1. Goals and outline of this handout

Goals:
This handout explains the principal modes of constraint interaction, relating them to some of the issues raised in Handout #1: blocking of processes by constraints, triggering of processes by constraints, and conspiracies where the same constraint has several blocking and/or triggering effects.

Outline:
1. Goals and outline of this handout ................................................................. 1
2. The issues ........................................................................................................ 1
3. Necessary and sufficient conditions for an unfaithful mapping in OT .......... 2
4. Triggering ........................................................................................................ 3
5. Blocking .......................................................................................................... 4
6. Conspiracies .................................................................................................... 7
7. Emergence of the Unmarked ........................................................................... 7
8. References ........................................................................................................ 8

2. The issues

The role of output conditions in phonology:
- Research since about 1970 has shown that satisfaction of conditions on output forms has a big effect on phonological alternations.
- Handout #1 described some of this work, with conspiracies being a particular focus.
- In a conspiracy, a single output condition is observed to trigger and/or block several processes in a single language.

Why is this issue important?
- Theories that mix rules and output conditions have not in general been very successful in accounting for these phenomena.
- The problem: the output condition is often only “inert but admired” (P&S, in a different context). To the analyst, it is clear that rule X is a response to condition Y, but nothing in the statement of rule X or the theory of rule application gives formal expression to the analyst’s intuition.
- Self-delusion is remarkably easy (and common) in these situations.
3. Necessary and sufficient conditions for an unfaithful mapping in OT

The word “process”, with its connotations of rule application, is a poor fit with OT. But we can talk about OT’s nearest analogue, the unfaithful mapping, and the conditions that must obtain for an unfaithful mapping to be optimal. (Bear in mind that, because of ROTB, an unfaithful mapping may occur even in situations where there are no overt alternations.)

(1) Necessary and sufficient conditions for an unfaithful mapping

The unfaithful mapping /a/ → [b] will occur if and only if all of the following conditions are met:

a. \( \text{CON} \) includes some markedness constraint \( M \) that favors [b] over [a]. (\( M \) favors X over Y if and only if \( M \) assigns fewer violation-marks to X than Y.)

b. \( M \) is ranked above every faithfulness constraint that is violated by the /a/ → [b] mapping.

c. \( M \) is ranked above every markedness constraint that favors [a] over [b].

d. For all candidates [x], where [x] is not [a] or [b], no mapping /a/ → [x] is more harmonic than /a/ → [b]. This is assured in two situations:
   i) The candidate [x] is more marked than [b]. That is, the highest ranking constraint that distinguishes them is a markedness constraint favoring [b] over [x].
   ii) The mapping /a/ → [x] is less faithful than /a/ → [b]. That is, the highest ranking constraint that distinguishes them is a faithfulness constraint favoring /a/ → [b] over /a/ → [x].

Remarks on (1):

- This statement looks pretty complicated, and with good reason: it essentially recapitulates the definition of \text{EVAL}.
- The key to the triggering mode of interaction is the \( M \gg F \) ranking conditions in (a) and (b).
- The key to the blocking mode of interaction is the intervention of one of the ranking conditions implied by (b), (c), or (d).
- Conspiracies typically involve both triggering and blocking.

The main points:

- There is nothing special about triggering, blocking, or conspiracies. They are just the normal result of \text{EVAL}-mediated interaction of ranked, violable constraints.
- “Triggering”, “blocking”, “process”, and “conspiracy” are just the names we give to certain interactional situations. They have no formal status in OT whatsoever. They are useful only insofar as they help us to understand how OT works.
4. Triggering

Necessary condition for an unfaithful mapping:
- Some markedness constraint M dominates some antagonistic faithfulness constraint F.
- Why? Harmonic ascent requirement is intrinsic to OT.

Harmonic ascent (Moreton 2003):
- An OT grammar is a ranking of markedness and faithfulness constraints — and nothing else (see Handout #1, §5).

What exactly are faithfulness and markedness constraints, as intended here. (See Handout #1.)
- A faithfulness constraint alone can’t compel violation of another faithfulness constraint, under the natural assumption that every candidate set contains a fully-faithful candidate that obeys all faithfulness constraints.

Explain the preceding statement.
- Constraint violation is minimal under EVAL.
- So the only reason to violate a faithfulness constraint is to satisfy a higher-ranking markedness constraint.
- More about this in handout #4.

What if CON includes constraints other than faithfulness and markedness?

An example of triggering:

(2) Epenthesis in Classical Arabic (Coetzee 1998)

<table>
<thead>
<tr>
<th>Underlying</th>
<th>Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>/alwaladu/</td>
<td>[ʔalwaladu] ‘the boy (nom.)’</td>
</tr>
<tr>
<td>/dˤrib/</td>
<td>[ʔidˤrib] ‘beat (m. sg.)’</td>
</tr>
</tbody>
</table>

Analyze (2) using comparative tableaux. You will require the markedness constraints ONSET “vowel-initial syllables are prohibited” and *COMPLEX-ONSET “syllable-initial consonant clusters are prohibited”.

How will you rule out a candidate like [dˤrib]? 
What are the other typological possibilities implied by your analysis of Classical Arabic? Could there be a language with /alwaladu/ \(\rightarrow\) [ʔalwaladu] but /dˤrib/ \(\rightarrow\) [idˤrib]?

Triggering cascades:
- In /dˤrib/ \(\rightarrow\) [ʔidˤrib], vowel epenthesis necessitates consonant epenthesis.
- In rule-based phonology, this interaction shows that the two rules are in feeding order (3).
- In OT, the effects of several processes are evaluated together (“parallelism” — ATGtOT pp. 138ff.). [ʔidˤrib] beats *[idˤrib] and *[dˤrib] because only [ʔidˤrib] satisfies high-ranking ONSET and *COMPLEX-ONSET. See (4).
- This can be called a triggering cascade: satisfaction of one markedness requires an unfaithful mapping that threatens violation of another markedness constraint, so an additional unfaithful mapping is required. (This description should not be taken to imply a sequence of derivational steps — there is no such sequence.)
(3) Feeding order in Classical Arabic
Underlying /dAGR/ ➔ beat (m. sg.)!
Vowel epenthesis idAGR
[?] epenthesis ?idAGR
Surface [?idAGR]

(4) Tableau for Classical Arabic illustrating parallelism

<table>
<thead>
<tr>
<th>/dAGR/</th>
<th>ONSET</th>
<th>*COMP-ONS</th>
<th>DEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>➔ ?idAGR</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>~ dAGR</td>
<td>1 W</td>
<td></td>
<td>L</td>
</tr>
<tr>
<td>~ idAGR</td>
<td>1 W</td>
<td></td>
<td>L</td>
</tr>
</tbody>
</table>

The triggering problem and OT’s solution:
- Recall from Handout #1 that Kisseberth’s solution to conspiracies dealt with blocking but not triggering.
- The triggering problem in mixed rule-and-constraint theories: rules are normally obligatory whenever their structural descriptions are met, so there’s no straightforward way to get the rule to apply only when it’s needed to satisfy an output condition.
- OT’s solution: there are no rules. The unfaithful mapping occurs only when needed because that’s how EVAL works: faithfulness violation, like all constraint violation, is minimal. See (5).

(5) An economy effect

<table>
<thead>
<tr>
<th>/dAGR/</th>
<th>ONSET</th>
<th>*COMP-ONS</th>
<th>DEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>➔ ?idAGR</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>~ ?id'iribi</td>
<td></td>
<td>4 W</td>
<td></td>
</tr>
<tr>
<td>~ dAGR</td>
<td>1 W</td>
<td></td>
<td>L</td>
</tr>
<tr>
<td>~ idAGR</td>
<td>1 W</td>
<td></td>
<td>L</td>
</tr>
</tbody>
</table>

Triggering and economy:
- Minimal violation of faithfulness is very roughly analogous to economy of derivation.
- But minimal violation of faithfulness is not some special principle of derivational economy; it’s just how EVAL works, and it’s no different for markedness constraints.
- Minimal violation of faithfulness is also arguably a good deal more precise in its application than economy of derivation.
- On the derivative character of economy in OT, see Gouskova (2003).

5. Blocking

Potential sources of blocking effects:
- Look at (1). Given M >> F, what other ranking conditions can prevent the unfaithful mapping /a/ ➔ [b] that violates F to better satisfy M?
- Blocking by another faithfulness constraint: If the /a/ ➔ [b] mapping also violates some other faithfulness constraint that dominates M (condition (b) in (1)).
• Blocking by another markedness constraint: If some constraint ranked higher than M favors [b] over [a] (condition (c) in (1)).

• Blocking by another unfaithful mapping: If there is another unfaithful mapping /a/ → [x], where [x] satisfies M at least as well as [b], and /a/ → [x] is more harmonic than /a/ → [b] because /a/ → [x] is more faithful than /a/ → [b] or [x] is less marked than [b]. (This is condition (d) in (1).)

Before continuing, try to think of real or imaginary cases that exemplify each of these situations.

Blocking by another faithfulness constraint:
• This is the essence of *positional faithfulness* (Beckman 1998, Casali 1996): a specific faithfulness constraint blocks an otherwise general process.
• An example is given in (6). Onset-satisfying consonant epenthesis is blocked word-initially by the positional faithfulness constraint DEP$_{\text{Init-}}$.$\sigma$.


<table>
<thead>
<tr>
<th>/iŋ-koma-i/</th>
<th>DEP$_{\text{Init-}}$.$\sigma$</th>
<th>ONSET</th>
<th>DEP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>→ iŋ.ko.ma.ti</td>
<td></td>
<td>1</td>
<td>W</td>
</tr>
<tr>
<td>1.</td>
<td>~ tiŋ.ko.ma.ti</td>
<td>L</td>
<td>2</td>
</tr>
<tr>
<td>2.</td>
<td>~ iŋ.ko.ma.i</td>
<td>L</td>
<td>W</td>
</tr>
</tbody>
</table>

What do we do about candidates like [ko.ma.ti]?
What does this tell us about the role of other faithfulness constraints in blocking situations?

Blocking by another markedness constraint:
• We saw an example in Handout #1 (Yawelmani).
• Final vowels apocope: /pana˘-mi/ → [panam] ‘arrive (consequent gerundial)’
• But apocope is blocked if it would create a final CVCC syllable: /?opo˘t-mi/ → [ʔopotmi] ‘arise from bed (id.)’
• See (7) for an analysis.

Constraints:
FINAL-C (McCarthy 1993) --- violated by vowel-final words
*[$\mu$]$_{\sigma}$ and/or *APPENDIX --- violated by CVCC and CV:C syllables.

(7) Blocking of apocope in Yawelmani

<table>
<thead>
<tr>
<th>/pana˘-mi/ → panam</th>
<th>*[$\mu$]$_{\sigma}$</th>
<th>FINAL-C</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>~ pana˘:mi</td>
<td>1</td>
<td>W</td>
<td>L</td>
</tr>
<tr>
<td>/ʔopo˘t-mi/ → ʔopotmi</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>~ ʔopotm</td>
<td>1</td>
<td>W</td>
<td>L</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>W</td>
</tr>
</tbody>
</table>

What do we do about candidates like [ʔopo˘t:im], with apocope and epenthesis?
What does this tell us about the role of other faithfulness constraints in blocking situations?
How does the Dutch example of Handout #1 fit into this basic typology of blocking effects?

Blocking by another unfaithful mapping:

- A language may have two unfaithful mappings in response to the same markedness constraint.
- One mapping occurs under some specific conditions; the other mapping steps in as the back-up or default when those conditions are not met.
- In this case, the specific mapping “blocks” the default mapping.
- In Yawelmani, *[µµµ]σ is satisfied by vowel shortening if possible, otherwise by vowel epenthesis. See (8).
- This is a very common type of interaction. It has been referred to as “homogeneity of target/heterogeneity of process”: the same output condition is satisfied in two or more different ways, depending on the circumstances defined by the higher-ranking constraints and by the conditions obtaining in the form under evaluation.

(8) Blocking of epenthesis by shortening in Yawelmani

<table>
<thead>
<tr>
<th>Rule</th>
<th>*[µµµ]σ</th>
<th>DEP</th>
<th>MAX-µ</th>
</tr>
</thead>
<tbody>
<tr>
<td>/paxat-hin/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>~ paxatihin</td>
<td>1</td>
<td>W</td>
<td>L</td>
</tr>
<tr>
<td>~ paxatihin</td>
<td>1</td>
<td>W</td>
<td>L</td>
</tr>
<tr>
<td>/logw-ka/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>~ logiwa</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Before continuing, try to think of other cases where one unfaithful mapping sometimes blocks another unfaithful mapping, though both are in service of the same output condition.

The blocking problem and OT’s solution:

- Unlike triggering, a blocking regime could be implemented for rule-based phonology.
- But Handout #1 described a problem: how do we identify which output conditions cause blocking and when?
- Yawelmani is an example: *[µµµ]σ blocks apocope after a cluster but not after a long vowel, as shown in (7).
- Yet the immediate output of the apocope rule violates *[µµµ]σ in both situations: *[pana:mi], *[?opotm].
- Vowel shortening can step in and fix this problem (it is a “persistent rule” (Myers 1991) or “repair strategy” (Paradis 1988a, 1988b)), but for some reason epenthesis cannot.
- In OT, this behavior is just a matter of judicious ranking. The key is the conflict between FINAL-C and DEP, a conflict that arises in the derivation /?opot-mi/ [?opotmi].

Complete the analysis by integrating tableaux (7) and (8) and explaining why *[µµµ]σ blocks apocope in [?opotmi] but not [panam].
Blocking and obligatoriness:

- Syntactic theories of blocking by surface structure conditions, beginning with Chomsky and Lasnik (1977), rely on the assumption that all transformations are optional.
- Free (non)application of the optional transformations thereby defines a set of possible derivational paths — really, just a set of candidates. (Consult the diagram on p. 57 of ATGiOT.)
- Blocking occurs when a derivational path leads to a surface structure that violates some output condition. (Syntactic output conditions, called “filters” by Chomsky and Lasnik, are like the unviolated surface phonotactic conditions of pre-OT nonlinear phonology.)
- A transformation is obligatory if all derivational paths in which it has failed to apply produce surface structures that violate some output condition(s).
- The principal thesis of this research program: “that the consequences of ordering, obligatoryness, and contextual dependency can be captured in terms of surface filters … and further, that these properties can be expressed in a natural way at this level” (Chomsky and Lasnik 1977: 433).

Where does OT resemble and differ from this view?

6. Conspiracies

There’s little need for further explanation. In a conspiracy, some output condition is observed to trigger and/or block several processes. *[µµµ]σ in Yawelmani has exactly that character, triggering shortening and epenthesis and blocking apocope. We have already seen how that is accomplished with constraint ranking.

Conspiracies have no special status in OT; indeed, they have no status at all. They’re just one of the observed effects of constraint interaction.

7. Emergence of the Unmarked

Constraint violability:

- In OT, all constraints are in principle and in fact violable.
- But because violation is minimal, a constraint may be violated yet still active. Domination isn’t nullification.
- Faithfulness constraints are the obvious example, as in (5).
- But this also happens with markedness constraints, as in (7).
- In fact, a markedness constraint that crucially dominates no faithfulness constraints can still be active.
- This is the emergence of the unmarked.

The emergence of the unmarked (TETU):

- A markedness constraint M that crucially dominates no faithfulness constraints is unable to compel any unfaithful mappings.
- This means that M will never force alternations or impose phonotactic requirements, even in a limited way.
- Nonetheless, M is not necessarily inactive. (Constraint inactivity is in fact very hard to guarantee, though see Prince and Smolensky’s 2004 discussion of Panini’s theorem for an example that’s applicable in highly limited circumstances.)
• When M isn’t asked to compel unfaithfulness, it can still emerge from the depths of low-rank- 
ing constraints to favor some candidate crucially.

TETU and syllabification:
• Consider a language like Hawaiian with onsetless syllables in all positions.
• This means MAX, DEP >> ONSET.
• How is …VCV… syllabified?
• ONSET, though low ranked, emerges to favor …V] [CV… This is TETU.

Does this mean that …VC] [V… always loses in every language?

TETU and epenthesis:
• If DEP violation is unavoidable, some segment must be epenthesized.
• What should it be? If all epenthetic segments are equally faithful, then the winning 
candidate will contain the segment that is least marked according to the constraint 
hierarchy of the language in question.
• Example: Prince and Smolensky’s (2004) Peak Hierarchy favors more sonorous nuclei, 
accounting for epenthesis of [a] in Mekkan Arabic, as shown in (9).

What if choice of epenthetic segment is context-dependent? Examples: Turkish epenthesis 
high vowel whose color is determined by vowel harmony system; Lardil epenthesis a stop that 
is homorganic with the preceding consonant; some languages have echo epenthesis, totally 
copying a nearby vowel (Kawahara 2004, Kitto and de Lacy 2000).
• There are unsettled questions here. Gouskova (2003: 190ff.) argues that schwa is 
epenthesized for faithfulness reasons, not markedness. The schwa-favoring constraint is 
still emergent, though. For further relevant discussion, see de Lacy (2002), Lombardi 
(2002, 2003), and Vaux (check link at http://www.uwm.edu/~vaux/cv.html).

(9) [a] epenthesis in Mekkan Arabic

<table>
<thead>
<tr>
<th>/mufta:h-kum/</th>
<th>*[µµµ]r</th>
<th>DEP</th>
<th>Id(high)</th>
<th>*NUC/HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>→ mufta:hakum</td>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>~ mufta:hkum</td>
<td>1</td>
<td>W</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>~ mufta:hikum</td>
<td>1</td>
<td>L</td>
<td>3</td>
<td>W</td>
</tr>
<tr>
<td>~ mafta:hakam</td>
<td>1</td>
<td>2</td>
<td>W</td>
<td>L</td>
</tr>
</tbody>
</table>

TETU and prosodic morphology (McCarthy and Prince 1994):
• See problem sets “Infixation in Timugon Murut” and “Makassarese Problem”

8. References


I. Data and Generalization

Timugon Murut (McCarthy and Prince 1993, 1994, Prentice 1971) marks various grammatical distinctions by a morphological process of reduplication. The reduplicative affix, underlined in the following examples, is a copy of the first CV sequence in the word. Thus, when the word is consonant-initial (1), the reduplicative affix is a simple prefix. But when the word is vowel-initial (2), the reduplicative affix is an infix:

(1) Consonant-Initial Words

<table>
<thead>
<tr>
<th>Word</th>
<th>Reduplicated Word</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>bu.lud</td>
<td>bu.bu.lud</td>
<td>‘hill/ridge’</td>
</tr>
<tr>
<td>li.mo</td>
<td>li.li.mo</td>
<td>‘five/about five’</td>
</tr>
</tbody>
</table>

(2) Vowel-Initial Words

<table>
<thead>
<tr>
<th>Word</th>
<th>Reduplicated Word</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>u.lam.poy</td>
<td>u.la.lam.poy</td>
<td>no gloss provided</td>
</tr>
<tr>
<td>a.ba.lan</td>
<td>a.ba.ba.lan</td>
<td>‘bathes/often bathes’</td>
</tr>
<tr>
<td>om.po.don</td>
<td>om.po.po.don</td>
<td>‘flatter/always flatter’</td>
</tr>
</tbody>
</table>

Word-internal syllable boundaries are shown by a “.”.

The same morphological process — literally, the same reduplicative affix — is involved in (1) and (2). Somehow, the phonological shape of the word — C-initial vs. V-initial — determines whether the affix is a prefix or an infix. The goal of this problem set is to work out the details of how that happens.

2. Assumptions about Gen

To analyze processes of reduplication and infixation like this one, we need to add something to Gen. Specifically, we will assume that Gen emits candidates differing in what is reduplicated and where the reduplicative affix (or any affix, like Tagalog -um-) is placed. We will also assume that the input contains an abstract reduplicative morpheme RED, and it’s Gen’s job to “spell-out” RED in various ways in the output candidates. Here’s some examples:
Observe that the candidates listed in (3) differ only in the placement of the reduplicative affix, which invariably copies the (C)V sequence that immediately follows it. You should focus on only these candidates in section 4 of the problem. Additionally, Gen will emit candidates that differ in extent of reduplication, such as bul.bu.lud, o.m.po.don, and u.u.lam.poy. These candidates are not to be addressed in section 3, though you are asked to speculate about them in section 6.

3. Assumptions about Constraints in UG

Gen can emit candidates that differ in the placement of affixes, but affixes have a preferred placement given by ranked, violable constraints. The preferred placement of an affix is peripheral, since prefixes and suffixes are far more common (and less marked) than infixes. The constraint EDGEMOST, also called ALIGN, is responsible for this. It has two versions, one that is specifically for prefix-like morphemes, and the other for suffix-like morphemes:

For prefixes: EDGEMOST-L(Prefix) “prefixes are initial in the word”
For suffixes: EDGEMOST-R(Suffix) “suffixes are final in the word”

Infixed, then, are prefixes or suffixes that don’t quite make it. Is the reduplicative affix of Timugon Murut a prefix or a suffix?

4. The Core Problem

Using the appropriate EDGEMOST constraint of section 3, analyze Timugon Murut, focusing only on the candidates given in (3). Use 2X2 comparative tableaux to argue for specific constraint rankings. You should be able to analyze these data without invoking some highly specific constraints tailored to the situation.
5. Additional Data

What implications do the following data have for your analysis? Do they motivate any further constraint rankings?

(4) am.bi.lu.o ‘soul’
    nan.su.i ‘slanting from vertical’
    lo.go.i ‘the price’

6. Further Candidates

As noted above, Gen also provides candidates that differ in extent of reduplication, such as bul.bu.lud, o.mom.po.don, and u.lu.lam.poy. What does your analysis say about these? If your analysis encounters difficulty with them, how might you modify the analysis so as to contend with them successfully?

7. Typological Considerations

There are many other languages with affixes that have the same distribution as Timugon Murut: prefixed to C-initial words and infixed after the first syllable of V-initial words. Remarkably, every one of these affixes is reduplicative; there are no affixes of the ordinary kind, whose segments are fixed rather than copied. This regularity demands an explanation. Can you find one, by using your analysis of Timugon Murut as a starting point? It will help if you consider four different types of hypothetical non-reduplicative affixes with Timugon Murut’s post-initial-onsetless syllable distribution:

(5) V, as in abulud, ugalpoy.
    VC, as in ambulud, uamlampoy
    CV, as in tabulud, utalampoy
    CVC, as in tambulud, utamlampoy

8. More Typological Considerations

What would you say about the following phenomena?

    o–huka ohuka–huka ‘he laughed/kept laughing’
    o-mo–tumuŋ omotumu–tumu–ŋ ‘he shook it/repeatedly’
    je–umiriŋ jeumiri–miri–k ‘I tie up/repeatedly’
    o–je–ʔapah*at ojeʔapah*a–pah*a–t ‘he rolls himself up/repeatedly’
    o–etun oetu–etu–n ‘he smells/keeps on smelling’
    a–pot apo–apo–t ‘I jump/repeatedly’
(7) Chamorro Infixing Reduplication (McCarthy and Prince 1986, Topping 1973)

- danuko danuko-lo ‘big/really big’
- bunita bunita-ta ‘pretty/very pretty’
- nalal ja la-a- na ‘hungry/very hungry’
- metgot metgo-go-t ‘strong/very strong’


- tup tu-tup
- plak pl-plak
- sqmai s-qm-qma-i
- p’a p’a-pa
- st’q’lus st’-q’l-q’lus

Obstruent-only roots are common (~10% of lexicon) but rarely reduplicate.

References


Makassarese Problem

Makassarese is an Austronesian language spoken in Indonesia (Aronoff et al. 1987, Basri et al. 1998, McCarthy 1998, McCarthy and Prince 1994). Consider each of the following data sets and the associated questions in turn. Each data set contains just a few examples, but it is representative of a widely attested, regular pattern in the language. The data sets are ordered in increasing difficulty; do not attempt the later ones unless you feel you have a clear understanding of the earlier ones.

Data Set I:

lómpo ‘big’ lompóan ‘bigger’
lompói ‘make big, enlarge’

1. What’s the underlying form of the root ‘big’?
2. What’s the underlying form of the suffixes ‘comparative’ and ‘causative’?
3. Where does stress go? (Makassarese has one vowel per syllable: lom.po, lom.po.âŋ, lom.po.i.)
4. Any other phonology in these data?

Data Set II:

lánta ‘deep’ lantájan ‘deeper’
lantáji ‘make deep, deepen’

5. What’s the underlying form of the root ‘deep’?
6. Anything else new, or does the story so far work out nicely?

Data Set III:

báji ‘good’ bajíka ‘better’
bajíki ‘make good, improve’

7. What’s the underlying form of the root ‘good’?
8. What else is new? (It’s necessary to know that k and ʔ are in complementary distribution — with ʔ occurring at the end of a syllable and k elsewhere (approximately), as in ba.jiʔ versus ba.ji.kaŋ.)

Data Set IV:

rántasa ‘dirty’ rantásaŋ ‘dirtier’
rántasi ‘make dirty’
téttare ‘quick’ tettéraŋ ‘quicker’
tetti ‘make quick’
jámala ‘naughty’ jamáləŋ ‘naughtier’
jamáli ‘make naughty’

9. What are the underlying forms of the roots ‘dirty’, ‘quick’, ‘naughty’?
10. If you’ve made the right choice of underlying forms for these roots, then you should be in a position to explain:
    a. Why does rantasaʔ end in a aʔ sequence that is missing in the suffixed forms rantásaŋ and rantasi (and likewise for the other examples)?
b. Why is the stress on the antepenult in rântasa? etc.?

11. Is there anything truly surprising or unexpected about rantasa? etc.? I’m thinking here about the final ? Is your account of it straightforward?

The next two parts present additional challenges and may be significantly more difficult.

Data Set V:

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>lómpoi</td>
<td>‘it is big’</td>
</tr>
<tr>
<td>lántañi</td>
<td>‘it is deep’</td>
</tr>
<tr>
<td>báji?i</td>
<td>‘it is good’</td>
</tr>
<tr>
<td>rântasa?i</td>
<td>‘it is good’</td>
</tr>
<tr>
<td>têttere?i</td>
<td>‘it is quick’</td>
</tr>
<tr>
<td>jámala?i</td>
<td>‘it is naughty’</td>
</tr>
</tbody>
</table>

12. How is the suffix -í ‘it is …’ different in its phonological behavior from the homophonous suffix -í ‘causative’?

Data Set VI — Reduplication:

a. bátu | batu-bátu | ‘small stone(s)’
gólla | golla-gólla | ‘sweets’
táu | tau-táu | ‘doll’
táuñ | taun-táuñ | ‘yearly’
bálla? | balla?-bálla? | ‘little house’
búlañ | bulam-búlañ | ‘monthly’

b. manára | maná?-mantra | ‘sort of tower’
bálao | bala?-baláo | ‘toy rat’
baíñe | bai?-baíñe | ‘many women’
barámbañ | bara?-barámbañ | ‘sort of chest’

c. têttere? | tette?-têttere? | ‘rather quickly’
ak-bésere? | ak-bese?-bésere? | ‘quarrel in jest’

d. gassiñi | gassín-gassiñi | ‘make somewhat strong’
lompói | lompo-lompoí | ‘make somewhat big’
gássini | gassiñ-gássini | ‘he is somewhat strong’

13. Can you predict the form that reduplication takes? How?

References:


1 As corrected by Anthony Jukes (p.c.).