Class 7: Optimality Theory, part II

To do
- Korean HW (last week's material) due tomorrow.
- Reading questions on K&K ch. 8 excerpt, Anderson 1984 ch. 9, Kaplan 2008 excerpt due Monday
- **Bibliographic exercise** due any time next week
- I'll post an assignment on this week's material; due *next* Friday.

Overview: Last time we talked in detail about how the theory works. This time, the focus will be on practicing using it. Plus, target vs. process; correspondence theory.

1. Warm-ups

- Which candidate wins? *plickers*

	CONSTR1	CONSTR2	CONSTR3	CONSTR4
a	*	*		
b	*		*	
c	*			*

	CONSTR1	CONSTR2	CONSTR3
a	*	**	
b		**	
c		***	

- Try the tableau recipe (repeated below) for /bid/ → [bit]

- Start with the winning candidate and the fully faithful candidate.
- If the winning candidate ≠ the fully faithful candidate…
  - Add the markedness constraint(s) that rule out the fully faithful candidate.
  - Add the faithfulness constraints that the winning candidate violates.
  - Think of other ways to satisfy the markedness constraints that rule out the fully faithful candidate. Add those candidates, and the faithfulness and markedness constraints that rule them out. How far to take this step is a matter of judgment .
- If the winning candidate = the fully faithful candidate...
  - ...then you are probably including this example only to show how faithfulness prevents satisfaction of a markedness constraint that.
    - Add that markedness constraint.
    - Add one or more candidates that satisfy that markedness constraint.
    - Add the faithfulness constraints that rule out those candidates.

2. Comparative tableaux

- An innovation of Alan Prince. They convey the same information, but in a different form

/at+ka/ → [atəka]	*CC	DEP-V
a [atəka] vs. [atka]	W	L
b [atəka] vs. [atəkəa]		W

Each line compares the winner to one losing candidate, and shows whether each constraint prefers the winner (W) or the loser (L)

- Comparative tableaux are nice because you can easily see if your ranking is correct: the first non-blank cell in each row must say *W*.

  - We also see easily why [atəkəa] is irrelevant to the ranking—explain.

3. Exercise: Metaphony (just the two easy cases—we might do hard ones later)

- Walker 2005 discusses Romance dialects/"dialects" in which suffix vowels spread their [+high] feature to the stem's stressed vowel.

  - Develop OT accounts of these two metaphony systems (they can have different rankings, since they're different languages).

Foggiano/Pugliese (Ethnologue classifies as dialect of Italian). Vowel inventory: [i,e,ɛ,a,u,o,ɔ]

pét-e	'foot'	pít-i	'feet'
móʃʃ-a	'soft (fem.)'	múʃʃ-u	'soft (masc.)'
kjén-a	'full (fem.)'	kjín-u	'full (masc.)'
grɔ́ss-a	'big (fem.)'	grúss-u	'big (masc.)'

Veneto (~ 6 million speakers in Italy/Slovenia/Croatia and Brazil) Same vowel inventory.

véd-o	'I see'	te víd-i	'you see'
kór-o	'I run'	te kúr-i	'you run'
prét-e	'priest'	prét-i	'priests'
bɛ́l-o	'beautiful (masc. sg.)'	bɛ́l-i	'beautiful (masc. pl.)'
mɔ́d-o	'way'	mɔ́d-i	'ways'
gát-o	'cat'	gát-i	'cats'

  - When you're done, we'll talk about triggering and blocking.

this page intentionally left blank for you to work on your metaphony analyses

4. Exercise: our bleeding example from English

- Translate our previous rule analysis into OT

(reminder: /-z/, Ø → ɨ / [+strid]__[+strid], [–son] → [–voice] / [–voice] __)

pʰi-z	‘peas’	dɑg-z	‘dogs’	mɪt-s	‘mitts’	glæs-ɨz	‘glasses’
tʰoʊ-z	‘toes’	læb-z	‘labs’	bloʊk-s	‘blokes’	fɪz-ɨz	‘fizzes’
dɑl-z	‘dolls’	sɑlɪd-z	‘solids’	kʰɑf-s	‘coughs’	bɹæn͡tʃ-ɨz	‘branches’
pʰæn-z	‘pans’	weɪv-z	‘waves’			bæd͡ʒ-ɨz	‘badges’
		saɪð-z	‘scythes’			wɪʃ-ɨz	‘wishes’

- Could the counterbleeding candidate *[glæs-ɨs] win under any ranking of these constraints?

5. Very short feeding example

Catalan (Indo-European lang. from Spain, France, Andorra w/ 11.5 million speakers [Lewis 2009]; Mascaró 1976)

/son/ → [son]	'they are'	/bint/ → [bin][1]	'twenty'
/pok-s/	'few'	/pan-s/	'breads'
[som poks]	'they are few'	[bim pans]	'twenty breads'

- First, develop an analysis with rules (no cheating by asking Gemma ☺).
- Give an OT analysis.
- Could the counterfeeding candidate *[bin pans] win under any ranking of these constraints?

[1] How do we know the underlying form has a final /t/? Because it shows up when it can be syllabified as an onset, as in /bint+i+un/ → bin.ti.u 'twenty-one'.

6. *If we have time:* counterfeeding that we can capture

Another Romance metaphony case from Walker 2005

Lena (dialect of Asturian, a language from Spain with about 100,000 speakers)

fí-a	'daughter'	fí-u	'son'
nén-a	'child (fem.)'	nín-u	'child (masc.)'
tsób-a	'wolf (fem.)'	tsúb-u	'wolf (masc.)'
gát-a	'cat (fem.)'	gét-u	'cat (masc.)'

- Develop a rule account
- What's the problem with translating this into OT (hint: [gét-u] is the problematic word)?
- Any ideas for playing with our faithfulness constraints to get this?

7. Opacity [more on this in Week 5!]

- We now have our first empirical difference between SPE and OT: SPE straightforwardly predicts counterfeeding and counterbleeding, and OT doesn't.
  - any purported case of counterfeeding or counterbleeding is a good **term-paper topic**
- In Week 6 we'll see a version of OT that does better with opacity (Kiparsky's Stratal OT).

8. We need a better theory of faithfulness

- Trick question: fill in the constraint violations:

/tui/	IDENT(round)	IDENT(back)
a [ty]		

- In Prince & Smolensky 1993, an output candidate *contains* the input form—you can see what's been inserted or deleted.
  - This is retrospectively known as the containment approach.
  - Changing features gets tricky, and metathesis gets very hard.

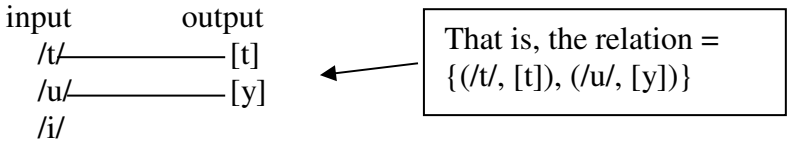
9. The correspondence relation

McCarthy & Prince 1995 proposed replacing containment with **correspondence**.

- Every segment in the input bears a unique index (maybe every feature, mora, syllable…).
- Units of the output also bear indices (instead of the output containing input material).
- An input segment and an output segment are *in correspondence* iff they bear identical indices.

/$t_1u_2i_3$/	IDENT(round)	IDENT(back)
a [t_1y_2]		*
b [t_1y_3]	*	

- These indices define a relation between input segments and output segments:



- /$p_1a_2t_3o_4k_5$/ → [$p_1a_2t_3o_4k_5$] means Corr(/p_1/, [p_1]), Corr(/a_2/, [a_2]), etc., where Corr(*x*, *y*) means "*x* corresponds to *y*".

- These are also output candidates for that input: [$p_5a_1t_4o_2k_3$], [$p_1a_1t_1o_1k_1$], [$p_6a_7t_8o_9k_{10}$].
  - Try drawing them in the connection-lines format

  - But they're so outrageously bad we wouldn't normally bother including them in a tableau.

- When you see a candidate in a tableau without indices, you can assume that the correspondence relation is the obvious one.
- Sometimes it's not clear what the obvious correspondence relation is; in that case, spell it out with subscripts.

10. Constraints on the relation

- Faithfulness constraints (sometimes also called *correspondence constraints*) are constraints that care about various aspects of the correspondence relation.
- Here are the most important ones proposed by McCarthy & Prince:

MAX-C MAX-V	(don't delete)	Every consonant in the input must have a correspondent in the output. Every vowel in the input must have a correspondent in the output. (*maximize* the preservation of material in the input)
DEP-C DEP-V	(don't insert)	Every consonant in the output must have a correspondent in the input. Every vowel in the output must have a correspondent in the input. (every segment in the output should *depend* on a segment in the input.)
IDENT(F)	(don't change feature values)	If two segments are in correspondence, they must bear identical values for feature [F]. This constraint doesn't care about *whether* segments have correspondents or not; only about making sure values for that specific feature match *if* two segments do correspond.

- There are also constraints against merging, splitting, and reordering segments. See McCarthy & Prince 1995 for a full list.

Next time:

- What happens when there are multiple places within a form where a rule could apply or a constraint is violated?
- What if applying a rule (satisfying a constraint) creates a new environment for the same rule to apply (creates a new violation of the same constraint)?
- We'll look at how this should play out in SPE (not always clear) and OT (clear, but are the typological predictions correct?)

References

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