 1973)

a. Voiced obstruent assimilates to following voiceless

/ʔagsam/	ʔa <u>ḡ</u> sam	'he swore an oath'
/mazku:r/	ma <u>ḡ</u> ku:r	'mentioned'

b. But not vice-versa. Assimilation can't create marked voiced obstruents

/ʔakbar/	ʔa <u>ḡ</u> bar, *ʔa <u>ḡ</u> bar	'older'
----------	-----------------------------------	---------

c. Otherwise, voiced obstruents, even codas, are treated faithfully

/ʔibnu/	ʔi <u>ḡ</u> nu	'his son'
/ʔadʒu:z/	ʔad <u>ḡ</u> u:z	'old'
/dabdaba/	da <u>ḡ</u> daba	'pitter-pat (footsteps)'

- (3) a. _NM >> F >> _OM : grandfather effects, nonderived environment effects
 b. _OM >> F >> _NM : noniterating processes, coalescence paradoxes, counterfeeding opacity

(4) Palatalization of /t/ before /i/:

a. /e•h-pya•t-i/	e•hpya• <u>či</u>	'he went'
b. /e•h-in-et-i/	e•hine <u>či</u>	'one addressed him thus'
c. /pye•t-ike•w-a/	pye• <u>či</u> ke•wa	'he is bringing (something)' [antipass.]
d. /a•t-im-o-w-a/	a• <u>či</u> mowa	'he is telling a story'

(5) Nonderived environment effects:

a. /e•h-ma•wači•eti•wa•t-i/	e•hma•wa <u>či</u> ti•wa•či	'they called each other together'
b. /pašito•h-etike/	pašito•he <u>tike</u>	'old men!' (voc. pl.)
c. /wača•h-etiso-w-a/	wača•he <u>tisowa</u>	'he is cooking for only himself'

(6) Problematic forms with counterfeeding opacity:

a. /pi•t-wike•w-a/	pi• <u>tike</u> •wa	'he enters'
b. /očity-i/	o <u>či</u> ti	'bird's rump or tail' (cf. <i>očitye•ni</i> , 'bird's tails')

Works Cited

- Goddard, Ives.** 1994. *Leonard Bloomfield's Fox Lexicon: Critical Edition*. Winnipeg, Manitoba: Algonkian and Iroquoian Linguistics.
- Kiparsky, Paul.** 1973. Phonological Representations. In Osamu Fujimura (ed.), *Three Dimensions of Linguistic Theory*. Tokyo: Taikusha. Pp. 1-136.
- McCarthy, John.** 2002. Comparative markedness. Ms. University of Massachusetts, Amherst. [ROA-489]