Weeks 13 – Rule Triggering and Rule Blocking

November 25, 2008

1 Rule Triggering

(1) Remove environment information from rule and state it instead as a constraint that triggers the rule any time that applying the rule would help.

(2) Sommerstein (1974):

> "A P-rule R is positively motivated with respect to a phonotactic constraint C just in case the input to R contains a matrix or matrices violating C and the set of violations of C found in the output of R is null or is a proper subset of the set of such violations in the input to R."

(3) A rule, or subcase of a conspiracy, positively motivated by phonotactic constraint C does not apply unless its application will remove or alleviate a violation or violations of C.

(4) Recall Hakha Lai tone (ignoring opacity)

/â â/ → /â à/ /â ă/ → /â ă/ /â à/ → /â à/
/ă â/ → /ă â/ /ă ă/ → /ă â/ /ă à/ → /à à/
/à â/ → /à à/ /à ă/ → /à ă/ /à à/ → /à à/

(5) As Hyman & VanBik point out (see their paper for a more elegant analysis), this is conspiratorial. In the spirit of Sommerstein, we could have:

a. constraint: *[αhi finish]C0 [$-\alpha$hi start]

b. rules:

(i) V → [-hi start]

(ii) $\begin{bmatrix} V \\ \alpha\text{hi start} \\ -\alpha\text{hi finish} \end{bmatrix} \longrightarrow \begin{bmatrix} -\alpha\text{hi start} \\ \alpha\text{hi finish} \end{bmatrix} / \text{VC}_0 \_\_\_$

(iii) V → [-hi finish]

★ We need to add to this some statements about priority.

★ Under Sommerstein's conception, does a constraint have to be surface- true? Recall:

> "The degree of violation V(M,C) to which a matrix M violates a phonotactic constraint C is equal to the cost of the minimal structural change necessary to turn M into a matrix satisfying C. The application to a matrix M of operation A alleviates a violation in M of phonotactic constraint C just in case the output M' of such application is such that $0 < V(M',C) < V(M,C)$"

★ Can you invent a case where a violation could be alleviated without being eliminated? (It's OK if it's silly.)

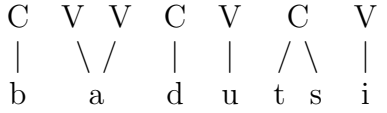
★ Can we recast any of the constraints above as persistent rules?

1.1 A frequently used constraint: the OCP (Obligatory Contour Principle)

(6) We introduced the OCP with respect to tone, but it has been argued it applies to the autosegmental analyses of common features as well (here with respect to the "CV" and "melodic" tiers).

(7) "At the melodic level, adjacent identical elements are forbidden." (McCarthy 1986[1])

(8) Recall that elements on the CV tier and melodic tier need not be one-to-one:



★ Make up a representation that violates the OCP. Think of some rules that the OCP, acting as a constraint, could plausibly trigger.

[1]McCarthy, John (1986). OCP effects: gemination and antigemination. Linguistic Inquiry 20: 71-99.

2 Constraints Blocking Rules

3 Anti-gemination and the OCP (McCarthy 1986)

(9) McCarthy presents various cases in which syncope is blocked if it would result in the formation of a geminate consonant (=double consonant).

(10) Example from our old friend Tonkawa

(11) reminder: the basic pattern (stress is also involved, but we'll ignore that)

picen	'castrated one; steer'		
picn+oʔ	'he cuts it'	picna+noʔ	'he is cutting it'
we+pcen+oʔ	'he cuts them'	we+pcena+noʔ	'he is cutting them'
ke+pcen+oʔ	'he cuts me'	ke+pcena+noʔ	'he is cutting me'
notox	'hoe'		
notx+oʔ	'he hoes it'	notxo+noP	'he is hoeing it'
we+ntox+oʔ	'he hoes them'	we+ntoxo+noʔ	'he is hoeing them'
ke+ntox+oʔ	'he hoes me' (??)	ke+ntoxo+noʔ	'he is hoeing me'
netl+oʔ	'he licks it'	netle+noʔ	'he is licking it'
we+ntal+oʔ	'he licks them'	we+ntale+noʔ	'he is licking them'
ke+ntal+oʔ	'he licks me'	ke+ntale+noʔ	'he is licking me'
naxc+oʔ	'he makes it a fire'	we+nxace+noʔ	'he is making it a fire'
we+nxac+oʔ	'he makes them a fire'	we+nxace+noʔ	'he is making them a fire'
ke+nxac+oʔ	'he makes me a fire'	ke+nxace+noʔ	'he is making me a fire'

★ Summarize what's going on in the data above.

★ What's different about these forms?

hewawoʔ	'he is dead'
ham'am'oʔ	'he is burning'

(12) Further illustration: compare plain stem /jakapa/ to reduplicated /jakakapa/

jakpoʔ	'he hits him'
ke+jkapoʔ	'he hits me'
jakakpoʔ	'he hits him repeatedly'
ke+jkakpoʔ	'he hits me repeatedly'

★ McCarthy argues that the **geminate* constraint is really a instance of the OCP. Can you reconstruct the argument?

(13) Crucially, the OCP violation that would be created if syncope applied in the usual way to yield *[jakkapoʔ] can't seem to be repaired by immediate fusion of the adjacent identical Cs—instead, the OCP simply blocks deletion.

★ In Myers' terms, can we analyze failure of syncope with a persistent rule instead of a constraint that blocks it?

4 English

(14) Consider the following words:

$\widehat{\text{dʒ}}\text{ʌ}\widehat{\text{dʒ}}\text{əz}$
$\widehat{\text{tʃ}}\text{ɜ}^{\text{ɹ}}\widehat{\text{tʃ}}\text{əz}$
bʌsəz
k^{h}wɪzəz

(15) This is like McCarthy's Damascene Arabic case, where two consonants don't have to be exactly alike (they can differ in voice and pharyngealization) to count as 'identical'.

(16) Eric Baković has looked at this case, and proposes:
   a. The OCP prohibits only adjacent identical elements
   b. Other constraints may prohibit adjacent, dissimilar elements (i.e., require assimilation)
   c. But if satisfying those other constraints makes the elements identical, the OCP is violated. So, something else should happen instead that can satisfy both constraints.

(17) In constraint-and-rule terms, /bʌsz/ violates the constraint
$[\ -voice\ ]\ \begin{bmatrix} +voice \\ -son \end{bmatrix}$, which should trigger the assimilation rule
X $\longrightarrow$ [α voice] / [α voice] ____ (cf. /k^{h}æt+z/ $\rightarrow$ [k^{h}æts]).

★ What would happen if the assimilation rule applied to /bʌsz/?

★ How would this work for /d͡ʒʌd͡ʒ+z/? What does this predict about /bʌd͡Z+d/?

5 Anti-antigemination and OCP

(18) Odden (1988)[2]

(19) Koya: Dravidian language from India with 330,000 speakers (data originally from Taylor 1969[3])

(20) V $\longrightarrow \emptyset$ / ____ # applies only if the V is flanked by identical (modulo retroflexion) Cs:

/naːk**i** kaːvaːli/	naːkkaːvaːli	'to me it is necessary'
/aːru ruːpaːjku/	aːrruːpaːjku	'6 rupees'
/verkaːɖ**i** digte/	verkaːɖdigte	'the cat got down'

(21) Yapese: Austronesian language from Yap state of the Federated States of Micronesia with 6,592 speakers (data originally from Jensen 1977)

(22) V *rightarrow*$\emptyset$ applies only if the V is flanked by homorganic Cs:

/b**a** puw/	bpuw	'it's a bamboo'
/b**a** maːb/	bmaːb	'it's a door'
/n**i** teːl/	nteːl	'take it'
/r**a**daː+n/[ɐ]	rdaːn	'its width'
/qalaŋ**e**ŋe+gu/	qalaŋŋeːg	'my headache'

[2]Odden, David. 1988. Anti antigemination and the OCP. Linguistic Inquiry 19: 451-475.

[3]Taylor, S. (1969). Koya: An outlinea grammar, Gommu dialect. University of California Publications in Linguistics 54. Berkeley and Los Angeles: University of California Press.