Overview

- Results of mid-course feedback
- Faithfulness vs. Markedness
- Factorial typology
- Nisgha OT reanalysis
- Term paper update

Clearing up something in Kager

The term *Fallacy of Perfection* (McCarthy & Prince 1994) refers to this objection to OT: There is some least-marked output, so why don’t all words come out that way? Kager’s “definition” (“no output form is possible that satisfies all constraints”, p. 16) is actually the standard *response* to the FoP.

Faithfulness vs. Markedness

*Faithfulness constraints we’ve seen so far*

- **IDENT[F]**: a segment must have identical values for F in both the input and the output
- **MAX**: don’t delete segments
  - **MAX-C, MAX-V**
- **DEP**: don’t insert segments
  - **DEP-C, DEP-V**

You may want to experiment with **MAX[F]** and **DEP[F]**.

*Markedness constraints we’ve seen so far*

- **[αF]**: no segment should have the value α for the feature F. (or just *[F] for privative features)
- **[COR]**
- **[αF, βG]**: no segment should have both the value α for the feature F and the value β for the feature G.
  - **V_{NASAL} = *[+SYLLABIC, +NASAL]**
- **[αF]/__SYLL**: no coda segment should have the value α for the feature F.
  - **VOICED-CODA**
- **NOCODA**: syllables must not have codas
- **ONSET**: syllables must have onsets
- **COMPLEXCODA**: codas should not contain more than one segment
- **COMPLEXONSET**: onsets should not contain more than one segment
- **STRUC**: segments are illegal
  - **STRUC-V, STRUC-C**
*X >> FAITH-X
X never occurs. Output always has –X.

FAITH-X >> *X
Output has X when the input has X, and –X when the input has –X.

-X/A__B >> *X >> FAITH-X
Regardless of input, output has X in context A__B, -X elsewhere.

-X/A__B >> FAITH-X >> *X
In the context A__B, output has –X, but elsewhere output is faithful to input.

Chopping up constraint families

*P/X = X must not be a syllable nucleus (“peak”) (Prince & Smolensky 1993)

*P/T >> *P/D >> *P/S >> *P/Z >> *P/N >> *P/L >> *P/R >> *P/I >> *P/E >> *P/A

Faithfulness constraints can create a cut-off anywhere in this hierarchy. For convenience, let’s assume that the faithfulness constraint at work is IDENT[SYLLABIC].

Factorial typology

The above is an example of a (partial) factorial typology: it shows that most of the possible rankings are attested.

It is common practice, when proposing a constraint, to show that all ranking permutations of that constraint and whatever constraints it interacts with are attested.

The idea is that unless Universal Grammar restricts the ranking in some way (as in inherently ranked constraint families), all possibilities should be attested.

If you have \( n \) freely rankable constraints, there are \( n! \) possible rankings.

\[ n! \text{ ("n factorial") = n \times (n-1) \times (n-2) \times (n-3) \times \ldots \times 3 \times 2 \times 1} \]
This is because first you have \( n \) choices for what the top constraint should be, then you have \( n-1 \) choices for what the second-highest constraint should be, then you have \( n-2 \) choices for what the third constraint should be, etc.

\[
1! = 1 \\
2! = 2 \\
3! = 6 \\
4! = 24 \\
5! = 120 \\
6! = 720 \\
7! = 5040 \\
8! = 40320
\]

Factorials grow really fast!

But usually there are far fewer possible ranking to consider, because you can collapse many of the rankings (they produce the same result). In the vowel-nasality example, there were three constraints but only 4 outcomes.

There’s also software that does factorial typology for you (we will be using it soon).

**Limitations on factorial typology**

(none of these have been well worked out; the second two especially are speculative)

**Some rankings don’t allow enough information transmission for a viable language**

- No language in which all markedness constraints outrank all faithfulness constraints.
- No language in which *STRUC (Zoll 1993) is ranked at the top.
- No language in which REDUP (Zuraw 1999) and all the Base-Reduplicant Identity constraints are ranked at the top.
- In the *P/X hierarchy, there is no language that places the cutoff right above *P/a.

We know why these languages don’t arise, but we don’t have an explicit theory of how they’re prevented.

**Computability**

Some procedures for generation and parsing might not work for some rankings

**Evolvability**

All languages must come from some previous language. Typical mechanisms of change are to be children’s “errors”, random variations that are seized on as socially prestigious, and language contact.

Perhaps some grammars, though they would be learnable and usable, could never arise by means of these forces.

And maybe some grammars are unusually unstable (vulnerable to raid historical change), and so can arise but don’t last long enough to be observed.
Chance

The set of existing languages is a proper subset of the set of possible languages. If your factorial typology predicts 40,320 language types, though they might all be possible languages, they won’t all be attested.

Term paper update

Paper topics are due Friday!

I just want a paragraph, not an abstract. Here is a hypothetical example (this is not a recommended topic for you, since we won’t be doing reduplication).

I want to do something about reduplication, probably in Tagalog. I’ve got Jill Carrier’s dissertation, which has a lot of data on Tagalog reduplication and its interaction with other rules. I might do something with reduplication in loanwords—this seems like it could be interesting, since the loans have things like initial clusters that don’t occur in native words. The article we read last week about reduplication in Ilokano makes me think that it could also be interesting to compare the two languages (I think they’re related). Do you know of a good general reference on Tagalog or Ilokano?

Some useful resources

- Rutgers Optimality Archive: ruccs.rutgers.edu/roa.html
  Searchable collection of manuscripts, dissertations, and articles about OT
- Linguistics and Language Behavior Abstracts
  www.usc.edu/isd/elecresources/subject/arts_Lingui.html
  Searchable index with abstracts
- Modern Language Association (MLA)
  www.usc.edu/isd/elecresources/subject/arts_Lingui.html
  Searchable index; lots of non-linguistics, so you may need to add extra keywords (i.e., not “assimilation” but “assimilation phonology”)

Preview of next time

- Blocking and triggering
- Consequences of parallelism

For next time

Read

- McCarthy-annotated Prince & Smolensky (this is mainly for fun)

Problem

- Palauan
- OPTIONAL: McCarthy’s “little exercises”